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Market Orientation and Sources of Knowledge to Innovate in SMEs: A Firm Level Study

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Abstract: This work examines the relationship between the three market orientation (MO) components, i.e. customer orientation, competitor orientation and inter-functional coordination, and the extension to which small and medium-sized enterprises (SMEs) use different sources of knowledge to innovate. Based on a sample of 181 Chilean SMEs, a confirmatory factorial analysis (CFA) was performed to analyze the relationship among constructs. The results show that the extension to which SMEs use different sources of knowledge to innovate depends on the interactions between MO components. This study addresses a gap in the literature, by linking and interrelating market orientation components to the innovation perspective in SMEs. Therefore, we provide insights into the role of each MO component in influencing the extension to which firms seek for and use different sources of knowledge to innovate and attempt to explain some literature inconsistencies on the theme.

Keywords: market orientation; sources of knowledge; innovation; small and medium-sized enterprises.

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Introduction

The development of a theoretical body on the market orientation (MO) theme addresses questions to "if", "when", and "how" MO affects business performance. Answer as to "if" MO affects performance seems to be confirmed, since a majority of research into this question has delivered positive results. These results show that MO enables improvements in business performance and that these results occur "when" corporate culture, internal conditions and capabilities combine to provide for MO development (Day, 1994). However, it is yet to be seen whether this improvement comes directly from MO or is moderated by other organisational practices and actions; i.e., "how" MO affects performance (Langerak, 2003).

From this perspective, the moderating role of innovation has been studied by various researchers in a variety of countries (Lukas & Ferrell, 2000; Im & Workman, 2004; Laforet, 2008). In general, studies focus on identifying the relationship between MO and innovation results, or further verify what cultural characteristics and internal capabilities facilitate innovation in organizations with a market orientation, as in innovativeness and the capacity to innovate (e.g. Gatignon & Xuereb, 1997; Kirca et al., 2005).

Despite some discordant findings, studies of this issue have demonstrated that MO has a positive impact on innovation outcomes. Assuming that the customer orientation – and the close relationship with them – is one of the components of market orientation (Narver & Slater, 1990), the results from marketing literature can be partially corroborated and reinforced in the literature of innovation in SMEs as well. For instance, findings of Kaminski et al. (2008) indicate that SMEs essentially collaborate with their clients for innovation.

However, the mechanisms as to how the three market orientation components achieve these positive outcomes are less well conceptualized (Smirnova et al., 2011). Taking the three major MO components suggested by Narver and Slater (1990) i.e., customer orientation, competitor orientation, inter-organisational coordination, some inconsistencies has been observed in researches in terms of their influence on innovation (Lukas & Ferrell, 2000; Grinstein, 2008). Considering the component-wise approach to the MO construct one possible explanation of these discrepancies may refer to methodological deficiencies (Tsiotsou, 2010). Although the distinctive role of different MO components in innovation results and/or organisational performance has been admitted by marketing scholars (Lukas & Ferrell, 2000) the MO component-wise approach is not usually treated in empirical studies (Tsiotsou, 2010).

Among studies however, that do consider the component-wise approach, most of them consider that MO components are independent from each other and focus on their direct effect on innovation outcomes and/or organisational performance without examining possible indirect influences (Lukas & Ferrell, 2000; Smirnova et al., 2011). Other component-wise approaches are confined to certain dimensions of MO such as competitor and/or customer orientation (see Gatignon & Xuereb, 1997).

Taking into account the contradictory findings regarding the MO role in affecting innovation results and/or organisational performance, a deeper examination of the dynamics of the MO components becomes imperative (Tsiotsou, 2010). As noted by Han et al (1998, p.41) "it may be useful to take a component-wise approach to the MO construct, because the roles of different MO components may vary, contingent on the types of innovation strategies and turbulences present in the environment". Although the incomplete analysis

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of the component-wise MO approach has recently captured the attention of some scholars (Tsiotsou, 2010), further research is needed to understand the routes through which MO components influence innovation outcomes. To date, the role of MO components in supporting the initial forces leading to firm innovation has been little studied, especially in small and medium sized enterprises (SMEs). To the author's knowledge, no component-wise approach has examined the indirect influences of the three components of MO on innovation activities in the SMEs context. As Laforet (2008) noted, researchers often examine innovation in the context of large firms and overlook innovation within SMEs. As such, much remains unknown about the ingredients needed for successful innovation in smaller and medium sized firms. Seeking for sources of knowledge for innovation is one of the first stages of the innovation process in firms, which is a crucial decision for firms to engage in innovations (Hashi & Stojcic, 2012). In doing so, firms establish partnerships with suppliers, customers, universities, and others external and internal agents (Löof & Heshmati, 2002). Market-oriented firms could develop these partnerships in a successful way as these firms are more able to capture the market demands in terms of customer needs, competitor strategies and so forth (Kirca et al., 2005). Thus, market orientation could favour the firm activity related to seek for sources of knowledge for innovation, one aspect that has not been sufficiently explored in previous researches.

This research addresses these questions by examining the direct and indirect influences of the three major market orientation components on the knowledge for innovation in SMEs. Specifically, the objectives of this article are (a) to examine the direct and indirect effects of each market orientation component on sources of knowledge for innovation in SMEs, and (b) to investigate how MO components relate to one another in order to influence these innovation activities. Based on previous literature about innovative characteristics of firms (Löof & Heshmati, 2002; Hoffman et al, 1998), we consider the sources of knowledge for innovation as the different sources that firms use to capture ideas to innovate, both internal and external to organisation.

This study differentiates from previous studies relating market orientation with firm innovation, and thus contributes to expanding the existing literature in several ways. Firstly, it treats the three market orientation components as separate constructs and examines both their direct and indirect links to innovative initiatives in SMEs. As stated by Han et al. (1998) and Langerak (2003), the market orientation literature remains incomplete if studies do not explore how MO influences the firm´s overall performance. Specifically, a component-wise approach of the MO construct is important to the understanding of how MO works to influence innovative initiatives of the firms. This goes along with the assumption that the roles of different MO components may vary, contingent on the types of innovation strategies (Han et al., 1998). Furthermore, Langerak (2003, p. 460) notes that "although being market-oriented may lead to general benefits for the firm's marketing activities, the ability to develop and market innovations may be critical". This includes understanding the role of MO components in influencing innovation initiatives in firms. Secondly, this is one of the first studies which considers competitor orientation and inter-functional coordination as antecedents of customer orientation which in-turn is a mediator in the relationship between these two market-oriented components and innovative initiatives. A recent study considers this perspective in the service industry and applies the same Slater and Narver (1994) conception about MO (see Tsiotsou, 2010). Thirdly, this study relates MO to the initial actions that companies take on the path to innovation, an aspect that has been ignored on the whole in research. According to Hashi and Stojcic (2012), the probability that an organization will decide to innovate, which is the first stage of the process, increases the extent to which it improves its market orientation. Identifying the role take by MO components in this initial stage of the innovation process contributes to a deeper understanding of the theme and complements previous studies. Fourthly, it expands on the pool of knowledge about the initial context surrounding innovation in SMEs, under the perspective of market orientation. As stressed by Laforet (2008), literature on SME innovation is fragmented and generally concentrates on singular case studies or qualitative interviews with executives. Furthermore, the work in this area focuses mainly on firm-specific innovation characteristics instead of the strategic and market orientation of the firm (Salavou et al., 2004).

The article thus proceeds in the following manner. In the next section, we present the theoretical framework and the study hypothesis of the research, followed by the methodology. Subsequently, we present the analysis and discussion of the results found and finally, we present the managerial implications based on the results and limitations of the study as well as future research directions.

Theoretical Background and Study Hypotheses

Market oriented firms respond better to the requirements of their customers through the information obtained from the market and shared within the firm in a coordinated manner (Kohli & Jaworski, 1990). Market orientation is considered as an internal capacity of the enterprise and that is difficult to imitate (Day, 1994), as well as orienting the enterprise toward the search for growth opportunities and reduce the response time to these opportunities (Kirca et al., 2005). According to Narver and Slater (1990), market orientation consists of three behavioural components: customer orientation, competitor orientation, and inter-functional coordination. Customer orientation emphasizes the role of sufficiently understanding one's target customers in order to be able to create superior value for them, competitor orientation suggests that firms understand the short-term strengths and weaknesses and long-term capabilities and strategies of both key current and potential competitors, inter-functional coordination focuses on the coordinated utilization of company resources in creating superior value for target customers (Narver & Slater, 1990). Each of these components are engaged in intelligence generation, dissemination, and responsiveness (Han et al., 1998).

Market orientation is highlighted as a determining factor and the foundation for a company's innovation efforts (Salavou, et al., 2004; Hashi & Stojcic, 2012). Deepening this perspective in the context of small and medium enterprises, results obtained from the study by Verhees and Meulenberg (2004) signal that the basis for the

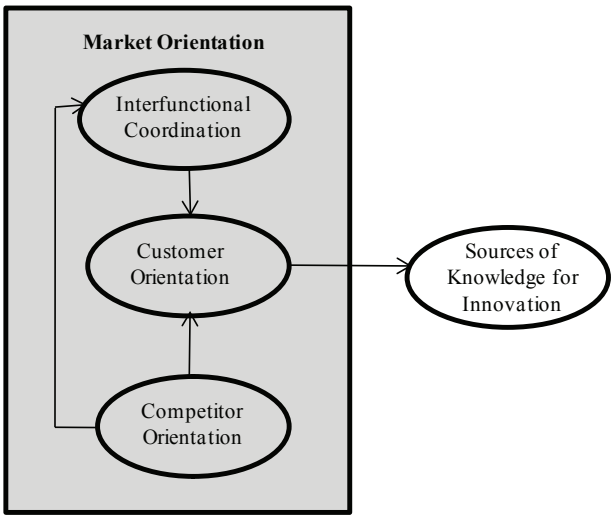
relationship between MO and innovation in SMEs is innovativeness: the initial efforts taken towards innovation are defined by a company's innovativeness, which positively influences market orientation and innovation. Innovativeness is understood as: "the notion of openness to new ideas as an aspect of a firm's culture" (Hurley & Hult, 1998, p.44). If, on one hand, innovativeness favours an organization's ability to successfully adopt or implement new ideas, processes or products, and on the other hand, is related to MO (Hurley & Hurt, 1998) it can be assumed that market orientation at least partially engenders a propitious environment for innovation and favours its initial stages. In fact, Hashi and Stojcic's results (2012) demonstrate that MO has a positive influence in a firm's decision to engage in innovation.

Traditionally, the literature has assumed that MO is an unidimensional construct and/or consider that the three components contribute equally to the construct (Narver & Slater, 1990; Slater & Narver, 1994). However, this perspective does not exclude the assumption that the three elements of market orientation may be interrelated (Kohli & Jaworski, 1990).Thus, the understanding of how market orientation affects other organisational processes and/or performance implies a detailed inspection of the mechanism responsible for transforming market orientation into superior performance (Han et al., 1998; Tsiotsou, 2010).The comprehension of how MO operates includes the understanding of causal relations between their three dimensions and the examination of both direct and indirect effects on performance (Tsiotsou, 2010).

Taking into account a component-wise approach for MO, the direct effect of each MO component on innovation is somewhat contradictory in the literature. Results from some researchers suggest that only customer orientation and/or competitor orientation affect innovation performance (Han et al., 1998; Lukas & Ferrell, 2000; Smirnova et al., 2011). Discordant findings also suggest a positive or a negative impact of inter-functional coordination on innovation consequences (Grinstein, 2008; Im & Workman, 2004).

Considering the indirect effect, previous literature highlights that customer orientation and/or inter-functional coordination could improve the impact of competitor orientation on performance results, including with it a new successful product (Smirnova et al., 2011; Grinstein, 2008). In the current study, it is contended that there is a causal relationship between MO components which in turn affects the early innovative efforts of organisations. We expect that customer orientation directly influence the intensity to which firms use sources of knowledge for innovation. We also expect that competitor orientation influence inter-functional coordination and customer orientation and, through them, influence the intensity to which firms use sources of knowledge for innovation. These linkages will be detailed in the following paragraphs. The model is illustrated in Figure 1.

Figure 1. Conceptual and Testing Model



Regarding the relationship between customer orientation and innovation consequences, the findings of Han et al. (1998) revealed that customer orientation is highly and positively significant for organisational innovativeness. As noted by Han et al. (1998), MO facilitates an organisational innovativeness which, in turn, positively influences its business performance. Customer orientation is the dominant factor responsible for this meditational phenomenon (Han et al., 1998). Grinstein's (2008) results for a meta-analysis about the effect of market orientation and its components on innovation consequences reinforce this perspective by confirming that customer orientation can be successfully used to develop innovative products. The findings of Frambach et al. (2003) also confirm that customer orientation has a positive influence on new product activity.

In spite of having some inconsistent results regarding the effect of customer orientation on innovation outcomes, the common view held in the marketing literature is that customer orientation enhances innovativeness because it involves doing something new or different in response to market conditions (Jaworski & Kohli, 1993).It has also been considered the most fundamental aspect of corporate culture and the fundamental element of a customer value strategy (Tsiotsou, 2010). In addition, the view is that customer orientation provides the foundation for a sustainable competitive advantage and contributes to firm performance (Kohli & Jaworski, 1990). Furthermore, customer-oriented firms generate new ideas and products aimed at satisfying customer needs and often work closely with customers in the early stages of the new product development process (Slater & Narver, 1998). In addition, customer orientation enhances innovativeness because it involves doing something new or different in response to market conditions (Jaworski & Kohli, 1993). Also, the literature about innovation in SMEs reiterates that cooperation with clients, which is a natural consequence of customer orientation, provides an important support to innovation of products and processes in those firms (Bigliardi et al., 2011). For instance, in studying Italian SMEs, Bigliardi et al., 2011, p.90) demonstrated that "innovations have been mainly obtained through know-how of users".

In line with these arguments, and considering that the initial stages of innovation involve sources of knowledge for innovation including cooperative arrangements with domestic suppliers, international research institutes, customers, trade fairs, universities, firm's internal resources (Hashi & Stojcic, 2012; Löof & Heshmati, 2002), we propose the following hypothesis:

H_1: Customer orientation affects directly and positively the extension to which firms use different sources of knowledge for innovation.

Competitor orientation complements customer orientation in creating value for customers and in allowing customer-oriented firms to satisfy demand and serve the needs of their customers better than their competitors (Tsiotsou, 2011). Defined as "understanding the short-term strategies of both the key current and the key potential competitors" (Narver & Slater, 1990, p.22), competitor orientation is considered a prerequisite of customer orientation (Day, 1994). The findings of Frambach et al. (2003) confirm this statement showing that competitor orientation depends on customer orientation to enhance new product activity. Testing the direct effect of competitor orientation on customer orientation, Tsiotsou (2010) showed that competitor orientation has a strong impact on customer orientation. Based on these statements, it is predicted that:

H_2: Competitor orientation has a positive effect on customer orientation.

A recent meta-analysis about the effect of market orientation and its components on innovation consequences showed that the positive effect of competitor orientation on innovation consequences depends on a minimum level of customer orientation (Grinstein, 2008). This suggests that a balanced mix of competitor and customer orientation is needed to improve innovation in firms. In their study, Gatignon and Xuereb (1997) showed that both orientations are combined to technological orientation for designing innovations which have a strong relative advantage. Lukas and Ferrell (2000) examined the direct effect of competitor orientation on product innovation and indicated that a greater emphasis on that orientation increases some types of product innovation. On the contrary, Han et al. (1998) and Frambach et al (2003) revealed a negative influence of competitor orientation on innovation results. In fact, the findings of Frambach et al (2003) revealed that competitor orientation only influences new product activity indirectly via customer orientation. Considering new product performance as a measure of business performance, Smirnova et al. (2011) suggest that the direct and positive effect of competitor orientation on business performance is complemented by the indirect effects of customer orientation and inter-functional coordination. Therefore, we propose that:

H_3: Competitor orientation influences indirectly and positively the extension to which firms use different sources of knowledge for innovation via customer orientation.

Inter-functional coordination is characterized by the level of interaction of information sharing and coordination between all organisational departments (Narver & Slater, 1990; Im & Workman, 2004). Thus, the specific aspects of the structure of an organisation are responsible for facilitating the communication amongst the organisation's different functions (Gatignon & Xuereb, 1997). Considering that the three market orientation components may be interrelated, the findings of Gatignon and Xuereb (1997) demonstrate that inter-functional coordination is the mechanism which enables customer orientation, competitive orientation and technological orientation in an organisation. In line with this, and as result of field interviews with business executives, Kohli and Jaworski (1990, p.3) argue that "it is critical for a variety of departments to be cognizant of customer needs". The recent study developed by Tsiotsou (2010) has supported this statement. Examining the causal relations between the three MO components in the service industry, Tsiotsou (2010) showed that inter-functional coordination has a positive effect on customer orientation. Hence, our fourth hypothesis states that:

H_4: Inter-functional coordination influences positively and directly customer orientation.

Functional coordination plays a "crucial role in new product development" (Homburg et al., 2004, p.1334). Whilst considering different perspectives, many studies have explored the implications of organisational characteristics on innovation. Research studies include inter-functional coordination as an element that may influence the innovation consequences (Grinstein, 2008). However, some studies have not found this positive influence (Han et al., 1998; Lukas & Ferrell, 2000).

In a meta-analysis about the effect of market orientation and its components on innovation consequences, Grinstein (2008) has found that inter-functional coordination is positively related to innovation consequences. On the other hand, the findings of Lukas and Ferrel (2000) showed that inter-functional coordination is not related to new-to-the-world products. Likewise, Han et al. (1998) found that inter-functional coordination is not related to organisational innovativeness. Despite these discordant findings, marketing researchers agree that inter-functional coordination is important to organise the internal efforts for innovation (Gatignon & Xuereb, 1997; Kohli & Jaworski, 1990). Therefore, it is reasonable to suppose that the positive influence of inter-functional coordination on customer orientation (Tsiotsou, 2010) may result in an indirect and positive influence on the early efforts to innovate. This is due to the fact that customer-oriented firms often work closely with customers in the early stages of the new product development process (Slater & Narver, 1998). Thus, we propose:

H_5: Inter-functional coordination affects indirectly and positively the extension to which firms use different sources of knowledge for innovation via customer orientation.

Inter-functional coordination is understood as "the process that assimilates the results of being customer and competitor oriented and allows coherent action" (Wooldridge & Minski, 2002, p.31). Thus, competitor orientation is expected to influence positively the inter-functional coordination (Tsiotsou, 2010). This assumption may be reasonable because companies need to disseminate knowledge about their competitors throughout all business units and departments (Tsiotsou, 2010). As highlighted by Kohli and Jaworski (1990, p.5), "market intelligence must be communicated, disseminated, and perhaps even sold to relevant departments and individuals in the organization." Literature points out some evidence of the relationship between competitor orientation and inter-functional coordination. Using a Narver and Slater (1990) scale for MO, Tsiotsou (2010) proved the positive influence of competitor orientation on inter-functional coordination. Therefore it is reasonable to predict that:

H_6: Competitor orientation has a direct and positive effect on inter-functional coordination

According Miller (1987, p.60), the introduction of new products "creates the need for more scanning of markets to discern customer requirements, the analysis and discussion of this information in group decision-making sessions which bring to bear marketing, R&D, engineering, production and finance perspectives". Two perspectives can be considered from this statement. First, the inter-functional coordination has an important role in mediating the intra-organisation efforts for innovation. In fact, inter-functional coordination may promote innovativeness in the organisation as it "involves open generation and sharing of new ideas, resolution of problems and disagreements by means of non-routine methods and different frames of reference" (Im & Workman, 2004, p.118). Second, inter-functional coordination is closely related to customer orientation and competitor orientation in promoting the initiatives for innovation in firms (Kohli & Jaworski, 1990). Considering that: (a) competitor orientation affects positively the inter-functional coordination (Tsiotsou, 2010); (b) inter-functional coordination plays an important role in promoting the innovation in firms (Grinstein, 2008); (c) customer orientation is important to generate new ideas and products aimed at satisfying customer needs, it is reasonable suppose that:

H_7: Competitor orientation influences indirectly and positively the extension to which firms use different sources of knowledge for innovation via inter-functional coordination and customer orientation

Methodology

The data used in this study were taken from the database of the project 'Demography of the Regional Small and Medium size Enterprises', undertaken by researchers at the Entrepreneurship and SME Center at Universidad Católica del Norte, Chile. The current database utilizes a sample of 550 micro and small to medium-sized companies in the district of Antofagasta, northern Chile. The data was collected via a cross-sectional survey and the respondents were the owners of the firms. Overall, owners are the decision makers in SMEs and they are able to respond about strategic questions. The criterion adopted for the definition of SME was the sales volume of each company, according to the government criterion in Chile. In accordance with this criterion, a SME has an annual sales volume of no less than US$ 86,970.00 and no more than US$ 3,623,763.00 (reference values in Chilean pesos, the national currency, converted to US dollars according to the exchange rate of 31th August, 2015). Considering this criterion and excluding micro firms and missing values, an initial sample of 325 SMEs was considered for this study. From that sample, we excluded SMEs which had not revealed investments in innovation relation to the development of new or improved products and/or processes. Following this criteria, a final sample of 181 SMEs was usable for analysis.

Four constructs were considered in the measuring model: market orientation – represented by it three dimensions - (1) customer orientation - CUSTOR; (2) competitor orientation - COMPOR; (3) inter-functional coordination - COORD; (4) sources of knowledge for innovation - KNOWINN. Sources of knowledge for innovation were represented by six variables that corresponded to the extension to which companies use different sources of innovation (Hashi & Stojcic, 2012) – which includes customers, suppliers, competitors, firm's internal sources, fairs and exhibitions, universities and research centres. Market orientation components were assessed using Narver and Slater's (1990) measure, MKTOR. All constructs were measured in a continuous scale of seven points, ranging between the extremes of 'never' and 'always'.

In order to ensure statistical significance in the model, adjustments were made to the dimensions of the constructs. Three items were eliminated from the market orientation scale. Therefore, the final MKTOR measure resulted in twelve items that were grouped into the three market orientation components (customer orientation = five items; competitor orientation = four items; inter-functional coordination = three items).

Shorter versions of MKTOR have been previously utilized (see Tsiotsou, 2010) without diminishing the validity of the measure. Two items were also removed from the construct "sources of knowledge for innovation" considering the adjustment of the scale to the specific context of the analysis. The items exhibited low loadings and were eliminated to ensure statistical significance. The final model was represented with sixteen items (twelve items for the market orientation components; four items for the sources of knowledge for innovation).

Results

Confirmatory factorial analysis (CFA) using AMOS 16.0 was applied to verify the relationship among constructs, after verifying the reliability of the scale with Cronbach's alpha. Convergent and discriminant validity was verified using the procedures recommended by Fornell and Larker (1981). Table 1 shows the results of Cronbach's alpha, average variance extracted (AVE) and discriminant validity of constructs.

Table 1. Results of Cronbach's Alpha, Convergent and Discriminant Validity

	A	AVE	1	2	3	4
1. Customer Orientation	0.71	0.52	**0.72**			
2. Competitor Orientation	0.81	0.53	0.53	**0.71**		
3. Interfuncional Coordination	0.73	0.51	0.67	0.45	**0.73**	
4. Sources of Knowledge for Innovation	0.67	0.63	0.45	0.47	0.34	**0.79**

Note: Bold numbers on the diagonal show the squared root of AVE

Overall, the results showed in Table 1 are above the recommended threshold values of .70 for Cronbach's alpha and .50 for AVE (Bagozzi & Yi, 2012) with exception of the construct 'sources of knowledge for innovation' that presents a relatively low alpha. However, it was decided to maintain the variables with the objective of better capturing the relationships among the studied dimensions. Additionally, discriminant validity was examined using the square root of AVE and cross-loadings as recommended by Fornell and Larcker (1981). As shown in Table 1, the AVE square root values were greater than the correlation with other latent variables, which suggest discriminant validity in the model (Fornell & Larcker, 1981).

We also examined the data for empirical evidence of common method bias by applying the single-common-method-factors approach, as recommended by Podsakoff et al. (2003). The results revealed all item loading significantly on its intended theoretical construct, with no load in the unmeasured methods factor.

The model with final adjustments (Figure 2) showed good fit indices (CFI = 0.932, GFI = 0.906, RMSEA = 0.052) (Bagozzi & Yi, 2012). The relationships were calculated considering the direct and indirect effects among the constructs.

Figure 2 – Test Model

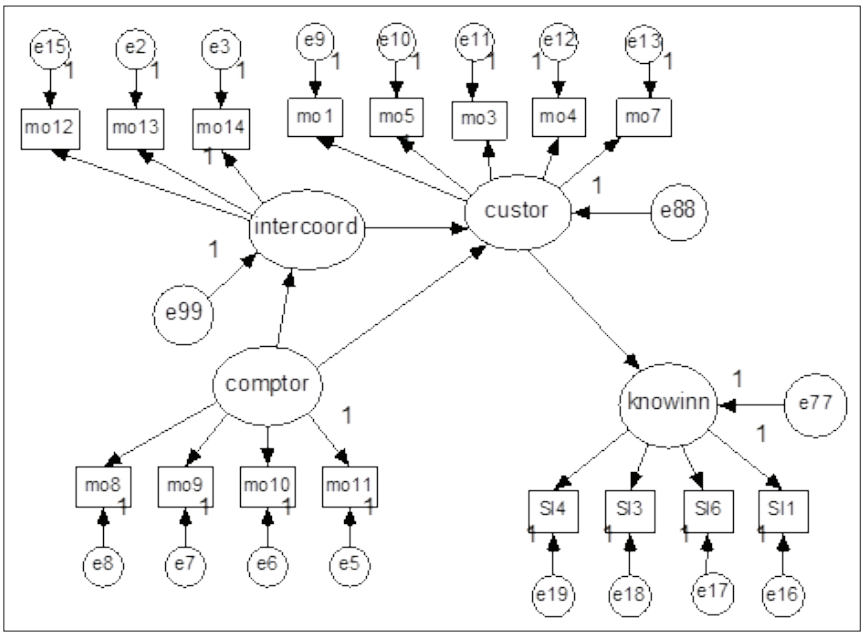


Table 2 shows the standardized results for the testing hypotheses.

Hypothesis	Path	Coefficient	p-values	Accept/Reject
H_1	CustOr ---> KnowInn	.534	.014	Accept
H_2	CompOr ---> CustOr	.383	.040	Accept
H_3	CompOr ---> CustOr ---> KnowInn	.205	.003	Accept
H_4	Coord ---> CustOr	.505	.014	Accept
H_5	Coord ---> CustOr ---> KnowInn	.269	.011	Accept
H_6	CompOr ---> Coord	.450	.013	Accept
H_7	CompOr ---> Coord ---> CustOr ---> KnowInn	.121	.003	Accept

Table 2. Results for Relationship between MO Components and Knowledge for Innovation

According to the results (see Table 2), the extension to which firms use different sources of knowledge for innovation is directly and positively influenced by customer orientation as predicted in H_1. The coefficient of 0.534 and p-value of .014 ($p<0.05$) confirm this relationship. This result indicates that customer oriented companies are engaged in action that target innovation, coming from searches for sources of information and knowledge that stimulate the development of new products and/or services. Such behavior reflect the initiative of generating new ideas and products aimed at satisfying customer demands, which is typical in a customer oriented firm (Slater & Narver, 1998; Kohli & Jaworski, 1993). In this process, customer oriented firms often work closely with customers in the early stages of the new product development process (Slater & Narver, 1998). Also, this result corroborates the evidences founded by Han et al. (1998), Grinstein (2008) and Frambach et al. (2003). These authors analysed different perspectives of innovation and their relationships with MO components and found a positive relationship between constructs. Han et al. (1998) found a positive relationship between customer oriented and organisational innovativeness. Grinstein's (2008) results for a meta-analysis about the effect of market orientation and its components on innovation consequences revealed that customer orientation influence positively the development of innovative products. Frambach et al (2003) confirmed that customer orientation has a positive influence on new product activity. Similarly, the literature about innovation in SMEs highlights that cooperation with clients plays an important role in providing know-how to SMEs that, in turn, translates in successful innovations (Bigliardi et al., 2011).

Taking into account the causal relationships between MO components, the results shown in Table 2 also indicate that competitor orientation has a positive influence on customer orientation. The coefficient of 0.383 and p-value of 0.040 ($p<0.05$) confirm H_2, revealing that competitor orientation has a role in enhancing customer orientation. In this perspective, competitor orientation is a prerequisite of customer orientation (Day, 1994) and complements customer orientation in creating value for customers (Tsiotsou, 2010). Furthermore, competitor orientation influences indirectly and positively the extension to which firms use different sources of knowledge for innovation via customer orientation, as hypothesised in H_3. The coefficient of 0.205 and the highly significance level of 99% (p-value = 0.003) confirm this positive relationship. This result reinforce that competitor orientation relate to customer orientation to enhance new product activity (Frambach et al., 2003). Specifically, the result suggests that both orientations are needed to start the process of innovation in firms. Companies will be encouraged to use the different sources of knowledge for innovation when they will exercise them skills in monitoring their competitors and customers. Although considering the earlier initiatives of innovation instead of examining the innovation consequences and/or innovation outcomes, this result somewhat corroborates previous findings of Grinstein (2008), Gatignon and Xuereb (1997) and Frambach et al. (2003). As indicated in the findings of Grinstein (2008), the positive relationship between competitor orientation on innovation consequences depends on a minimum level of customer orientation. Gatignon and Xuereb´s (1997) findings revealed that competitor orientation and customer orientation are combined to technological orientation for designing innovations. The findings of Frambach et al (2003) showed that an extension of customer orientation is needed to competitor orientation influence new product activity. In addition, competitor orientation influences directly and positively the inter-functional coordination of the SMEs. The coefficient of 0.450 and the p-value of 0.013 indicate this influence and lead to accept H_6. This result highlights that inter-functional coordination facilitates the dissemination of knowledge about competitors within firms and help them to create superior value for their customers (Tsiotsou, 2010). As suggested by Kohli and Jaworski (1990, p.5) "responding effectively to a market need requires the participation of virtually all departments in an organisation". This result also corroborates previous studies that examined the causal relationships between MO components (Tsiostou, 2010). The positive linkage between inter-functional coordination and customer orientation was also confirmed in our study. Showing a coefficient of 0.505 and a significance level of 95% (p-value = 0.014), this relationship leads to accept H_4. Previous studies in a component-wise approach of MO had found similar results. Tsiotsou's (2010) research showed that inter-functional coordination influences positively the customer orientation in a service industry context.

The results exhibited in Table 2 also highlight that inter-functional coordination has an indirect effect on the extension to which firms use different sources of knowledge for innovation through customer orientation. The positive coefficient of 0.269 and the p-value of 0.011 confirm this relationship and the H_5. This result confirms that inter-functional coordination has a role in supporting innovative initiatives in firms as stated by Homburg et al. (2004) and Grinstein (2008). Other researchers have not found evidences considering the direct effect of inter-functional coordination on innovation outcomes (Han et al, 1998; Lukas & Ferrell, 2000). Taking into account that inter-functional coordination is an activity which takes place within organisation, may it not sufficient to support innovation results. As stated by Wooldridge and Minski (2002), inter-functional coordination has a function of assimilating the results of firms being customer and competitor oriented and allows coherent action. Thus, we can assume that inter-functional coordination, competitor orientation and customer orientation work together to promote firm innovation. As revealed in our findings, customer orientation is an important link between inter-functional coordination and innovation initiatives. Similar linkages may are needed to support firm innovation results. Furthermore, our result highlight that inter-functional coordination is important to enhance the organisations initiatives for innovation which is likely related to firm innovativeness, as an aspect of a firm's culture (Hurley & Hult, 1998). This could not be enough to warrant innovation results like the introduction of new products to the market.

Our findings also revealed that the extension to which firms use different sources of knowledge for innovation is a result of a sequence of market oriented activities. As shown in Table 2, competitor orientation influences indirectly and positively the SMEs early innovation efforts through inter-functional coordination and customer

orientation. The positive coefficient of 0.121 and p-value = .003 confirm H_7. Specifically, this result demonstrates that the causal relationships between MO components are important to promote firm innovation. Moreover, previous researches applying a component-wise approach suggest that the interdependence among MO dimensions results is needed to understand how MO affects firm results, which includes the innovation perspective (Tsiotsou, 2010).

Conclusions, Limitations and Future Research Directions

This research applies a component-wise approach of MO to examine the linkages between the three MO components and the extension to which SMEs use different sources of knowledge for innovation.

Overall, the results showed that the interactions between the three MO components, i.e. customer orientation, competitor orientation and inter-functional coordination, influence the extension to which SMEs use different sources of knowledge for innovation in different ways. The research findings revealed that customer orientation influences directly and positively this innovation initiative in SMEs. Also, competitor orientation affects positively and indirectly the extension to which firms use different sources of knowledge for innovation both through inter-functional coordination and through customer orientation. Furthermore, inter-functional coordination affects indirectly and positively the extent to which firms use different sources of knowledge for innovation through customer orientation. In addition, results revealed that the extension to which market orientation influences innovation initiatives depends on the interactions between MO components.

This study contributes to the understanding of how market orientation influences firm innovation by exploring a MO component-wise approach in the MO relationship with innovation initiatives. In doing so, we provide several contributions to the existing literature (Lukas & Ferrell, 2000; Gatignon & Xuereb, 1997; Grinstein, 2008; Frambach et al., 2003; Han et al., 1998). Firstly, we posit that the way in which each MO component affects the earlier efforts for innovation in firms depends on the inter-relations between them. Such perspective helps shed light on "how" MO is inserted in the innovation context, and contributes in explaining the role of MO components with it. Corroborating previous findings of Tsiotsou (2010) we have demonstrated that, in order to improve customer orientation, a firm needs to increase its competitor orientation and inter-functional coordination. In doing so, organisations are able to begin the innovation process by looking for different sources of knowledge for innovation. Secondly, the study complements previous research into the antecedents of innovation in companies (Hashi & Stojcic, 2010; Löof & Heshmati, 2002) and adds market orientation as one of the motivating elements for innovation in SMEs. Overall, it is known that the access to knowledge and information, collaboration, markets, and specific institutional contexts all contribute to a company's innovative capacity (Verhees & Meulenberg, 2004). However, little is known about how MO acts as an antecedent for innovation, which involves more than just establishing relationships with clients and other agents, but also the need for focusing on competitors and internal configurations that deliver value to clients (Narver & Slater, 1990; Kohli & Jaworski, 1990). The results encountered in this research reveal that such a focus on delivering client value translates, in its initial stages, favour innovative initiatives in companies (Bigliardi et al., 2011).

Regarding the limitations of this research, as well future research directions, this study is limited to examining the relationship between MO components and innovation solely in its initial stage. Future research could relate a MO component-wise approach to the different stages of the innovation process; i.e., the decision to innovate, the decision of how much to spend on innovative activities, the relationship between expenditure on innovation and innovation input, and the relationship between innovation output and performance (Hashi & Stojcic, 2012). This could allow the identification of in which stages of innovation MO is most relevant. Also, the specific context of the study (Chile) is a concern constraining the generalization and application of the results to other countries. Further research in a wide-variety of countries is needed in order to reinforce our findings.

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