

VALIDATION OF A MEASUREMENT SCALE FOR THE RELATIONSHIP BETWEEN THE ORIENTATION TO CORPORATE SOCIAL RESPONSIBILITY AND OTHER BUSINESS STRATEGIC VARIABLES¹

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Abstract:

The importance of Social Responsibility (SR) is higher if this business variable is related with other ones of strategic nature in business activity (competitive success that the company achieved, *performance* that the firms develop and innovations that they carries out). The hypothesis is that organizations that focus on SR are those who get higher outputs and innovate more, achieving greater competitive success.

A scale for measuring the orientation to SR has defined in order to determine the degree of relationship between above elements. This instrument is original because previous scales do not exist in the literature which could measure, on the one hand, the three classics sub-constructs theoretically accepted that SR is made up and, on the other hand, the relationship between SR and the other variables.

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As a result of causal relationships analysis we conclude with a scale of 21 indicators, validated scale with a sample of firms belonging to the Autonomous Community of Extremadura and it is the first empirical validation of these dimensions we know so far, in this context.

Keywords: Corporate Social Responsibility, measurement scale, innovation, competitive success, *performance* .

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1. INTRODUCTION

In recent years we have emphasized on the growing importance of Corporate Social Responsibility (CSR) for the overall economy, as well as for companies, institutions and organizations in particular, given the competitive advantages that its action reports (Weber, 2008). The academic community (Bebbington & Gray, 2001; Bell, 2002; Saravanamuthu, 2004, Hemming *et al.*, 2004; Laine, 2005; Oskarsson & Von Malmberg, 2005, Hahn & Scheermesser, 2006) has shown a growing interest in developing socially responsible actions, involving the pursuit of certain goals: green (healthy and balanced environment), economic (harmonic development) and social (reduction of inequalities).

The Green Paper (UE, 2001: 4) indicates that Social Responsibility (SR) is "a concept whereby companies decide voluntarily to contribute to a better society and a cleaner environment" adding that it will be conducted by the integration of "social and environmental aspects of business operations and their interaction with *stakeholders*" (UE 2001: 6). It also points out that "being socially responsible means not only meet legal obligations to which no doubt every company has to meet, but go beyond this performance by investing more in human capital, environment and caring relationships with agents of interest" (UE, 2001: 8). In this context, companies are encouraged to work actively for SR, because not only it is an opportunity given to companies, but in many cases it is a reflection of the expectations of customers, employees, society and other stakeholders (Mark-Herbert & Von Schantz, 2007).

In this sense, we observe the importance and necessity of dialogue with all stakeholders, considering that a key element of success in corporate strategic communication is a concern to have a significant and positive relationship with customers and other

stakeholder groups (Andriof *et al.*, 2003). The behaviour and communication between different *stakeholders*, both internal and external, will be a mark in the company (Korver & Van Ruler, 2003, Capriotti & Moreno, 2007; Holtzhausen & Fourie, 2008). An organization operates within a network of different *stakeholders* who can influence, directly or indirectly, determining the quality of an organization's relations with citizens, customers and other *stakeholders*. That is vital for quality of leadership and business performance (Sirgy, 2002; Habisch & Jonker, 2005; Gardberg & Fombrun, 2006; Balmer & Greyser, 2006; Galetzka *et al.*, 2008, Birth *et al.*, 2008).

In order to reach a business practice as a sustained application of theory, a research project was addressed at the Autonomous Community of Extremadura, in which the orientation of business towards SR has measured, putting it in relation to strategic variables of its management. It is understood that measurement is needed to realize the situation of firms to the various actions that make socially responsible behaviour. While many jobs are defining measurement scales, we can say that literature has not found a satisfactory scale that measures the degree of achievement of CSR in companies across its extension, nor scales to put on the CSR with other important strategic variables for companies explaining their causal relationships. There are some contributions (Abbott & Monsen, 1979; Quazi & O'Brien, 2000; Maignan & Ferrell, 2000; Turker, 2008) which support specific aspects; other contributions (Clarkson *et al.*, 2008) focus on only one of the areas of specific dimensions to the SR; or others that are oriented in only one area of business, such as responsible consumption (Webb *et al.*, 2008). In short, it was considered necessary to define a global scale to cover the various fields, social, economic and environmental issues, providing coverage to all situations that a company can address to receive the label of socially responsible.

In order to validate a measurement scale to a broader level of the existing ones, and by linking the construct of CSR with other strategic variables that the literature relates, it has been linked to innovation, *performance* and competitive success, designing a model that provides both the validation of the original scale of CSR and the degree of relationship between variables. About these relationships it is argued that: a) CSR is,

itself, an innovation (Nieto & Fernández, 2004), but also, according to the existing literature, we propose that firms which undertake SR actions are more likely to innovate (Lopez *et al.*, 2007), reason that led us to consider this variable firstly; b) secondly, *performance* or business performance was considered to be noted that companies which are taking SR actions obtain an improved performance (Capriotti & Moreno, 2007); c) finally, competitive success is highlighted as a key achievement after SR actions (Burke & Logsdon, 1996; Bagnoli & Watts, 2003; Galbreath, 2006; Porter & Kramer, 2006, Bies *et al.*, 2007; Weber, 2008; Maxfield, 2008; Fernandez-Kranz & Santaló, 2010).

The paper is organized as follows. After this introduction, it shows how in recent years, SR is incorporated into the strategy and operation of enterprises. The next section is devoted to analyzing the importance of measuring business orientation to SR. Section 4 defines the measurement scale used based on a questionnaire that is designed and describes the methodology undertaken. Section 5 verifies and contrasts with the methodology the proposed scale. Section 6 presents the validated measurement scales for each of these variables and, finally, section 7 concludes with a series of reflections, explaining the limitations of the study and commenting on future research to follow.

2. HOW CORPORATE SOCIAL RESPONSIBILITY IS INCORPORATED IN THE STRATEGY AND BUSINESS PERFORMANCE

It is sometimes argued about whether the positive outcomes are intrinsic to the business and whether the SR strategy should be built on it or, conversely, this approach is superior to such results. It is clear that every business is an economic unit that produces goods and services in society and earns some profits for the delivery of such items (Daft, 2003). It is therefore necessary to consider the economic aspect as the fundamental reason for the existence of any business, profit as the primary motive for owners to keep working, and this way, consolidate CSR strategy. So, and only once it is assumed, it is true that CSR involves a series of corporate behaviours that positively affect the *stakeholders* and go beyond the economic interest (Turker, 2008).

The current philosophy to incorporate sustainability in business is the prospect of the *Triple Bottom* or *Triple Bottom Line* (Elkington, 1998, 2004; Pappmehl, 2002, Norman & MacDonald, 2003; Brown *et al.*, 2006, Colbert & Kurucz, 2007). According to Elkington (1998), the *Triple Bottom Line* is defined as economic prosperity, environmental quality and social justice. McDonough & Braungart (2002) found that many managers are discovering this triad of concepts included in this perspective, trying to assign value to multiple economic, ecological and social functions that increase the value of the product offered.

Adopting the perspective of SR is based on the achievement of many benefits for businesses. Morsing & Schultz (2006) point to the benefits of adequate *stakeholder* engagement for the company while Campbell (2007) suggests the suitability of SR to gain social acceptance by companies. The report *People and Profit, A practical guide to corporate social responsibility* (Danish Commerce and Companies Agency, 2006), strengthens as arguments in favour of the SR the improvement of corporate image, the opportunity to attract suitable employees and the promotion of legitimate long term. Similarly, the study "*Social responsibility in the enterprise and competitiveness*" (Vicente *et al.*, 2007) suggests factors such as interest for image and reputation as critical to its justification.

An important focus of CSR, based on the correlation between business performance and the actions carried out in certain dimensions of corporate responsibility, which in Anglo-Saxon words is called "*the business case for corporate responsibility*". It is shown that there are compelling reasons linked to the performance of an organization so that it embraces the principles of CSR. However, some of the existing empirical evidences (Griffin & Mahon, 1997; Margolis & Walsh, 2003; Orlitzky *et al.*, 2003; Barnett, 2007; Pivato *et al.*, 2008) are not decisive enough for authors like Blowfield & Murray (2008) even there are areas in which CSR initiatives have been recognized as the true architects of organizational performance improvement: improving the relationship with consumers (Bhattacharya & Sen, 2004), the attraction of investment

(Smith, 2005), the attraction of talent (Bruch & Walter, 2005) and the protection of corporate reputation (Chen *et al.*, 2008).

So we can say that CSR can be as strategic as any other business orientation that seeks to maximize profit. This implies that the social approach coexists with the economic approach. As support of this idea there are studies that attempt to integrate the concept of SR and corporate strategy (Galbreath, 2006, Bies *et al.* 2007; Maxfield, 2008) and recommend to use the same framework of analysis to determine the *core business* of a business to convert the orientation to SR as a source of competitive advantage (Porter & Kramer, 2006). Bagnoli & Watts (2003) points to put in place good citizenship strategies lead companies to maximize their profits. Very recently, Fernandez-Kranz & Santaló (2010) have empirically shown that the most competitive firms have the highest levels of SR. They explain this fact based on the strategic character of SR in these companies, regardless of other considerations of additional social altruism.

As a final thought to strategic consideration of CSR, it is important to note that the current economic crisis is not a result of economic cycles. Saul (2011) warns about the new reality and the new role that companies play in society. According to him, social change has market value. This does not mean that companies have to sacrifice profits to be responsible, but on the contrary, there is now a significant market niche for social actions that generate benefits to business and therefore business strategies that involve some social innovation are very likely to be generating huge profits.

3. THE IMPORTANCE OF MEASURING THE BUSINESS ORIENTATION TOWARDS SOCIAL RESPONSIBILITY

The importance of measuring business orientation towards implementation of actions of SR is expressed. In this sense, Carroll (2000) questioned whether corporate social performance should be measured and why, responding positively given the importance of the issue for business and society. But, given the complexity of the subject, the

variety of situations to be collected and areas to be covered, it is stated that the development of valid and reliable measures is not easy.

Despite the interest the measurement of SR is still under study because while it is possible to find methods to measure socially responsible activities, they have their limitations. However, many authors have ventured into this field of measurement, in order to get a quantification and evaluation of socially responsible actions.

If we focus on the origin of data for the definition of the measuring instrument, Aupperle *et al.* (1985) developed a scale to measure individual values and attitudes towards CSR managers in accordance with the four-dimensional model of Carroll (2000). It has been considered as the first serious attempt to capture the multidimensional nature of CSR (Ruf *et al.*, 1998). On the other hand, the scale due to Singhapakdi *et al.* (1996) measures perceptions of managers about the role of ethics and SR to achieve the effectiveness of organizations by presenting as limitation the measurement of individual values rather than socially responsible activities

Based on attitudes to SR, Quazi & O'Brien (2000) designed a scale with support in previous studies (Davis, 1973; Orpen, 1987), on a two-dimensional model around issued of SR and results obtained from the implementation of socially responsible actions. The scope of application of this scale is large, allowing to determine the perceptions of managers in different economic and cultural contexts, aspect not always possible to focus the design of scales in more restricted areas of work. On the other hand, it has the limitation not to be designed to measure the organization's participation in socially responsible actions.

More recently, it is important Turker's contribution (2008), who focuses his work on the perceptions of various groups of *stakeholders* (employees, customers and government), analyzing the relationship of CSR to organizational commitment and reflecting the responsibilities of business against to all its *stakeholders*. In this context it offers an

original measure, valid and reliable for CSR validating a scale of 19 indicators for CSR. In this author's opinion, perhaps the limitation of these scales is in the impossibility or difficulty of obtaining data on socially responsible behaviours in organizations.

There are other alternatives, such as surveys, reputation indices, databases, content analysis of certain documents and case studies. We note the pioneering work of Abbott & Monsen (1979) which develops a scale to measure CSR based on content analysis of corporate annual reports of *Fortune* magazine. Later Ullman (1985) examines the extent of social disclosure from the analysis of annual reports and a more recent work (Clarkson *et al.*, 2008) develops an index of content analysis to assess the level of environmental disclosure in sustainability reporting. The use of case studies on Keeble *et al.* work (2003) explores how the appropriate use of indicators is a powerful tool to guide the sustainability of business.

Regarding the extent of its use, reputation indexes and databases have to be considered, defined based on attributes belonging to the three areas of SR and in turn collecting the perspective of different *stakeholders* (Abbott & Monsen, 1979; Turker, 2008). Other studies (Ruf *et al.*, 1998) have developed new scales for assessing the relative importance of the dimensions included in some indices of reputation, which validates the applicability of such scale and indices, watching the match with the dimensions of Carroll (1979). Most recent contributions stress the importance of measuring SR and analyze the proliferation of social *ratings* (Igalens & Gond, 2005, Marquez & Fombrun, 2005, Chatterji *et al.*, 2009). There are opinions contrary to the usefulness of indices, such as those of Maignan & Ferrell (2000) who find them inadequate to assess all businesses.

Other contributions define measures based on average of certain values (Mahoney & Thorne, 2005). For that, strengths and weaknesses are analyzed within each dimension and later an average of the values assigned to them is calculated. The limitation of these patterns is the limited area of implementation, focusing on certain countries or smaller territories within a country.

Between the late 70's and early 80 numerical indicators are suggested as a mean of uniting the social information contained in the reports (Déjean & Oxibar, 2003). With reference to these methods based on the use of indicators (Chen & Metcalf, 1984, Davidson & Worrell, 1990; Maignan & Ferrell, 2000, Keeble *et al.*, 2003), the multidimensional are considered fundamentally because the definition of an unique indicator is very restrictive and severely limits the results. The indicators that provide more than one dimension provide a greater range to incorporate perceptions in triple sense. Turker (2008) also points out a limitation to these models, noting that they do not have a comprehensive approach, reporting only business activities in a limited number of countries. However, it is considered that this limitation is perfectly surmountable in the sense that it is possible to define a scale, multidimensional, for general business characteristics, without regard to very specific aspects thereof.

However the validity, importance and progress that the discussed measurement scales contribute to the literature and business practice, it should be necessary to broad them in order to cover more comprehensive approaches, making measure the CSR at the organizational level. In this sense, Maignan & Ferrell (2000) addressed the economic expansion, legal, ethical and discretionary of imposed responsibilities by the *stakeholders*, while considering only three agents (customers, employees and public), limiting their use.

The review shows that even though various methods exist to measure the activities of SR, they are limited in various ways, and the majority are produced under the *stakeholder* approach. This is a relatively new research area, finding a research gap in the need to develop a scale that, on the one hand, be organized around the triple perspective and, moreover, be enriched with some aspects that expand the vision of the organization. In this sense, the scale defined in this work is fairly complete by adding the following blocks of analysis: 1) response to the actions of SR, 2) *performance* developed by the company's, 3) innovation, and 4) success achieved competitive.

4. DEFINITION OF A MEASUREMENT SCALE

Leaving of the approach that the companies that are guided to the attainment of *high levels of SR* will get *competitive success*, the orientation of companies to SR has been related to market success. With this approach a definition and validation of the measurement scale has carried on. Also, it has been considered that this relationship comes mediated by increments in the *innovation* levels and the *performance* of the firms. We consider a wider concept of the *performance* as a construct: this variable is not only the short term financial performance and pursues sustainable development but it is an explanatory antecedent of the total performance obtained by the companies in order to secure that a greater sensibility or approach to the actions of SR in the company.

In this sense, we deem these hypothesis: i) A large orientation to SR will suppose a more competitive success; ii) A large orientation to SR will expect a higher performance; iii) A large orientation to SR will infer a higher level of innovation; iv) A higher performance will suppose a bigger competitive success; v) A higher level of innovation will suppose a bigger competitive success.

4.1. THE DESIGN OF THE MEASURE INSTRUMENT

The questionnaire was elaborated using the measures based on the previous literature for each construct considered: *SR*, *innovation*, *performance* and *competitive success*. The questions about SR reflect the manager perception in a Likert scale of 10 points among "totally in disagreement" or "totally in accordance" while for the rest of the constructs is among "very below the competition" and "very above the competition". The measure instrument has been tested by using a structural equation model based on the methodology of Partial Least Squares (PLS). In this model, the four determinant constructs have been put in relationship: the orientation to SR, innovation, competitive success and performance.

4.2. SELECTION OF THE SAMPLE AND ANALYSIS OF DATA

The final sample, representative of regional entrepreneur, is formed by 777 companies with its corresponding predetermined substitution companies to control the non answer index. The fieldwork has been based on telephone calls to those responsible managers for the companies during the month of May 2010. The participation index has been of 11, 07% that corresponds to the percentage of companies in which a valid speaker has agreed to participate in the study. To get our final sample it has been necessary to contact with 7.022 companies of Extremadura: a) in the 50,30% of cases, the companies did not answer the call phone; b) the 13,66% of contacted companies manifested its lack of interest or its negative in participating in the study; c) a 12,20% of cases the contact was outside of range or was not valid; finally, d) in the 3,77% of cases the telephone was erroneous or nonexistent.

A previous pre-test was carried out with the intention to check that the survey was appropriately interpreted. In this sense, we asked about a group of 20 representative managers of sector firms of the sample. It could be verified that the questionnaire was realistic although there were carried out small adjustments in the content, it was revised the correct writing of the items asking about the understanding of the questions as well, and it was proved that all the questions were clear and direct because of the interviewees respond in a sure, natural and spontaneous way.

Table 1 shows the descriptive characteristics of the sample by size and sectors. It can be seen that by sectors, the most representative are services (31%) and trade (30%). By size, we can observe the importance of SMEs, and that the majority of the sample (91%) are companies with less than 9 employees (included unipersonal companies).

Table 1: Sample's characteristics

| SECTOR | 1- 9 employees | 10- 49 employees | 50-199 employees | >200 employees | TOTAL |
|-------------------------|----------------|------------------|------------------|----------------|------------|
| Industry | 54 | 8 | 6 | 3 | 71 |
| Construction | 96 | 10 | 1 | 1 | 108 |
| Trade | 224 | 7 | 2 | 0 | 233 |
| Tourism and Hospitality | 74 | 2 | 0 | 0 | 76 |
| Transport | 43 | 1 | 0 | 0 | 44 |
| Services | 219 | 20 | 3 | 3 | 245 |
| TOTAL | 710 | 48 | 12 | 7 | 777 |

Table 2 shows the technique record of the sample:

Table 2: Technique study record

| TECHNIQUE RECORD | |
|-----------------------------------|---|
| Universe | Companies of Extremadura: 67.181 firms (Source: DIRCE 2009) |
| Geographical scope | Extremadura |
| Method of information collection | Phone contact |
| Sample unit | Managers |
| Emitted calls | 19.292 |
| Population | 7.022 contacted firms |
| Final sample | 777 empresas |
| Index of participation | 11,07% |
| Measurement error | 3,3% |
| Trust level | 95% $z=1,96$ $p=q=0,5$ |
| Sampling method | Simple random |
| Average duration of the interview | 14:35 minutes |

The administering of the questionnaire was made by phone interviews. They were carried out through the CATI system (*Computer Aided Telephone Interviewing*): the survey was shown in the interviewer's screen who read the questions telephonically to the managers. The answers were introduced, by the interviewer, in the computer application, guaranteeing this way that the data were complete. Every manager was been previously contacted to mark the day and time of the phone survey's realization in order to assure that it was carried out in an appropriate moment.

4.3. METHODOLOGY

Finally, in order to validate the questionnaire, a structural equations model (SEM) has been tested by considering that it was an appropriate methodological tool. These types

of models are multivariate second generation models (Fornell, 1982) and for this reason very proper for the objectives because they allow: to) to incorporate non observables abstracts constructs directly, as the case of SR; b) to determine the grade in which the variables which can be measured (measured variables) can describe the variables that are not directly observables (latent variables); c) to model the relationships between the dependent variables and predictors variables (independent variables); d) to test the hypothesis of the previous theoretical framework with data picked up empirically.

Although this type of models value in a systematic, unique and integrative analysis two aspects: the measurement model and the structural one (Cepeda *et al.*, 2005), this study is only focused in the first part because we study the design of a sufficiently wide and ambitious measurement model and it is considered that it deserves an independent study.

5. PROPOSED SCALE VALIDATION

In this section we will **verify the validity of the scales and the reliability of the measurement model** (*inner model*). The purpose at his point is to analyze whether the theoretical concepts are properly measured by observed variables. This analysis is made for the attributes validity (measuring what is really being measured) and reliability (if it is done on a stable and consistent). To this end we proceed to calculate the individual item reliability, internal consistency or reliability of the scales, the analysis of the average variances extracted (AVE) and discriminant validity

5.1. ITEM RELIABILITY

The stricter criterion in order to accept an indicator as part of a construct is that it possesses a greater loading than 0.707 ($\lambda > 0.7$). This implies that the variance shared between the construct and its indicators is larger than the error variance (Carmines & Zeller, 1979). However, some authors believe that this rule should not be so strict and loads of 0.5 or 0.6 would be acceptable in the early stages of development of scales (Chin, 1998) or when the scales are applied in different contexts (Barclay *et al.*, 1995).

Given the initial values obtained, we have removed from the model, using iterative depuration processes, reflective indicators that did not meet the criterion of individual reliability, constituting the final number of indicators for each of the constructs

5.1.1. THE MEASUREMENT OF THE ORIENTATION TO SOCIAL RESPONSIBILITY

The managers orientation to SR in firms operating in Extremadura have been carefully analysed taking into account the three axes of the *Triple Bottom Line* (economic, social and environmental aspects). Consequently, CSR has been considered as a second order construct. We have obtained a final scale of 21 indicators from the original proposal of 35 indicators.

After depuration (table 3) we can see that most of the indicators loads exceed the exigent criteria of values bigger than 0.707 and that in no case loadings less than 0.52 are presented. It justifies the values between 0.52 and 0.7, according to Chin (1998), being the initial state of development of a scale, by the novelty of the topic, the relationship of a very new variable (SR) with other more traditional ones, and the overall implementation of the emerging variable (SR) in a business like this, characterized by constant changes in the environment.

Table 3: CSR Item reliability

| Sub-Construct (Second order) / Indicators | Social Dimension | | Economic Dimension | | Environmental Dimension | |
|---|------------------|--------------------------|--------------------|--------------------------|-------------------------|--------------------------|
| | Indicator | Loading (λ) | Indicator | Loading (λ) | Indicator | Loading (λ) |
| | A3 | 0,654 | A16 | 0,683 | A27 | 0,788 |
| | A5 | 0,551 | A17 | 0,749 | A28 | 0,754 |
| | A7 | 0,523 | A18 | 0,715 | A29 | 0,792 |
| | A8 | 0,730 | A20 | 0,773 | A30 | 0,771 |
| | A9 | 0,650 | A21 | 0,769 | A32 | 0,751 |
| | A10 | 0,767 | | | A33 | 0,820 |
| | A11 | 0,778 | | | A34 | 0,762 |
| | A14 | 0,776 | | | A35 | 0,796 |

5.1.2. MEASUREMENT OF INNOVATION, *PERFORMANCE* AND COMPETITIVE SUCCESS

It has been considered a very wide conception of innovation. Following Boer & Duning (2001), the construct assumes as innovation the adoption of a new idea or practice able to develop new products or services, to enter in new markets or to generate new organizational or administrative process. In general, it is assumed that the actions related to products or process are linked to the technological side of I+D at the same time that the actions related to marketing, organizational issues or management are specially linked to the administrative side of I+D (Atuahene-Gima, 1995). Considering both sides of innovation, it has been contemplated all aspects of the concept included in the Oslo Manual (2005):

- *Product or Service Innovation*, considering the development of new products or services and the improvement of the functionality or singularity of the existing ones when these changes are able to increase the market share (Storey, 1994; Bajaj *et al.*, 2004).
- *Process Innovation*, that refers any change occurred in the way of producing the final product or service offered (Utterback, 1994).
- *Marketing Innovation*, considering the introduction of new brands, entering in new markets or developing new systems to commercialize the final products or services (Lin & Chen, 2007).
- *Organizational Innovation* including changes in the organisational design and structure or related to administrative process affecting organisational policies, resources distribution or other factors associated to the social and organisational structure of the firm (Ravichandran, 2000).
- *Management Innovation* related to actions involving the strategic planning of firms (Zahra *et al.*, 2000).

Moving now to the measurement of *performance*, and going beyond the financial result of the firms, it has been developed a multidimensional construct. Based in previous

literature with special consideration in SME's, the contribution of Wiklund & Shepherd (2003) has been combined with the previous work of Pelham & Wilson (1996) in order to include the market share and the growing of sells.

Finally and related to the competitive success, it has been considered that maintaining a competitive edge is vital to the long-term success of the firm. There are a wide range of factors that determine the success and these components include finance, marketing and human elements. In the study, a company has competitive success when is able to get a favourable position in the market obtaining superior results and avoiding an extremely poor retribution of factors of production.

To measure the competitive success taking into account the SME's nature of firms, it has been considered aspects of competition related to human resources (Pfeffer, 1994; Yusuf, 1995; Warren & Hutchinson, 2000), related to managers capabilities (Huck & McEwen, 1991; Luck, 1996), marketing aspects (Lin, 1998; Warren & Hutchinson, 2000), quality of products or services and levels of quality in organization and management (Powell, 1996), technologic resources and information systems (Donrrosoro *et al.*, 2001), financial management (Huck & McEwen, 1991; Gadenne, 1998), sharing corporate values (Clifford & Cavanagh, 1985), adequate organizational structure and know-how level (Donrrosoro *et al.*, 2001).

At this point we proceed to make the second round of the items depuration process. For that we test the reliability of individual item in the global model. From a total amount of 34 indicators (the 3 SR dimensions, 13 indicators for innovation, 8 for performance and 10 for competitive success) has been reduced to 28 final items after dropping of items with loadings below 0.5. Results are in table 4 showing the evidence of acceptable individual item reliability.

Table 4: Item reliability for all construct in the model

| Indicators | Loadings (λ) | Indicators | Loadings (λ) | Indicators | Loadings (λ) |
|-------------------------------|---------------------------|---------------------------------|---------------------------|--------------------------------------|---------------------------|
| Social Dimension of SR | 0,730 | Economic Dimension of SR | 0,787 | Environmental Dimension of SR | 0,822 |
| Innovation | | | | | |
| I1 | 0,575 | D6 | 0,902 | C1 | 0,718 |
| I2 | 0,599 | D7 | 0,912 | C2 | 0,737 |
| I3 | 0,675 | D8 | 0,787 | C3 | 0,739 |
| I4 | 0,543 | | | C5 | 0,739 |
| I5 | 0,682 | | | C6 | 0,745 |
| I6 | 0,689 | | | C7 | 0,611 |
| I7 | 0,757 | | | C8 | 0,727 |
| I8 | 0,688 | | | C9 | 0,641 |
| I9 | 0,707 | | | C10 | 0,683 |
| I10 | 0,606 | | | | |
| I11 | 0,727 | | | | |
| I12 | 0,732 | | | | |
| I13 | 0,645 | | | | |

5.2. CONSTRUCT RELIABILITY

Construct reliability analyses that the indicators ultimately selected for the scale actually measure the variables of BSR, innovation, *performance* and competitive success on Extremadura companies. For this evaluation, besides the traditional Cronbach alpha, it has the **composite construct reliability** (*composite reliability*), results you can observe in table 5.

Table 5: Construct reliability

| Construct | Cronbach's Alpha | Composite Reliability |
|------------------------|------------------|-----------------------|
| SR: Social Dimension | 0,8348 | 0,8740 |
| SR: Economic Dimension | 0,7918 | 0,8569 |

| | | |
|------------------------------|--------|--------|
| RSE: Environmental Dimension | 0,9075 | 0,9251 |
| Innovation | 0,8974 | 0,9114 |
| <i>Performance</i> | 0,8351 | 0,9021 |
| Competitive Success | 0,8718 | 0,8980 |

Following the guidelines offered by Nunally (1978), the interpretation of the values obtained can be adopted for both measures. The author suggests 0.7 as a benchmark for modest composite reliability, applicable in the early stages of research. The examination of the Cronbach's alpha and the composite reliability in the scales proposed reveals very good internal consistency for all constructs since all have measures of internal consistency that far exceed the minimum. This ensures that the occurrence of random error of measures has been minimized and these results suggest that the theoretical constructs exhibit good psychometric properties.

5.3. CONVERGENT VALIDITY

In order to evaluate the convergent validity it have been used the average variance extracted (AVE). On table 6 it is showed the AVE. It assesses the amount of variance that a construct captures from its indicators relative to the amount due to measurement error and should be greater than 0,50 (Fornell and Larcker, 1981) assuring that 50 per cent or more variance of the indicators should be accounted for. In the study, the convergent validity of the scales was generally supported although the innovation scale presents an AVE slightly below the minimum recommended. As innovation is a complex variable, and it is not the independent variable of the model, we have considered good enough the value obtained for their AVE for the purpose of the study.

Tabla 6: Convergent Validity

| Constructs | AVE |
|-----------------------------|------------|
| SR: Economic Dimension | 0,55 |
| SR: Social Dimension | 0,50 |
| SR: Environmental Dimension | 0,60 |
| Innovation | 0,45 |
| Performance | 0,75 |
| Competitive Success | 0,50 |

5.4. DISCRIMINANT VALIDITY

The traditional methodological complement to convergent validity is discriminant validity, which represents the extent to which measures of a given construct differ from measures of other constructs in the same model (Barclay *et al.*, 1995). In a PLS context, one criterion for adequate discriminant validity is that a construct should share more variance with its measures than it shares with other constructs in a given model. To assess discriminant validity, Fornell y Lacker (1981) suggest the use of the average variance shared between a construct and its measures (AVE). This measure should be greater than the variance shared between the construct and other constructs in the model. In practice, this can be demonstrated in a correlation matrix which includes the correlations between different constructs in the lower left off-diagonal elements of the matrix, and the square roots of the average variance extracted values calculated for each of the constructs along the diagonal.

To roughly assess the discriminant validity of the constructs in the model proposed in this study, the higher estimated path coefficient (β) have been used to be compared with the root AVE values reported in the model. In all cases the condition is satisfied (0,5992>0,444; 0,8690>0,374; 0,666>0,261) and it is possible to conclude that all constructs in the model have discriminant validity.

6. FINAL SCALES PRESENTATION

Once the scales have been analysed and validated, it is showed on tables 7, 8, 9 and 10 the final composition of each construct representing scales adapted to the context of the study in the Region of Extremadura.

Table 7: Validated scale for the orientation to BSR

| First order Sub-constructs / Indicators |
|--|
| Social Dimension of SR |
| A3: We are aware of the employees quality of life |
| A5: Employees compensation is related to their competences and their results |
| A7: We are committed to job creation (fellowships, creation of job opportunities in the firm...) |
| A8: We foster training and development of our employees |
| A9: We have human resources policies to facilitate conciliation between professional and personal life |

| |
|--|
| A10: We are aware to employees initiatives related to management decisions |
| A11: Equal opportunities exists for all employees |
| A14: We have dynamic mechanisms of dialog with employees |
| Economic Dimension of SR |
| A16: We are worried about offering high quality products and/or services to the customers |
| A17: Our products and/or services satisfy national and international quality standards. |
| A18: We are characterised to have the best relation price to quality |
| A20: We offer to our customers accurate information about our product and/or services. |
| A21: The respect to consumer rights is a priority axis in our firm |
| Environmental Dimension of SR |
| A27: We are able to minimize our environmental impact. |
| A28: We use goods in process and/or goods processed with low environmental impact. |
| A29: We contemplate energy savings in order to get high levels of efficiency. |
| A30: We attached very high value to the introduction of alternative sources of energy. |
| A32: We are aware of the relevance of planning investments to reduce the environmental impact. |
| A33: We are in favour of gas emission reductions and waste products recycling |
| A34: We have a positive predisposition to use, to buy or to product ecological goods. |
| A35: We appreciate using recyclable packing |

Table 8: Validated scale for Innovation

| |
|--|
| Innovation |
| I1: We try to carry on investment and development I+D projects |
| I2: We have put into the market new products or services |
| I3: We have introduced new practices to foster entering in new national markets |
| I4: We have introduced new practices to foster entering in new international markets |
| I5: We are aware of the importance to work as a network and we have created new alliances or associations. |
| I6: We have improved our process or modes of production and/or distribution. |
| I7: We have intensify technologies of information and communication |
| I8: We have increased our presence in Internet |
| I9: We are started changes in the marketing area (design, packing, prices...) |
| I10: Our company have introduced new methods considering certification rules |
| I11: We have developed internal or external employee training in order to increase knowledge and creativity in the firm. |
| I12: We have started new managerial practices related to the organization of work and the structure of the firm. |
| I13: We have introduced standards of production or customer management systems considering social and environmental aspects. |

Table 9: Validated scale for Performance

| |
|---|
| Performance |
| D6: Level of satisfaction and fidelization of customers |
| D7: Satisfaction and retention of the best employees |
| D8: Market positioning, image and reputation |

Table 10: Validated scale for Competitive Success

| |
|---------------------|
| Competitive Success |
|---------------------|

| |
|--|
| C1: Quality in human resources management |
| C2: Employees Training and development levels |
| C3: Manager Capabilities |
| C5: Quality of products and services |
| C6: Organizational quality and administrative management |
| C7: Technological resources and information systems |
| C8: Transparency of our financial management |
| C9: Values and corporate culture cohesion |
| C10: Market knowledge, Know-how and accumulated experience |

It can be concluded that the scales have been validated. As it have been shown, all variables in the model have reliable indicators (the three sub-constructs conforming the CSR, and the three first order constructs such as innovation, *performance* and competitive success) indicating good correlations between each construct and their indicators and explaining around the 50% of the variance. At the same time, constructs in the study show acceptable Cronbach's Alfa and AVE values and high construct reliability. Convergent validity and discriminant validity results have been also acceptable, assuring the validity of the scales to measure the constructs proposed and their relationship.

7. CONCLUSIONS AND LIMITATIONS OF THE STUDY

The analysis presented is a preliminary step to validate the structural model as evidence of the link between SR actions and the benefits the company gets for being responsible. The validation of the model that empirically and reliable includes these linkages will help entrepreneurs and managers understand why they should pay attention to issues relating to the SR and what they could expect to make efforts towards social and environmental performance, more beyond economic one.

The defined and validated SR scale in this study permit to determine to what extent the orientation to SR is a determinant variable on the companies' performance in Extremadura and what role plays the innovation and competitive success as mediating

variables of that relationship. It is considered that the present work we have defined a set of indicators that define SR, as a result of a dynamic process that informs business actions, rather than the end itself of the organization. In this regard, and according to Keeble *et al.* (2003), even though the indicators can not be established in a unique and perfect way for organization, in case of obtaining the definition of a simple, as presented, the important significance will come through the implementation and evaluation of the practice, analyzing their application at certain intervals to build a proper and fluid dialogue between the different levels of the organization that allows continuous improvement and the extent of competitiveness.

The large scale defined for SR composed of 35 initial indicators has been reduced to 21 ones which maintain the balance between social, economic and environmental aspects state by priori theory and empirical evidence. In this sense, our analysis corroborates the classical dimensions targeted.

When we look at the indicators that persist in the final scale and explain SR in the context of the Autonomous Community of Extremadura, and related with other strategic variables, we find interesting results that will guide future academic works and will serve to management support of businesses which are seeking to improve on their responsibility aspects. Starting with the social dimension, indicators such as concern for the disability or participation in corporate volunteering projects, that start to gain size in SR of Spanish companies as strategic axis (Gallardo *et al.* 2010), are not among the validated indicators. This circumstance is apparently linked to the fact that analyzed companies are mostly SMEs and unable to address issues of SR still only available to large companies. However, and for the same reason, if we observe the importance of employee-related issues in the social dimension of scale achieved.

Regarding the economic dimension of the scale, it is showed the importance of the consumer, providing high quality at fair prices, but the analysis has been dismissed as explanatory indicators of this dimension aspects related to the products security or the implementation of efficient management systems of such complaints, which would

indicate a higher level in terms of concern for the issues mentioned above. Nor indicators related to preference of local suppliers or linked to fair trade have been remained as part of a theoretical concept of responsibility, it may not yet be available to all companies which want to be responsible.

And finally and in favour of the orientation to SR of entrepreneurs of businesses in Extremadura, the indicators of environmental dimension that remain in the scale provide a complete overview of this aspect and are a guarantee for the future of responsible regional businesses because of the relevance they are having on the overall context of SR.

Related to the other scales we have to note the good performance of innovation. In this sense, the indicators originally proposed have been kept although the analysis results also warned us of its complexity and the need of approach one step adjusted to its true composition in the Extremadura region. Respect to the performance variable it has been explained by three indicators unconventional, despite having started from a sufficiently broad range and complete of indicators, but fully captured its essence to include the result to both internal customers (employees), as outside and the overall position in the market, including the reputation. In conclusion we indicate that the competitive success variable also retains a wide range of indicators that reflect all its facets.

Even it has come to define a broad scale and sufficiently validated, we consider some limitations of the study, which are: a) *Those derived from the elaboration of presented survey*: non-prior existence of valid and generally accepted scales for the constructs under review has had to design an own survey, based on some basic literature and specially using the logic of working in companies of Extremadura; b) *The derived from the telephone survey* (for achieving each of the 777 surveys it has been necessary to issue an average of 24.83 calls; c) *The derived of the person who has answered the questionnaires*: the survey was aimed at executives of companies in Extremadura, with a particular position and view of the issue of SR. The approach offered comes from, therefore, only from the perception that this group has shown, and it may in some way

condition a holistic approach to SR. However, it is considered that this study will shortly be reinforced by a multistakeholder approach and can be cross views and perceptions of them; d) *Those derived of undertaking the study in total for all sectors of businesses in Extremadura*: we understand that if the study is conducted by sectors it could be more accurately target the questions in the survey; e) *The ones derived from the non existence of previous regional studies similar to the proposed*: however, from the beginning it was considered that this reason that a priori could be seen as a limitation, later could become a favourable outcome for the research group, for the University of Extremadura and for the Autonomous Community, to qualify as a pioneer in the academic field; f) *The regional area which includes the work*: Although it is considered that the results are extrapolated to a national or even international, as by considering the perceptions of managers of a group of companies or organizations, without discrimination of size, industry or geographic location.

However, given the indicated limitations, the work is considered as a pioneer one and can be considered a starting point for measuring the points raised in other regions and encourage their implementation at the national, and even international level. We also indicate that work will continue using validated measurement scale for the contrasting of a structural model to analyze the causal relationship between CSR orientation of the companies with the variables: innovation, performance and competitive success. The results of this model will indicate that if CSR influences or largely explains the competitive success will be an interesting strategy to be developed by the companies.

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