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# Entrepreneurial orientation and export intensity: Examining the interplay of organizational learning and innovation

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### ABSTRACT

Nowadays how to be a successful exporter has reach great importance. Some studies on the entrepreneurial orientation literature highlights the attitude of the manager to make risky strategies such as strategies toward exports. But might the CEO's attitude toward entrepreneurship be sufficient to achieve greater SMEs export performance? Through an analysis of a database of Spanish and Italian SMEs, we find that entrepreneurial orientation is a managerial attitude that enhances exports when managers also make efforts in organizational learning and innovation. Being entrepreneurially oriented is important, but it might not be sufficient for increasing export performance if the company is not able to learn and to innovate.

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## 1. Introduction

In an increasingly globalized environment, exporting plays a vital role in the strategies of Small and Medium Enterprises (SMEs) (Golovko & Valentini, 2011). Exporting is a straightforward internationalization initiative widely used by SMEs. It allows them to sell their products in foreign markets and, as a result, benefit from some economies of scale. Moreover, exporting can be done with a less resource-laden approach as compared with alternative foreign market entry modes (Morgan, Katsikeas, & Vorhies, 2012). As a result, exports greatly affect SMEs overall performance. In fact, it has been used as a proxy of SMEs general performance (Stoian, Rialp, & Rialp, 2011).

Firms' survival and expansion is strongly dependent on a better understanding of the determinants that influence their export performance (Sousa, Martínez-López, & Coelho, 2008, p. 344). The key issue is how to be a successful exporter. In response to this question, an influential research stream has explored the factors that are critical to SMEs' export success (Morgan et al., 2012; Sousa et al., 2008). In this context, we find the entrepreneurial orientation (EO) literature that highlights the attitude of the chief executive officer (CEO) to make risky strategies, such as strategies toward

exports. It claims that most export operations are set in motion by entrepreneurship as its core elements (i.e., ability to innovate, acceptance of risk, and adoption of a proactive stance) can explain a firm's decision to pursue foreign market opportunities (Balabanis, Theodosiou, & Katsikea, 2004; Dimitratos & Jones, 2005; Omri & Becuwe, 2014; Oviatt & McDougall, 2005). This entrepreneurship role in a firm's decision to engage in exporting activities has been reported in research on new ventures (e.g., Yiu, Lau, & Bruton, 2007), SMEs (e.g., Javalgi & Todd, 2011) and born-global firms (e.g., Knight & Cavusgil, 2004). But might the CEO's attitude toward entrepreneurship be sufficient to achieve greater SMEs export performance? This paper's main contribution is based on an in-depth analysis of the relationship between EO and SMEs export intensity by examining the steps between both. We argue that EO on its own might not enough to give rise to exports and we propose a model in which entrepreneurial orientation (EO) increases export intensity through the mediation of organizational learning capability (OLC) and innovation performance. Both organizational learning and innovation have recently been shown to have a close connection with EO (Blackburn & Kovalainen, 2009; Cope, 2003; Ireland & Webb, 2007; Wang, 2008) and export intensity (Knight & Cavusgil, 2004).

Innovation can be defined as the successful implementation of new ideas (Amabile, Conti, Coon, Lazenby, & Herron, 1996). This understanding includes novelty and usability as two indispensable conditions. Thus, innovation requires new ways to solve problems and achievement of commercial success. The importance of innovation for firms' long-term outcomes has been widely

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reported in the EO literature and exports. In fact, Schuler (1986) understands entrepreneurship as the practice of innovating, and claims that what distinguishes entrepreneurial from non-entrepreneurial firms is the rate of innovation. And, some previous studies have found that innovation increases export performance (Nassimbeni, 2001; Lachenmaier & Wößmann, 2006; Lages, Silva and Styles, 2009).

With regard to organizational learning, it consists of the acquisition, dissemination and use of knowledge (Argote, McEvily, & Reagans, 2003), and is therefore an extremely useful process for generating new ideas. It is understood that a manager with entrepreneurial orientation is capable of creating a learning organization (Hurley & Hult, 1998; Wang, 2008). And, an organization with high capacity to learn outperforms export performance (Johanson & Vahlne, 2009; Villar, Alegre, & Pla-Barber, 2014).

So, our study tries to contribute to the on-going research stream linking entrepreneurial orientation with SMEs export performance showing that organizational learning and innovation mediates this relationship. We aim to shed light on the SMEs export performance literature: being entrepreneurially oriented is important, but it might not be sufficient for increasing export performance if the company is not able to learn and to innovate.

The paper is structured as follows. The next section sets out a conceptual framework and a theoretical review of the connection between entrepreneurial orientation, organizational learning capability, innovation and export intensity. In line with this theoretical review, a number of research hypotheses are put forward in the context of SMEs. In the following section, we explain our methods. We then describe the design of the survey, addressed to SMEs in the Italian and Spanish ceramic tile industry, and the measures and the analyses used in this study. Finally, the results and conclusions are presented in the last two sections of the paper.

## 2. Conceptual background and hypotheses

A firm's strategic posture can be established along a continuum ranging from conservative to entrepreneurial (Covin, 1991). "Conservative firms" tends to be risk-adverse, non-innovative, and reactive, whereas "entrepreneurial firms" tend to be risk-takers, innovative and proactive. This conservative-entrepreneurial conceptualization is consistent with earlier conceptualizations developed in the management and organization theory literature. For example, *prospector* firms are strategically similar to *entrepreneurial firms* (Miles & Snow, 1978) and *defender* and *adapter* firms resemble conservative firms (Miles & Snow, 1978; Mintzberg, 1973).

Yeoh and Jeong, (1995, p. 99) argue that the conservative-entrepreneurial dichotomy also shares similarities with some of the dichotomies developed in the export literature: active-reactive (Piercy, 1981), aggressive-passive (da Rocha, Christensen, & da Cunha, 1990; Tesar & Tarleton, 1982), proactive-reactive (Johnston & Czinkota, 1982), active-passive (Eshghi, 1992) and innate-adoptive (Ganitsky, 1989). Following Covin and Slevin (1989), we consider entrepreneurial orientation (EO) as a managerial attitude with three key dimensions: the incorporation of frequent or radical innovation, competitive orientation, and aggressive or proactive decisions that involve high risk. We argue that, in the current context of globalization, SMEs need more and more to be proactive in their pursuit of opportunities in overseas markets. Entrepreneurially oriented SMEs are more able to detect export opportunities, thereby achieving superior levels of export intensity. Considering the above, we put forward the following hypothesis:

**H1.** EO positively affects export intensity of SMEs.

On the other hand, it is generally accepted that the ability to innovate is one of the main factors contributing to create competitive advantage, especially in terms of exports

(Lachenmaier & Wößmann, 2006; Nassimbeni, 2001; Pla-Barber & Alegre, 2007; Roper & Love, 2002; Wakelin, 1998). In fact, Rogers (2004) claims that innovative firms will tend to enter foreign markets in order to increase sales volume and spread the fixed costs of innovation over a larger number of units. Moreover, innovation confers market power and, as a consequence, facilitates exports (Quintás, Vázquez, García, & Caballero, 2009). In the case of SMEs that normally face significant disadvantages in the marketplace in terms of managerial expertise, access to capital, and experience curve effects, managerial efforts should focus on a specific growth strategy. In this vein, Golovko and Valentini (2011) recently found that the adoption of an innovative strategic posture by SMEs positively influences the adoption of an exporting strategy. Therefore;

**H2.** Innovation performance positively affects exports intensity of SMEs.

However, we find support to argue that this positive effect might be directly influenced by EO. In fact, a deeper look into the relationship between EO and exports reveals that the common thread running through many of the studies on corporate entrepreneurship is innovation (Rauch, Wiklund, Lumpkin, & Frese, 2009). Innovation is a crucial factor in the firm's outcomes as a result of developments in the competitive environment (Newey & Zahra, 2009). The importance of innovation for SMEs' long-term outcomes has been widely reported in the literature. In fact, Schuler (1986) understands entrepreneurship as the practice of innovating, and claims that what distinguishes entrepreneurial from non-entrepreneurial firms is the rate of innovation. EO could therefore be considered as an antecedent of innovation performance in the context of SMEs.

Considering the above, innovation performance may represent one important trigger, influenced by EO that could have a boosting effect on exports. Therefore, we suggest that:

**H3.** Innovation performance mediates the effect of EO on export intensity of SMEs.

Further still, firms that are able to learn about other organizations (customers, suppliers and competitors), market evolution and technological changes stand a better chance of detecting and acting upon dynamic environments (Wu & Fang, 2010). Organizational learning consists of the acquisition, dissemination and use of knowledge (Argote et al., 2003), and is therefore an extremely useful process for generating new ideas. Previous research suggests that organizational learning affects positively export intensity (Bengtsson, 2004). A number of previous studies have viewed exporting as a process of learning and knowledge accumulation during which the company identifies and exploits opportunities abroad (Brouthers, Nakos, Hadjimarcou, & Brouthers, 2009; Li, Nicholls, & Roslow, 1998). Knowledge renewal and exploitation regarding foreign markets may increase exports (Balabanis et al., 2004) because firms that learn efficiently from their experience are able to export faster and with fewer mistakes. In fact, following the Uppsala model which explains the characteristics of the internationalization process of the firm we meet the term commitment; firms change by learning through the commitment decisions that they make to strengthen their position in the foreign market (Johanson & Vahlne, 2009). Experience build firm's knowledge of a market, and that body of knowledge influences decisions about the level of commitment and the activities that subsequently grow out of them: this leads to the next level of commitment, which engenders more learning still (Johanson & Vahlne, 2009, p. 1412). So, the more learning generated through the internationalization process, the more committed a firm will be.

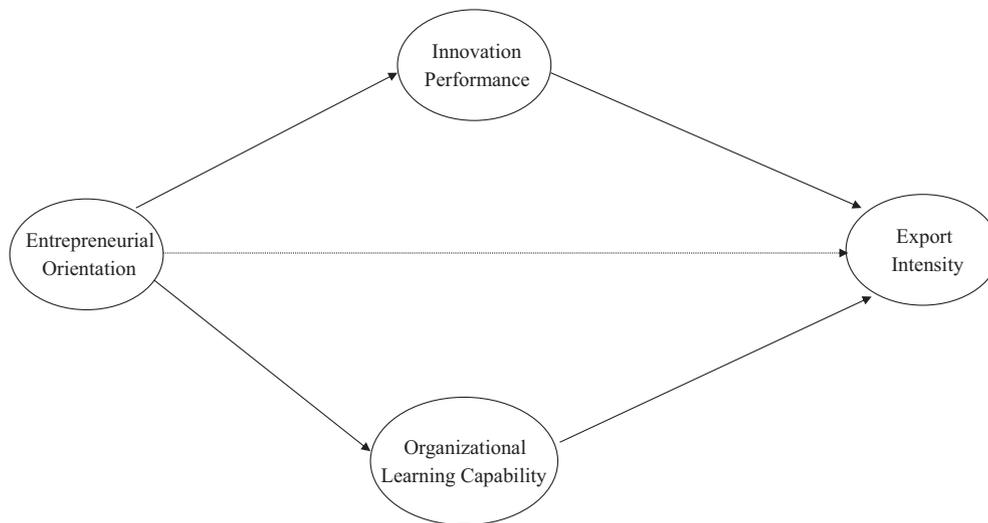


Fig. 1. Model.

From a managerial point of view, looking at the facilitating factors of the organizational learning process might be a first step toward a learning organization. We therefore focus on organizational learning capability (OLC), which is defined as the organizational and managerial characteristics or factors that facilitate the organizational learning process or allow an organization to learn (Dibella, Nevis, & Gould, 1996; Goh & Richards, 1997; Hult & Ferrell, 1997). Following Chiva and Alegre (2009), we conceive OLC as a set of five facilitating factors: experimentation, risk-taking, interaction with the environment, dialog and participative decision-making.

As a result, fostering OLC represents a way in which managers attempt to implement initiatives that facilitate learning processes. Exporting might be understood as a learning process because through it firms are able to be adapted to international customers (Balabanis et al., 2004). In SMEs these learning processes are easily implemented due their flexibility. Considering the above:

**H4.** OLC positively affects export intensity of SMEs.

However, we find support to argue that this positive effect might be directly influenced by EO. A deeper look into the relationship between EO and performance reveals that the common thread running through many of the studies on corporate entrepreneurship is OLC (Wang, 2008). In this vein, Dess et al. (2003) report that entrepreneurship has a direct effect on organizational learning, which is considered as a mediating variable between entrepreneurship and knowledge.

Entrepreneurial firms encourage creativity, collaboration, and dialog (Cope, 2003; Covin, Green, & Slevin, 2006; Fletcher & Watson, 2007). Similarly, Zahra, Nielsen, and Bogner (1999) consider that EO promotes and supports organizational learning and learning values, such as teamwork or openness. EO might be considered as a basic managerial approach to support learning within organizations. Managers with an EO are more able to be open to the changes and this is key with the complexities associated with learning when a firm enters in a foreign market. For example, following the Uppsala model, a firm entering into a new market network has to identify the relevant market actors in order to determine how they are connected in often invisible complex patterns (Johanson & Vahlne, 2009, p. 1415).

Moreover, the development of capabilities and its application over time makes firms embedded and distinctive, providing a source of competitive advantage (Tippins & Sohi, 2003). Considering the above, OLC may represent one important trigger,

influenced by EO, which could have a boosting effect on exports. Therefore, we suggest that:

These lines of argument lead us to the following hypothesis (Fig. 1):

**H5.** OLC mediates the effect of EO on export intensity of SMEs.

### 3. Method

#### 3.1. Sample and data collection

Processes related to organizational learning and innovation, as well as the outcomes of those processes, might differ substantially between industries (Santarelli & Piergiovanni, 1996). For this reason, we test our hypotheses by focusing on a single industry in an international context: Italian and Spanish ceramic tile producers. Carrying out a single-industry analysis is also interesting because it facilitates the identification and measurement of critical resources in an industry (Hitt, Bierman, Shimizu, & Kochlar, 2001). Furthermore, because our target population is relatively homogeneous, we control to a certain extent for size, industry, and national culture contingency factors (Lyon, Lumpkin, & Dess 2000; Rauch et al., 2009).

Ceramic tile industry presents some uniqueness that makes it particularly suitable for our purpose. The first is that it is highly globalized and its firms show an intense export growth thanks to their leadership in design and technology. Italian and Spanish ceramic tile production represented 77% of EU production (Ascer, 2006). The world's biggest ceramic tile producer is China, followed by Spain, Italy, Brazil and Turkey. The second characteristic that properly fits to our study is that Italian and Spanish tile industry is made by SMEs. Both, Italian and Spanish ceramic tile producers are organized in a similar way; they do not generally exceed an average of 250 workers and they tend to be geographically concentrated in industrial districts: Sassuolo in Northern Italy and Castellón in Eastern Spain (Valencia Chamber of Commerce, 2004). We deliberately focus on SMEs within this industry. According to the European Commission (2003), SMEs are defined in the European Union as firms employing between 10 and 250 people.

Survey fieldwork was undertaken from June to November 2004. A pre-test was carried out on four technicians from ALICER, the Spanish Center for Innovation and Technology in Ceramic Industrial Design, to ensure that the questionnaire items were

fully understandable in the context of the ceramic tile industry. The questionnaire was applied using a 7-point Likert scale.

A key information technique consistent with previous studies was used to obtain data (Lyon et al., 2000). The questionnaire was addressed to various company directors. The General Manager answered the items dealing with EO (Escribá-Esteve, Sánchez-Peinado, & Sánchez-Peinado, 2008; Moreno & Casillas, 2008). The Product Development Manager responded to the innovation performance questions, since this manager has knowledge of all activities concerning innovation (Calantone, Cavusgil, & Zhao, 2002). Finally, the Human Resources Manager answered items dealing with OLC (Wang, 2008). Appointments were made with respondents so that the questionnaire could be completed during a personal interview. Following Malhotra (1993), we offered a feedback report on the survey results to the participating firms in order to encourage response.

Export intensity data were obtained through secondary objective sources, with the collaboration of the Italian and Spanish ceramic tile associations (Ascer, 2009; Assopiastrelle, 2009). We used export data from 2006. Thus, we examine the effect of OLC and product innovation performance on the dependent variable with a time lag of two years. By combining primary and secondary data from two different key informants we limit potential statistical problems such as common method bias.

Our study received a total of 150 completed questionnaires, 57 from Italian firms and 93 from Spanish firms. The sample obtained represented around 50% of the target population in 2004 (Assopiastrelle, 2006; Valencia Chamber of Commerce, 2004). Both the number of responses and the response rate can be considered satisfactory (Spector, 1992; Williams, Garvin, & Hartman 2004). Non-response bias was assessed through a comparison of sample statistics with known population values such as annual sales volume or number of employees. The websites of the Italian (Assopiastrelle, 2006) and the Spanish (Ascer, 2006) associations of ceramic tile producers provide this information for most of the firms in the industry.

## 3.2. Measures

### 3.2.1. Entrepreneurial orientation

EO was measured with the widely used nine-item, 7-point scale proposed by Covin and Slevin (1989). This measurement scale has been applied satisfactorily by a number of empirical papers (Escribá-Esteve et al., 2008; Green, Covin, & Slevin, 2008).

### 3.2.2. Organizational learning capability

In light of the OLC concept adopted in our theoretical review, we selected the measurement instrument developed by Chiva and Alegre (2009). This is a fourteen-item, 7-point scale that includes five different dimensions consistent with the previous literature: experimentation, risk-taking, interaction with the external environment, dialog and participative decision-making (Appendix).

### 3.2.3. Innovation performance

We conceive innovation performance as a construct with three different dimensions consistent with the previous literature: product and process innovation effectiveness, and innovation efficiency (Appendix). These dimensions have been widely discussed in innovation research (Brown & Eisenhardt, 1995; OECD, 2005). The OECD Oslo Manual provides a detailed measurement scale for assessing the economic objectives of product and process innovation, and we propose this scale to measure product and process innovation effectiveness. This scale was devised by the OECD to provide some coherent drivers for innovation studies, thereby achieving greater homogeneity and comparability among innovation studies. Nowadays, many

innovation surveys use this widely validated scale (Alegre, Lapedra, & Chiva, 2006; INE, 2008).

Innovation efficiency is the third dimension considered to measure innovation performance. It is widely accepted that innovation efficiency can be determined by the cost and the time involved in the innovation project (Brown & Eisenhardt, 1995; Chiesa, Coughlan, & Voss, 1996; Wheelwright & Clark, 1992).

### 3.2.4. Export intensity

Export intensity represents the share of exports in total sales for a particular firm. This variable is a widely used indicator in empirical international marketing research (Majocchi, Bacchiocchi, & Mayrhofer, 2005).

### 3.2.5. Control variables

Firm size and location were included as control variables in the overall model since they might explain variation in export intensity. Firm size affects the endowment of significant inputs for the business process, such as money, people and facilities, and has been shown to influence export intensity. Large companies are considered to possess more financial and human resources and higher economy of scale levels. These characteristics facilitate their entry into international markets (Leonidou, Katsikeas, & Piercy, 1998). In addition, small size is closely related to a number of export barriers (Piercy, Kaleka, & Katsikeas, 1998). In our study it has been measured with the sales turnover and with the number of employees.

Respondent firms were all located in the Italian (Sassuolo, in northern Italy) or the Spanish (Castellón, in eastern Spain) ceramic tile industrial districts. Location was included in the model (1, located in Italy; 2, located in Spain) to control for any significant impact on performance derived from location in a particular industrial district that provides access to a specific institutional setting, a geographical market for labor, and for energy.

## 3.3. Analyses

Structural equations modeling (SEM) were used to perform the primary analyses of the data set. SEM has been developed in a number of academic disciplines to substantiate theory. SEM allows for the inclusion of latent variables that can only be measured through observable indicators. In this study, concepts such as EO or OLC are difficult to observe. Furthermore, SEM assesses measurement errors and allows all the relationships proposed in the conceptual model to be estimated simultaneously (Bou-Llusar, Escrig-Tena, Roca-Puig, & Beltrán-Martín, 2009; Hair, Anderson, Tatham, & Black, 1998). EQS 6.1 software was used to estimate the models for our research hypotheses.

## 3.4. Psychometric properties of measurement scales

The psychometric properties of the measurement scales were assessed in accordance with accepted practices (Tippins & Sohi, 2003), and included content validity, reliability, discriminant validity, convergent validity, and scale dimensionality. Table 1 exhibits factor correlations, means, and standard deviations, as well as coefficient alphas and composite reliability indicators.

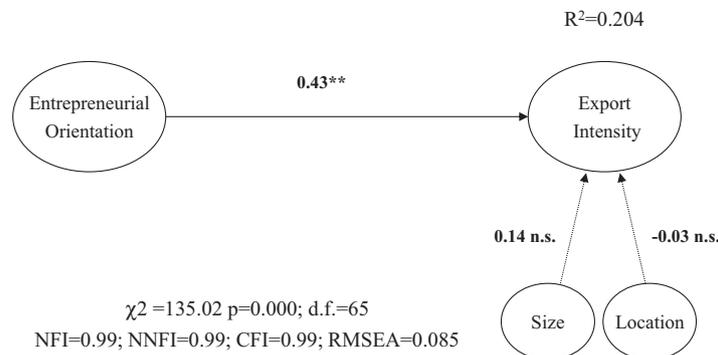
## 4. Results

Figs. 2 and 3 show the results of the structural equations analysis. Following Tippins and Sohi (2003), we carried out two analyses to examine the differences between the two models. In the first model, we included the direct relationship between EO and export intensity taking into account both control variables, size and location. In the second model we include all the items and

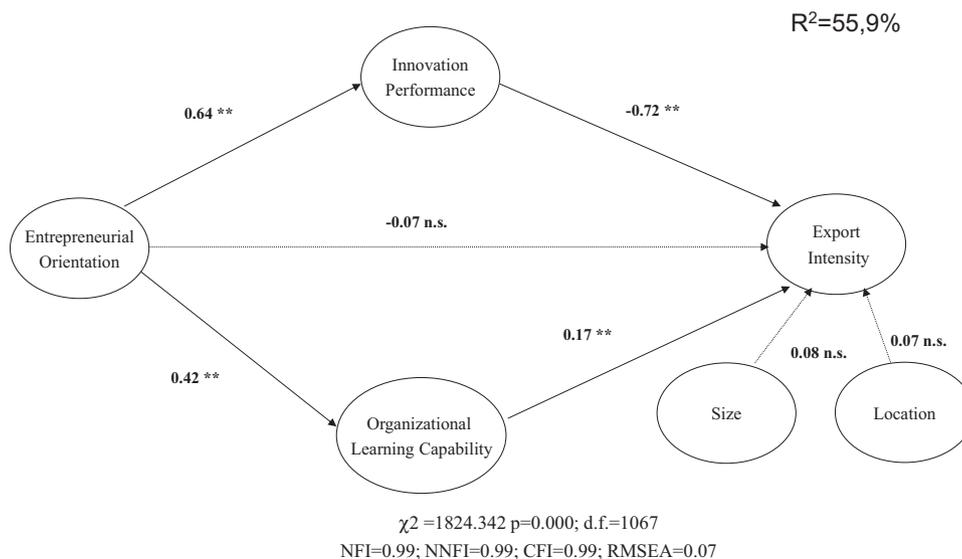
**Table 1**  
Factor correlations, means, standard deviations, and alpha reliabilities

	Mean	S.D.	1	2	3	4	5	6	7	8	9	10	11	12
1. EXPERIMENTATION	5,08	1,12	( $\alpha = 0.76$ / CR = 0.77)											
2. RISK TAKING	4,30	1,27	0,45**	( $\alpha = 0.63$ / CR = 0.64)										
3. ENVIRONMENTAL T.	4,58	1,31	0,56**	0,52**	( $\alpha = 0.81$ / CR = 0.81)									
4. DIALOGUE	5,36	1,07	0,59**	0,27**	0,47**	( $\alpha = 0.84$ / CR = 0.85)								
5. PARTICIPATIVE D.	4,38	1,31	0,41**	0,45**	0,59**	0,39**	( $\alpha = 0.85$ / CR = 0.83)							
6. PRODUCT EFFECTIV.	4,90	1,10	0,42**	0,24**	0,37**	0,53**	0,22**	( $\alpha = 0.90$ / CR = 0.90)						
7. PROCESS EFFECTIV.	4,68	1,06	0,36**	0,23**	0,37**	0,49**	0,28**	0,83**	( $\alpha = 0.93$ // CR = 0.63)					
8. INNOVATION EFFICIENCY	4,46	1,18	0,44**	0,36**	0,42**	0,44**	0,36**	0,76**	0,72**	( $\alpha = 0.90$ / CR = 0.83)				
9. SIZE	2,74	0,97	0,07	0,15	0,13	0,05	0,10	0,08	0,10	0,10	( $\alpha = 0.76$ / CR = 0.76)			
10. LOCATION	1,62	0,49	-0,11	-0,41**	-0,28**	0,12	-0,41**	0,08	0,00	-0,22	-0,13	-		
11. EXPORT INTENSITY	41,63	19,85	0,39**	0,20**	0,36**	0,51**	0,28**	0,72**	0,63**	0,66**	0,13**	0,04	-	
12. ENTREPRENEURIAL ORIENTATION	3,95	1,02	0,26**	0,08	0,19	0,35**	0,11	0,55**	0,38**	0,48**	0,16	0,23**	0,40**	( $\alpha = 0.80$ / CR = 0.77)

N= 150; Alpha reliabilities and Composite Reliabilities are shown in brackets on the diagonal.  
\*\* Correlation is significant at the 0.01 level.



**Fig. 2.** Direct model.



**Fig. 3.** Mediating model.

dimensions described in Section 3.2. The chi-square statistic is significant for both models, but other relevant fit indices suggest a good overall fit (Tippins & Sohi, 2003).

The mediating effect of innovation performance and OLC on the relationship between EO and SMEs export intensity (Hypotheses 3 and 5) is established due to the following conditions (Tippins & Sohi, 2003). Firstly, there is a positive relationship between EO and innovation performance, and between EO and OLC. Secondly, there is a positive relationship between innovation performance and OLC with SMEs export intensity. Thirdly, the direct effect of EO on SMEs export intensity seen in the direct model diminishes and is non-significant in the partial mediation model (Fig. 2). These conditions provide compelling evidence for the full mediating effect of innovation performance and OLC on the relationship between EO and export intensity, lending substantial support to Hypotheses 3 and 4. This mediation relationship therefore represents a significant contribution to our understanding of the positive influence of EO on SMEs export intensity that we present in the first hypothesis. That is, our first hypothesis regarding the positive relationship between EO and export intensity is supported (as seen in the direct model), but the inclusion of the mediating variables explains more variance in export intensity than the direct model ( $R^2 = 55.9\%$  vs.  $R^2 = 20.4\%$ ).

Results also provide support for Hypotheses 2 and 4. There is a positive relationship between innovation performance and export intensity and, also the direct effect of OLC on export intensity of SMEs is significant. Therefore, EO might be regarded as an antecedent of a firm's OLC and innovation performance.

Control variables have a low and non-significant impact on export intensity.

## 5. Discussion

In an international context exporting is key for SMEs because this strategy allows them to make profit from economies of scale with a low resource-laden approach compared with other strategies of different entry modes. So, in response to the question about how to be a successful exporter, a research stream has explored factors such as EO. However, although EO is generally considered to have a positive impact on SMEs export intensity, there are some previous controversial findings (Dimitratos, Lioukas, & Carter, 2004) on why some SMEs might manifest low export intensity while their managers show a clear EO attitude. We claim that a broader analysis of the intermediate steps is necessary. And, in doing so, we suggest that the organizational learning and innovation links would be missing variables that mediate the relationship EO-export intensity.

Our study demonstrates that OLC and innovation performance play a mediating role; EO enhances OLC and innovation performance, which in turn enhance export intensity. These findings make an important contribution to the recent extension of the EO-SMEs firm performance research stream focusing on the intermediate links between EO and different measures of firm performance (Rauch et al., 2009; Wang, 2008), in our case SMEs export intensity. Our study provides a wider picture of proving that both, OLC and innovation are reinforced with an EO and as a consequence export intensity is also increased.

We also contribute to the organizational learning literature; the relationship between EO and SMEs export intensity cannot simply be considered as a direct relationship, but it is also conditional or dependent on OLC, the organizational factors that facilitate the organizational learning process. Organizational learning has been highlighted as a novel area of research in entrepreneurship (Blackburn & Kovalainen, 2009); we claim that much of its relevance for entrepreneurship lies in its effects on export intensity. Our conclusion is that EO is a managerial attitude that

must be supported by certain organizational conditions which facilitate learning and have positive implications on SMEs export intensity. Furthermore, this research also contributes to the organizational learning literature by suggesting the importance of managers and their attitudes and posture in order to effectively implement the factors or conditions to learn within organizations (Hutzschenreuter, Pedersen, & Volberda, 2007).

With regard to the innovation literature; we also contribute demonstrating that the relationship between EO and SMEs export intensity is conditional or dependent on innovation. This means that innovator companies with an EO will be likely to achieve competitive advantage by benefiting from exports. To be entrepreneurially oriented might not be sufficient for increasing SMEs export performance. However it contributes to increasing innovation performance and consequently exports intensity is also enhanced.

### 5.1. Implications for practitioners

Our findings provide a general guideline to managers on how to make the most of their entrepreneurial attitude in terms of exports. According to our findings, implementing initiatives to foster organizational learning processes as well as innovation outcomes could be a wise decision if an SME is to fully benefit from its EO.

More precisely, SMEs' managers should develop initiatives to boost the OLC dimensions—experimentation, risk-taking, interaction with the environment, dialog, and participative decision-making—so that learning could be more fruitful for exports. Experimentation and risk-taking have to do fostering creativity and looking for new solutions by trying new things. Interaction with the environment refers to being aware of what is going on out of the borders of the firm in terms of new procedures, new technologies or new markets. Dialog and participative decision-making enhance knowledge sharing inside the organization. The employees involved on exports activities might have plenty of interesting ideas on how to improve their day-to-day operations (Chiva, Ghauri, & Alegre, 2014). But these ideas should be encouraged to be put into practice.

Additionally, managers should take actions to enhance product and process innovation effectiveness as well as project innovation efficiency. These actions are going to play an important role in marketing new products that are more attractive and/or more efficient in international markets.

This study has also important practical implications in the case of SMEs in countries experiencing demand contraction due to the current economic crisis. Exporting SMEs in countries in economic recession are in a better position to deal with reductions in domestic sales than non-exporters SMEs. Their export turnover leads to an increase in their general turnover and, most importantly, it provides them with liquidity, one of the most problematic issues at present for SMEs in regions in recession such as Southern Europe (Carbó-Valverde, Rodríguez-Fernández, & Udell, 2011).

Entrepreneurial SMEs need to build a learning organization and be good innovators if they wish to increase their degree of export and thus their chances of survival. Having an EO is not sufficient.

### 5.2. Limitations and future research directions

Our results must be viewed in the light of the study's limitations. Because this research is based on a single industry analysis, it has benefited from dealing with firms that are likely to be economically and technologically homogeneous. However, it must be stressed that single industry conclusions should be considered with caution. Further research in other industries is needed to empirically assess the effect of EO on OLC and innovation performance.

Furthermore, as with all cross-sectional research, the relationship tested in this study represents a snapshot in time. However, because our export intensity measure covers a period of two years, this problem is reduced. Future longitudinal studies could assess long-term EO effects in both OLC and innovation performance. Moreover, other traditional entrepreneurship dependent variables such as firm survival and firm growth could be included in the model.

From a content point of view, we have focused on OLC and innovation performance as intermediate links between EO and export intensity. However, other organizational issues related to organizational learning and innovation, such as adaptive and generative learning or human resources interventions (Chiva, Grandío, & Alegre 2010; Sadler-Smith & Badger, 1998; Wang, 2008), could be incorporated in our conceptual model. Future research might examine the role of these concepts on the EO–export intensity relationship.

Finally, our framework is based on organizational learning, innovation, and change within SMEs. In future research

initiatives, this framework could be enriched by including the concept of dynamic capabilities. According to Zahra, Sapienza and Davidson (2006), entrepreneurial orientation can facilitate the development of dynamic capabilities through leveraged recourses and learning processes. Dynamic capabilities arise from learning (Zollo and Winter, 2002; Teece, Pisano and Shuen, 1997; Teece, 2007; Easterby-Smith and Prieto, 2008). The repertory of dynamic capabilities allows the firm to make subsequent changes and adaptations in local practices so that they do not become core rigidities (Leonard-Barton, 1992; Winter, 2003). Moreover, dynamic capabilities could play an important role in explaining both the innovation and the exports outcomes of an SME.

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**Appendix A. Measures of the mediating variables:**

Organizational learning capability measurement scale.

Could you please assess the importance of the following items in your organization?

Dimension	Item	Literature source
Experimentation	EXP1. People here receive support and encouragement when presenting new ideas.	Chiva and Alegre (2009)
	EXP2. Initiative often receives a favorable response here so people feel encouraged to generate new ideas.	
Risk taking	RISK1. People are encouraged to take risks in this organization.	
	RISK2. People here often venture into unknown territory.	
Interaction with the external environment	ENV1. It is part of the work of all staff to collect, bring back, and report information about what is going on outside the company.	
	ENV2. There are systems and procedures for receiving, collating and sharing information from outside the company.	
	ENV3. People are encouraged to interact with the environment: competitors, customers, technological institutes, universities, suppliers etc.	
Dialog	DIA1. Employees are encouraged to communicate.	
	DIA2. There is a free and open communication within my work group.	
	DIA3. Managers facilitate communication.	
	DIA4. Cross-functional teamwork is a common practice here.	
Participative decision making	PDM1. Managers in this organization frequently involve employees in important decisions.	
	PDM2. Policies are significantly influenced by the view of employees.	
	PDM3. People feel involved in main company decisions.	

Innovation performance measurement scale.

Please state your firm performance compared to that of your competitors over the last three years with regard to the following items

Dimension	Item	Literature source
Product innovation effectiveness	PT1. Replacement of products being phased out.	OECD (2005)
	PT2. Extension of product range within main product field through new products.	
	PT3. Extension of product range outside main product field.	
	PT4. Development of environment-friendly products.	
	PT5. Market share evolution	
	PT6. Opening of new markets abroad.	
	PT7. Opening of new domestic target groups.	
Process innovation effectiveness	PS1. Improvement of production flexibility.	
	PS2. Reduction of production costs by cutting labor cost per unit.	
	PS3. Reduction of production costs by cutting material consumption.	
	PS4. Reduction of production costs by cutting energy consumption.	
	PS5. Reduction of production costs by cutting rejected production rate.	
	PS6. Reduction of production costs by cutting design costs	
	PS7. Reduction of production costs by cutting production cycle.	
	PS8. Improvement of product quality.	
	PS9. Improvement of labor conditions.	
	PS10. Reduction of environmental damage.	
Project innovation efficiency	EF1. Average innovation project development time.	Brown and Eisenhardt (1995); Chiesa et al. (1996)
	EF2. Average number of innovation project working hours.	
	EF3. Average cost per innovation project.	
	EF4. Degree of overall satisfaction with innovation project efficiency.	

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