LINKING MARKET ORIENTATION, INNOVATION AND PERFORMANCE: AN EMPIRICAL STUDY ON SMALL INDUSTRIAL ENTERPRISES IN SPAIN

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ABSTRACT

Many studies uphold market orientation as a key factor in creating and sustaining a firm's competitive advantage. The present research model explores this topic further by including within the model the links between organizations' innovation outcomes and business performance. In particular, the model empirically tests the mediating role of innovation outcomes in the relationship between market orientation and business performance. The present study uses a sample of 145 firms belonging to the Spanish automotive components manufacturing sector, which is essentially composed of small and medium sized enterprises (SMEs). In order to test and validate our research model and hypotheses, this study and employs partial least squares (PLS).

Keywords: market orientation, innovation outcomes, business performance, SMEs, partial least squares.

INTRODUCTION

Firms are currently competing within an extremely turbulent and dynamic context. Under such conditions, firms are forced to constantly renew their products and services, as these quickly become obsolete. In this sense, the organizations' ability to renew its knowledge bases would provide them an advantage over its competitors in the innovation contest, and hence make them improve its performance (Sanz-Valle, Naranjo-Valencia, Jiménez-Jiménez, & Perez-Caballero, 2011).

Innovation enhances the firms' capacity to face the uncertainty that characterizes the current competing fields. This capability enhances the firm's ability of seeking new opportunities and exploiting the existing ones more efficiently (Matzler, Abfalter, Mooradian, & Bailom, 2013). Moreover, innovation also constitutes a key factor in the creation and sustaining of competitive advantages, which in turn expands business performance. Being innovative involves making the firm's structures more flexible. By virtue of such flexibility, firms find easier to adapt to their business environment, thus enabling them to leverage opportunities better than their competitors (Damanpour & Gopalakrishnan, 2001).

Market orientation is defined as the firm's response to the needs and tastes of the customers (Narver & Slater, 1990). Market orientation places the customer at the very core of its strategy. Therefore MO is linked to an organizational culture typology that emphasizes the customer as the cornerstone of management. Market orientation deals with three main aspects: customer, competitor orientation and coordination between different functions and departments within the firm (Laforet, 2009).

It seems clear that in order to succeed within the new hypercompetitive manufacturing environment, firms ought to be more innovative. To this end, they need to remain up to date of the multiple changes and fluctuations that constantly appear in the market. This involves staying oriented to their customers, proactively adopting a market orientation (MO) strategy (Laforet, 2009). The ultimate aim of developing a market orientation strategy deals with enhancing the firm's innovativeness and performance.

There is plenty of literature positing that market orientation and firm innovativeness are both antecedents and influencers of business performance (March, 1991; Vijande, Pérez, González, & Casielles, 2005). However, few studies assess the indirect effect of MO on BP through innovation outcomes. Therefore, the present paper proposes that and innovation is a mediator of the direct relationship between market orientation and business performance.

The paper proceeds as follows. The next section presents the theoretical background together with the research model and hypotheses arising from the literature review. The third section comprises a description of the research methodology followed in order to test these hypotheses. The forth section presents the results of the data analyses using partial least squares (PLS) path-modeling technique. Finally, the fifth section brings together the discussion, implications, limitations, and directions for future research.

THEORETICAL BACKGROUND

Within this section we develop the theoretical foundations concerning the distinct variables and hypotheses included in the research model.

The Link Between Market Orientation and Performance

Market orientation is defined by Narver and Slater (1990) as a second order multidimensional construct shaped by three dimensions: (i) customer orientation: organizational actions oriented to identify the customers' perceptions, needs and desires and trying to satisfy them through their adapted supply. (ii) competitors orientation: organizational actions oriented to know the competitors' weaknesses, strengths, opportunities and strategies and being able to react and design the proper response. (iii) inter-functional coordination: joint and efficient use of the firm's resources and capacities in order to provide greater value to its customers.

Plenty of empirical works have analyzed the role of market orientation as an antecedent of business performance. However, the assessment of the link between market orientation and performance has aroused inconclusive results, as some research studies failed to find support for this direct relationship (Noble, Sinha & Kumar, 2002). Other studies obtain mixed results (Jaworski & Kohli, 1993).

Nevertheless, the literature in this field widely suggests the existence of a positive relationship between the firms' market orientation, new products success and overall performance (Narver & Slater, 1990; Desphande et al., 1993; Appiah-Adu & Singh, 1998). This positive relationship is explained because market orientation enables firms to generate long-term greater value for its customers (Morgan & Strong, 1998). The market orientation strategy helps firms to obtain vital information about the market needs and trends, and hence, enables them to enhance their decision-making capability and adjust their offer (Jiménez-Jiménez, Sanz-

Valle & Hernández-Espallardo, 2008). Consequently the firm is more connected to the customers' requirements, who will correspond arising higher doses of satisfaction and loyalty (Kohli & Jaworski, 1990).

Some empirical studies such as the one developed by Pelham (2000) that have found a positive relationship between market orientation and financial performance (e.g. growth in sales, gross profit enhancement, etc.). This author argues that organizations will increase their profits when they rely on certain actions and behaviors related with satisfying the customers' needs. Therefore, we posit the following hypothesis (Figure 1):

> *H1: Market orientation relates positively to business performance.*

The mediating role of innovation outcomes on the market orientation-performance link

Market orientation has been extensively assessed with regard to its relation with innovation outcomes. There are several research studies that reveal a positive impact of MO on new products development – especially at the early stages of the product life cycle– and incremental innovations (Atuahene-Gima, 1996; Laforet, 2009).

The organizational innovation process is to a large extent dependent of the amount of information obtained from the market. In this vein, the firm needs to be oriented to the market, this is to be aware of the changes in the customers' needs and behaviors, as well as carefully monitoring what competitors and suppliers are doing (Kohli & Jaworski, 1990).Strong evidence supports the impact of market orientation on firm innovativeness both in manufacturing and service companies (Harryson, 1997; Lukas & Ferrell, 2000).

SMEs continually attempt to attain sustainable competitive advantages over competitors (Palmer, Wright & Powers, 2001). Innovation always encompasses a degree of risk, however, and its implementation never assures successful results. Nonetheless, the literature and most empirical studies posit the existence of a positive link between the firm's innovativeness and business performance. One possible source of competitive advantage may he through either product or process innovations. It is widely accepted that firms that innovate are more efficient, attain higher performance, and are more likely to survive (Damanpour & Schneider, 2006; Leal-Rodríguez et al., 2014). Organizations that promote creativity and innovation are more likely to identify and attract opportunities that might lead to valuable results. Innovation always encompasses a certain degree of risk

and its success in never guaranteed. Most empirical research studies posit the existence of a positive relationship between innovation and performance (Roberts, 1999; Hansen, Nohria & Tierney, 1999).An innovative approach enables firms to deal with a turbulent and dynamic environment and helps them to achieve and sustain long-term competitive advantages (Leal-Rodriguez, Eldridge, Roldán, Leal-Millán & Ortega-Gutiérrez, 2014). In this vein, the proactive embracing of an innovation strategy, can be interpreted as a response to changes within the sector, technological advancements, or the anticipation of customers' trends needs and demands, with the aim of differentiating the organization from its competitors, hence improving its performance (Jansen, Van den Bosch, & Volberda, 2006). Accordingly, we propose the following hypothesis (Figure 1):

H2: Innovation outcomes positively mediate the relationship between market orientation and business performance.

Figure 1. Research model and hypotheses
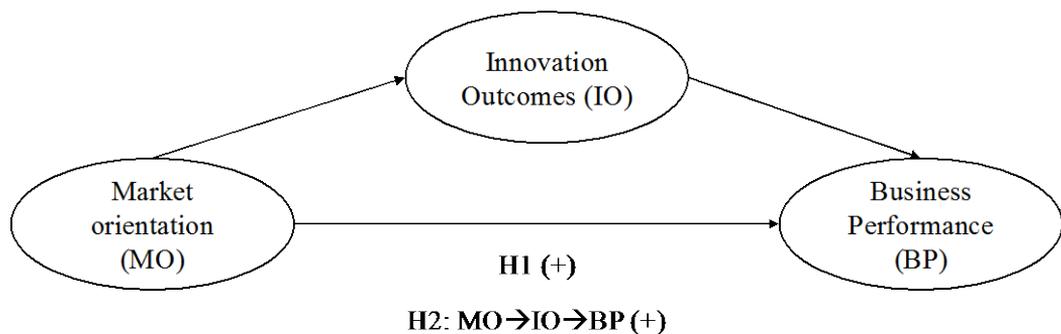
METHODS
Data collection and sample
This research identifies as study population the whole sector of Spanish firms belonging to the automotive components manufacturing industry. The sample was selected on the basis

of a directory that was obtained from Sernauto, the Spanish Association of manufacturers of equipment and components for the automotive industry. From this sector's 906 companies, 418 fulfil the selection criteria (i.e., being knowledge-intensive firms that are

innovation and learning oriented). After two mailing efforts, the outcome is 145 usable surveys (a 34.7% response rate). Questionnaires were answered by top managers.

Measures

The literature review in Section 2 provides the basis for the survey design. This study adapts scales from previous works in which the items and responses appear on a seven-point Likert scale ranging from 1 (completely disagree) to 7 (completely agree). MO is assessed through the scale developed by Narver and Slater (1990). This scale comprises 14 items (five to measure customer orientation, four to measure competitors orientation, and five to measure inter-functional coordination). Building on the previous work of Powell (1995), five items compose the scale for business performance (BP). For the innovation outcomes (IO) variable, this work adapts the eight items that Prajogo and Ahmed (2006) use in their study. Questionnaire items fully appear listed at the Appendix section.

Data analysis

In order to test the research model and hypothesis proposed in this study, we have used partial least squares, a structural equations modeling (SEM) technique. Accordingly with Pearl (2000) structural equations models were developed to enable that qualitative information on cause-effect relationships can be combined with statistical data, and hence, these causal relationships among the variables considered could become evaluated from a quantitative point of view. According to Chin (1998), the origin of structural equations models is in the coupling of the psychometric and the econometric approaches. On the one hand, the first is

responsible for the modeling of concepts such as latent or unobserved variables, indirectly inferred by using indicators or manifest variables, while the second has a predictive approach. Latent variables cannot be observed directly, but they are inferred by means of items, indicators or manifest variables that are directly observable. SEM are essentially multivariate techniques that combine aspects of multiple regression with factorial analysis (Barroso et al., 2007).

To test the research model, the present study uses partial least squares (PLS), a variance-based structural equation modeling (SEM) method. PLS is a suitable technique for use in this study due to the following reasons (Roldán & Sánchez-Franco, 2012): (1) the sample (n = 145) is small; (2) the focus of the study is the prediction of the dependent variables; (3) the research model entails considerable complexity with regard to the type of relationships in the hypotheses; and (4) this study uses latent variables' scores in the subsequent analysis for predictive purposes. The present work uses the SmartPLS software (Ringle, Wende, & Will, 2005) for the simultaneous assessment of the measurement model and the structural model.

RESULTS

The analysis of a PLS model comprises two phases: (1) assessment of reliability and validity of measurement model, and (2) evaluation of structural model.

Measurement model

The assessment of reflective measurement model evaluates model's reliability and validity. Results show that measurement model meets all common requirements. First, reflective individual items are reliable because all standardized loadings are greater than 0.7

(Table 1). Consequently, the individual item reliability is adequate (Carmines & Zeller, 1979). Second, all reflective constructs meet the requirement of construct reliability, since their composite reliabilities (ρc) are greater than 0.7 (Nunnally & Bernstein, 1994) (Table 1). Third, these latent variables achieve convergent validity because their average variance extracted (AVE) surpasses 0.5 level (Fornell & Larcker, 1981) (Table 1). Finally, all variables meet discriminant validity requirements. Confirmation of this validity comes from comparison of the square root of AVE versus the corresponding latent variable correlations (Table 2). For satisfactory discriminant validity, diagonal elements should be significantly greater than off-diagonal elements in the corresponding rows and columns (Roldán & Sánchez-Franco, 2012).

Table 1
Measurement model

CONSTRUCT/dimension/indicator	Loading	Composite Reliability (CR)	Average Variance Extracted (AVE)
MARKET ORIENTATION		0.955	0.876
Customer orientation	0.904		
Competitors orientation	0.963		
Inter-functional coordination	0.940		
INNOVATION OUTCOMES		0.970	0.803
BUSINESS PERFORMANCE		0.920	0.697

Table 2
Discriminant validity

	IO	MO	BP
IO	**0.896**	0	0
MO	0.628	**0.936**	0
BP	0.711	0.870	**0.935**

Diagonal elements (bold) are the square root of variance shared between the constructs and their measures (AVE). Off-diagonal elements are the correlations among constructs. For discriminant validity, the diagonal elements should be larger than the off-diagonal elements.

4.2. Structural model

Table 3 shows the explained variance (R^2) in the endogenous variables and the path coefficients for the three models under study. Bootstrapping (5000 samples) provides t-values that enable the evaluation of relationships' statistical significance in the research model (Roldán & Sánchez-Franco, 2012).

Table 3
Structural model results

Relationships	Model 1	Support	Model 2	Support
	$R^2_{BP} = 0.759$		$R^2_{BP} = 0.161$	
			$R^2_{IO} = 0.394$	
MO→BP	0.871*** (44.773)	Yes	0.161^{ns} (1.509)	No
MO→IO			0.628*** (13.316)	Yes
IO→BP			0.337*** (7.608)	Yes

Notes: MO: Market orientation; IO: Innovation outcomes; BP: Business performance
t values in parentheses *** $p < 0.001$; ** $p < 0.01$; * $p < 0.05$; ns: not significant (based on t(4999), one-tailed test). t(0.05, 4999) = 1.645; t(0.01, 4999) = 2.327; t(0.001, 4999) = 3.092

Table 3 includes the direct paths for both models 1 and 2. Model 1 solely comprises the MO-BP direct link. In such scenario, results support H1, which describes the direct relationship between market orientation (MO) and business performance (BP) (a = 0.871; t = 44.773). In addition, model 2 encompasses the indirect relationship once included the IO variable within the model. Results reveal that b_1, and c_1 are significant as direct effects. This is a first step to demonstrate the existence of an indirect effect of MO on BP via IO (H2).

Table 4
Summary of mediating effect tests

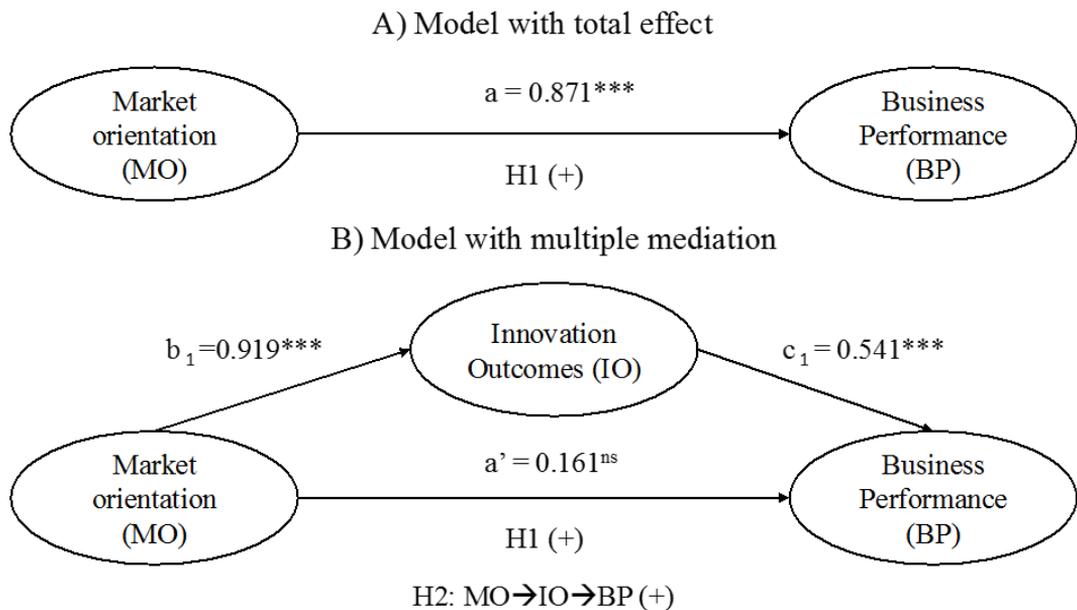| Total effect of MO on BP		Direct effect of MO on BP			Indirect effects of MO on BP				
Coef.	t-value		Coef.	t-value		Point est.	Percentile 95% CI		VAF
							lower	upper	
0.87***	44.77	H1 = a'	0.16ns	1.51	H2 = b2c2	0.50	0.30	0.67	57.06%

We have followed the methodological approach proposed by Preacher & Hayes (2008) and Taylor et al. (2008) in order to verify our mediation hypothesis (H2). Such mediating effects are quantified and contrasted (Table 4). Following Williams & MacKinnon´s (2008) proposals, we used the bootstrapping technique to test the mediation effect. Chin (2010) suggests a two-step procedure for assessing indirect effects on PLS. The first step deals with using the specific model in question including both direct and indirect paths, performing N-bootstrap resampling and finally multiplying the direct paths that make up the indirect path under evaluation. The second step is the estimation of significance and the size of the indirect effects in relation to the total effect, through the assessment of the variance accounted for (VAF). Thereby, it is possible to determine the extent to which the variance of the dependent variable is indirectly explained via the mediator variables. VAF = $(b_1 * c_1)/(b1 * c_1 + a)$. VAF values under 20%

imply the direct effect is very strong and there is no mediation. Values among 20% and 80% reveal the existence of partial mediation, whereas when VAF reaches values over 20% 80% we can affirm the existence of a full mediation (Hair et al., 2014). As Table 4 reveals that there exists partial mediation, as

VAF values are within the 20-80% interval. This means that IO partially mediate the influence of MO on BP. This study's 5000 resamples also generate95% confidence intervals (percentile) for the mediators as shown in Table 4 (Picón, Castro & Roldán, 2014).

Figure 2. Structural model

A) Model with total effect

$a = 0.871***$

Market orientation (MO) → Business Performance (BP)

H1 (+)

B) Model with multiple mediation

$b_1 = 0.919***$

Innovation Outcomes (IO)

$c_1 = 0.541***$

Market orientation (MO)

$a' = 0.161^{ns}$

Business Performance (BP)

H1 (+)

H2: MO→IO→BP (+)

DISCUSSION

The literature traditionally highlights the role of firm innovativeness as a source of competitive advantages for organizations. Recently, variables such as organizational learning and market orientation are also being studied as drivers of business performance. Besides, some studies sustains that they are key antecedents of innovation and that they affect performance by means of their effect on this variable (Jiménez-Jiménez et al., 2008; Leal-Rodríguez et al., 2015). However, there is a scarcity of empirical studies that include the impact of firm innovativeness on such relationship. Therefore, this work

simultaneously assesses the direct link between market orientation and performance as well as the mediating role of innovation outcomes and on this tie.

This study contributes to enhancing the recent research on the firm's strategic efforts on market orientation, and innovativeness, in their attempt to improve business performance. Firstly, we find support for the direct relationship between MO and BP. This result is in line with prior related studies (Narver & Slater, 1990; Desphande et al., 1993; Kohli & Jaworski, 1990) and provides additional evidence to sustain the relevance of

market orientation as a driver of business performance enhancement and hence as a source of competitive advantage. Secondly, our results support the hypothesis of considering MO as an antecedent of firm innovativeness. This finding is consistent with previous studies (Weerawardenaa & O'Cassb, 2004; Jiménez-Jiménez et al., 2008) that argue that firms, in order to be innovative, must rely on mechanisms of acquisition and leveraging of external knowledge –knowledge from customers, competitors, suppliers, etc.– as well as on the firm's internal knowledge. Finally, our results provide evidence to support the direct effects of IO and on BP. The IO-BP link was previously posited in research studies (Narver & Slater, 1990; Jaworski & Kohli, 1993). However, few studies posit a mediation link.

This work brings some important academic implications. First, it should be noted that prior related works have examined in a single research model the relationships between market orientation, innovation outcomes and business performance, but failed to include the firm's innovation outcomes as a mediating variable on the MO-BP link. Second, our results are in line with the theory as they prove the influence exerted by MO as an antecedent of BP. Furthermore, according to our results, we conclude that this influence of MO on performance is through its effect on IO, since when such variable is introduced within the model, the direct MO-BP relationship becomes unsupported. This means that IO plays a mediating role on the MO-BP tie.

This study presents as well clear practical implications. First, our findings enable a better understanding of the mechanisms through which MO impacts on BP, and leads us to

reflect about the necessity of jointly assessing the complementarities of managerial and marketing topics, with the aim of reaching lasting competitive advantages. Second, our results reveal that in order to enhance business performance, organizations ought to be more innovative. Although the importance of innovation as for improving organizational performance has gradually gained recognition both among practitioners and academics, how to develop and to take it into practice still remains uncertain. Our paper suggests that in order to be more innovative, firms must initially rely on a market orientation strategy that will enable them to detect and anticipate to market changes and trends –customers' needs; suppliers and competitors strategies, etc.–, and hence correspond with a more enhanced and customized offer.

Despite its contribution, this study presents several limitations. First, although this study provides evidence of causality, it cannot test causality, since it is the researcher who always assumes the direction of causal relationships among variables. Second, this research relies on the perceptions of survey respondents, and to elicit such insights we only relied on a single method. Finally, this research is focused on a specific economic sector (automotive components manufacturing industry) and geographical scenario (Spain). Therefore, researchers must be careful when generalizing these conclusions to other contexts. Taking into account such limitations, future research might be oriented to conducting this study in a different sector or geographical context and to develop comparative and longitudinal studies. As a further line of research it might also be interesting to assess the moderating roles played by the distinct organizational culture

typologies within the links explored in the present paper.

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Appendix: Questionnaire items.

A. Market orientation (Narver & Slater, 1990)

MO1. Customer orientation: In my company...

- We regularly analyze and take track of the needs of customers.
- Objectives are determined by customers' satisfaction.
- The strategy to obtain a competitive advantage is based on the understanding of the customers' needs.
- We regularly measure customers' satisfaction.
- Corporate strategy aims to create value for the customer.

MO2. Competitors orientation: In my company...

- We react very quickly to our competitors' actions.
- The commercial department usually shares information about the competence.
- We approach a market segment that allows us to better leverage our competitive advantages over other companies.
- We regularly analyze the strengths and weaknesses of the firms that offer products similar to ours.

MO3. Inter-functional coordination: In my company...

- Information about our clients flows freely along the whole company.
- There is coordination between the different functions and departments in order to achieve our goals.
- The managers know how the staff of all the departments can help to generate value for the customer.
- Resources are shared through employees and departments.
- Customers are regularly visited by Executives from various functions in the company.

B. Business performance (Powell, 1995)

OP1.   In comparison to its main competitors, my company...

- Is more successful.
- Posses higher market share.
- Grows faster.
- Is more profitable.
- Is more innovative.

C. Innovation outcomes (Prajogo and Ahmed, 2006)

- The level of novelty (innovation) of the new products is very high
- We use the latest technological innovations in our new products
- We are very quickly in the development of new products
- We have a large number of new products introduced into the market
- We possess a high technological competitiveness in everything we do (greater than all our competitors)
- We are very quickly in the adoption of the latest technological innovations in our processes
- Actuality and novelty of the technology used in our processes are high
- We possess a high rate of change and renewal in our processes, procedures and techniques