

# Market orientation and innovation: do structure and environment moderate this relationship?

## Orientación al mercado e innovación: ¿la estructura y el entorno moderan esta relación?

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#### ABSTRACT:

The importance of studying innovation is of great interest due to its relationship with corporate productivity and the competitiveness. This investigation studies the influence of market orientation on the product innovation success in a sample of Colombian industrial enterprises. Few investigations have evaluated this relationship using moderating variables such as structure and environment. Relationships are contrasted by way of regression analysis. Results indicate that market orientation positively influences product innovation. Furthermore, neither environment nor organizational structure moderated the relationship.

**Keywords:** Market Orientation; Innovation Success; Structure; Environmental Uncertainty; Empirical Study.

#### RESUMEN:

La importancia de estudiar la innovación cobra mayor interés debido a su relación con la productividad empresarial y la competitividad. Esta investigación estudia la influencia de la orientación al mercado en el éxito de la innovación de producto en una muestra de empresas industriales colombianas. Pocos trabajos han evaluado esta relación bajo condiciones de variables moderadoras como la estructura y el entorno. Las relaciones se contrastan mediante un análisis de regresión jerárquica. Los resultados indican que la orientación al mercado incide positivamente en la innovación de producto. Sin embargo, ni el entorno, ni la estructura organizacional moderan la relación.

**Palabras clave:** Orientación al mercado; Éxito de la innovación; Estructura; Incertidumbre del entorno; Estudio empírico.

## 1. Introduction

In a changing and competitive environment – such as the current one – we are more aware of the importance of innovation as a determining factor in a company competitiveness, and the economy in general (Navarro & Olivari, 2016). This has heightened interest in

investigation of the innovation phenomenon.

The literature has indicated that factors such as market orientation (Atuahene-Gima, 1995; Baker & Sinkula, 2005; Laforet, 2009) are determining factors in innovation, and specifically in NP success, given that knowledge of competitor activities, or of what clients want allows an organization to have an idea of market tendencies. This allows the organization to make decisions about products to be developed for the achievement of a competitive advantage.

Although previous literature has focused on the relationship between market orientation and innovation, the results are not always consistent, very few of those who study the relationship analyze innovation since the success of the new product and very few have studied the role of moderating variables in this relationship. Recent literature (Osorio-Tinoco, Hernandez-Espallardo, & Rodríguez-Orejuela, 2014; Wang & Miao, 2015) indicates the importance of incorporating moderators in the study of this relationship. In line with that proposed by Herhausen (2016) and Song, Wei, and Wang (2015), in this investigation, environment and structure were incorporated as moderators.

This investigation, thus, studies the influence of market orientation on innovative success and the moderating role of environmental variables and organizational structure, in a sampling of Colombian industrial companies. Since 2009, innovation has become more important in Colombia, as shown in the important efforts that have been made insofar as budgetary increments, tributary incentives, and the creation of development units which promote innovation. Nevertheless, there is a long road to be traveled, and the investment in investigation and development is still insufficient when compared to countries such as Chile and Mexico, and insignificant in comparison to countries such as Germany and Israel.

This paper is organized as follows: first, a review of literature is presented, which then allows the proposal of this study's hypothesis. Next, the methodology employed is presented, as is the statistical analysis necessary to contrast the proposed hypothesis. Finally, the main conclusions of the paper are detailed.

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## **2. Literature Review**

Schumpeter is recognized as being the creator of innovation theory. In his contributions to economic development, he describes the innovation process as a disturbance of existing structures, and incessant novelty and change (Albornoz, 2009). The Oslo Manual defines innovation as: the implementation of a new or significantly improved product (good or service), or process, a new marketing method, or a new organizational method in business practices, workplace organization or external relations (OECD & Eurostat, 2005, p. 46).

The same manual establishes that innovation can be classified into several subsections: product innovation, process innovation, marketing innovation, and organizational innovation.

It is clear that innovation is a fundamental factor in organizational performance, as well as in national and regional growth. Thus, interest in expanding its determinants has grown. The literature points to market orientation as a key factor in company innovation stimulation.

Market orientation allows an organization to absorb knowledge from the environment, which contributes to its assimilation and use to create innovations (Lynskey, 2004; Monferrer, Blesa, & Ripollés, 2013).

Market orientation seeks consumer satisfaction by way of products or services that add value. For this, it is key that the company keeps itself in a state of continuous apprenticeship, through changes in the environment, specifically regarding client needs and competitor behavior.

In general, in the market orientation literature, the conceptualizations of Kohli and Jaworski (1990) and Narver and Slater (1990) are cited. Deshpandé, Farley, and Webster (1993) take their ideas, and propose a definition that integrates both conceptualizations.

### **2.1. Market orientation and innovative success**

Market orientation is crucial, as it establishes a unified objective, in which all efforts and

organizational department projects work in conjunction, in order to satisfy client expectations and offer an improved user experience via new products (Atuahene-Gima, 1995; Kohli & Jaworski, 1990).

In general, the literature concurs that market orientation has a positive impact on innovation (Jimenez-Jimenez, Sanz-Valle, & Hernandez-Espallardo, 2008) and on success itself (Atuahene-Gima, 1995; Baker & Sinkula, 2005; Laforet, 2009). This can be a result of their capacity to satisfy client expectations and its capacity for absorption of new knowledge, which can be assimilated and applied for innovative purposes (Jaworski & Kohli, 1993; Monferrer et al., 2013).

The literature links market orientation to innovative success for diverse reasons: firstly, market orientation incorporates the organizational values and beliefs which guide activities, including new product development (Atuahene-Gima, 1995).

Secondly, a company's information processing capability allows them to identify and respond to client needs, taking advantage of opportunities to offer new products in a more opportune form, and with unique benefits (Baker & Sinkula, 2005, 2007). Thirdly, a company that compares and analyses itself, and responds to competitor actions can generate new solutions and improve the performance of new products (Song et al., 2015). Fourthly, market orientation facilitates innovation, by providing a supportive environment which promotes creativity, tolerance of risk-taking, and the capacity for identification of new opportunities (Song et al., 2015).

Based on the above, the following is proposed:

H1. Market orientation has a positive effect on the innovative success.

Although market orientation has been studied in relation to innovation in previous investigations, most of these do not address the innovation variable as it relates to new product success. Laforet (2009) studies market orientation in relation to new product development, process innovation, and innovation strategy, Ozkaya et al. (2015) in relation to market-based innovation, Jimenez-Jimenez et al. (2008) in relation to innovation performance (product innovation, process innovation, and administrative innovation), and Frambach, Prabhu, and Verhallen (2003) in relation to new product introduction and development.

Another group of studies analyses market orientation with innovation variables, linking moderating and mediating variables. This is the case of Zhou, Yim, and Tse (2005) who study the mediating effect of organizational learning between market orientation and breakthrough innovation. Augusto and Coelho (2009) study the mediating effects of internal and external factors between market orientation and new-to-the-world product innovation.

Few studies specifically analyze the relationship between market orientation and new product success. This is the case of Bodlaj, Coenders, and Zabkar (2012), who study proactive market orientation and responsive market orientation, in function of market success in manufacturing companies (with over 10 employees), as well as some from the service domain: wholesale and retail commerce, transportation, storage, and communication and financial intermediation in a central European country. Kaya and Patton (2011) study the relationship between market orientation and innovation performance, referring to success variables in manufacturing and services companies. Note that none of these studies link moderating or mediating variables in the relationship of interest.

Another group (which includes moderation) approaches study of the relationship of interest, through the linking of moderating variables different to those posed here. Baker and Sinkula (2007) analyze the learning style mediator effect, innovation priority (radical innovation, incremental innovation, and imitation) in the relationship between market orientation and new product success. Zhang, Wu, and Shaojie (2015) and Song, Wei, and Wang (2015) also study the incidence of market orientation on the market in variables which align with innovation success, by approximating moderating variables and connecting customer need tacitness in the first case, and ownership structure in the second.

Other investigations, such as that of Sainio, Ritala, and Hurmelinna-Laukkanen (2012), introduce the moderating role of market uncertainty. However, this is done between

customer relationship orientation as firm-level strategic orientations and the radicalness of the firm's innovation output (concretely, technological radicalness, business model radicalness and market radicalness). As can be observed, this does not approach market orientation, and innovation is viewed from its own success.

As demonstrated, although the literature has pointed to the importance of studying the relationship between market orientation and innovation, tying up moderating factors of internal and external natures (Osorio-Tinoco et al., 2014; Wang & Miao, 2015), specifically the moderating role of the environment (Herhausen, 2016), and organizational structure (Herhausen, 2016; J. Song et al., 2015), it exhibits that the study of these moderating factors, in relation to market orientation and new product success, has been very limited.

## **2.2. Structure's moderating effect on the relationship between market orientation and innovation success**

In this study, structure is approached from two dimensions: centralization, which makes reference to the organizational level at which decision making occurs, and the employees' degree of participation, as well as formalization which makes reference to the degree to which rules and procedures are established within an organization (M. Song & Thieme, 2006; Zaltman, Duncan, & Holbek, 1973).

A decentralized structure is considered to be a facilitator of communication, innovation adoption, and high levels of creativity. A centralized structure is expected to be the complete opposite (W. Zheng, Yang, & McLean, 2010), as in highly centralized organizations, the majority of decisions are approved in the highest levels, and communication channels are hierarchical instead of horizontal (M. Song & Thieme, 2006). Businesses with a high level of bureaucratic control, formalization, and centralization tend to inhibit innovation, since decision-making is assigned exclusively to top management (Damanpour, 1991). Formal control, defined as a high degree of formalization and centralization, does not favor the new product success (Ayers, Gordon, & Schoenbachler, 2001; Naranjo-Valencia, Jimenez-Jimenez, & Sanz-Valle, 2017).

It's to be expected, in this case, that the positive relation between market orientation and innovative success will be greater in cases in which the organizational structure is decentralized, and has low levels of formalization. This is because highly formalized structures focus their attention on internal affairs, to the detriment of external orientation. This serves to establish that the reach of an organization's centralization or formalization is inversely correlated with market focus (Harris, 2000). Also, the remoteness or isolation of decision-makers impedes a quick response to the market, which is necessary in order to make innovative changes (Harris, 2000).

Market orientation allows the information processing capabilities of a business to respond to client needs, and permits new products to be introduced in an opportune and successful manner (Baker & Sinkula, 2005, 2007). In order to achieve this, it is necessary for communication channels to be horizontal, and for information and knowledge exchange to become increasingly rapid and flexible. According to Jaworski and Kohli (1993) the formalization and centralization of an organization is inversely related to information exploitation, which can be used in the design of projects to respond to market intelligence.

Menguc and Auh (Menguc & Auh, 2010) alludes to the importance of structure in the degree of novelty and differentiation in the new products. It has been demonstrated that decentralization has a positive impact on the innovative performance (Dekoulou & Trivellas, 2017), as decentralized structures provide increased autonomy, and allow for additional interchange of ideas within organizations (R. J. Calantone, Harmancioglu, & Droge, 2010). The need for commitment in inter-functional knowledge structures, information and resource exchange is key for the superior performance of new products (Menguc & Auh, 2010). This is the case, given that, as proposed by Lundstrom (1976) and Levitt (1969), departmentalization and specialization – different from formalized systems – within organizations are a communication barrier. Hence, they are a market intelligence diffusion barrier (cited by Kohli & Jaworski, 1990) which are more effective in market-oriented

organizations.

For this reason, the second hypothesis is posed:

H2. Organizational structure moderates the effects of market orientation on innovative success

## **2.3 The moderating effect of environmental uncertainty on the relationship between market orientation and innovative success.**

Uncertainty refers to the unpredictability of competitor changes in product designs, consumer demand for new products, and technology which affects the form in which products are used or manufactured (Song & Thieme, 2006). According to Bstieler (2005) environmental uncertainty refers to the difficulty of predicting future evolution of markets or technologies, namely, the relationship with the difficulty of foreseeing rapid changes in the technology used, and its benefits, as well as the unpredictability of changes in market structure or the degree of the competition.

Atuahene-Gima (1995) demonstrates that the influence of market orientation varies, among other factors, in function of the intensity of competition and environmental hostility. Continuous changes in client needs oblige enterprises to develop new products, in order to maintain competitiveness in the market. Likewise, Bodlaj, Coenders, and Zabkar (2012) establish that when client necessities and buying behavior change rapidly, a company can increase its successes by promptly responding to said changes.

In line with the above, it has been found in the literature that environmental uncertainty can have repercussions on product development (Bstieler, 2005). In the same way, it is explained that achieving sustainability and a competitive advantage depends on the company's ability to adapt to environmental changes (Calantone, Garcia, & Dröge, 2003). In turbulent environments, product launching opportunities are short, and companies encounter aggressive competition (Calantone et al., 2003), which is why they must expand and create new markets, in their quest for growth and profitability (Markides, 2013).

The literature indicates that companies from sectors which characterize themselves for being in highly uncertain and continuously changing environments make predictions and see the need to anticipate change through use of innovation strategies (Jiménez-Jiménez & Sanz-Valle, 2012). It is to be expected that, in conditions of uncertain demand, a focus on the consumer is necessary, in order to be able to predict their needs, and thus, to create strategies for new product development and improved innovation performance (Gatignon & Xuereb, 1997). Additionally, in highly competitive environments, a focus on competitors is necessary, so as to anticipate their reactions and develop competitive advantages (Gatignon & Xuereb, 1997). As Gatignon and Xuereb (1997) argue, obtention of advantages appears to be one of the characteristics which explain new products adoption and success.

Furthermore, Henard and Szymanski (2001) conclude, in their innovation determinant meta-analysis, that there is theoretical support to establish that the relationship between market orientation and new products offerings' success has to do with aspects related to complexity, turbulence, and market uncertainty.

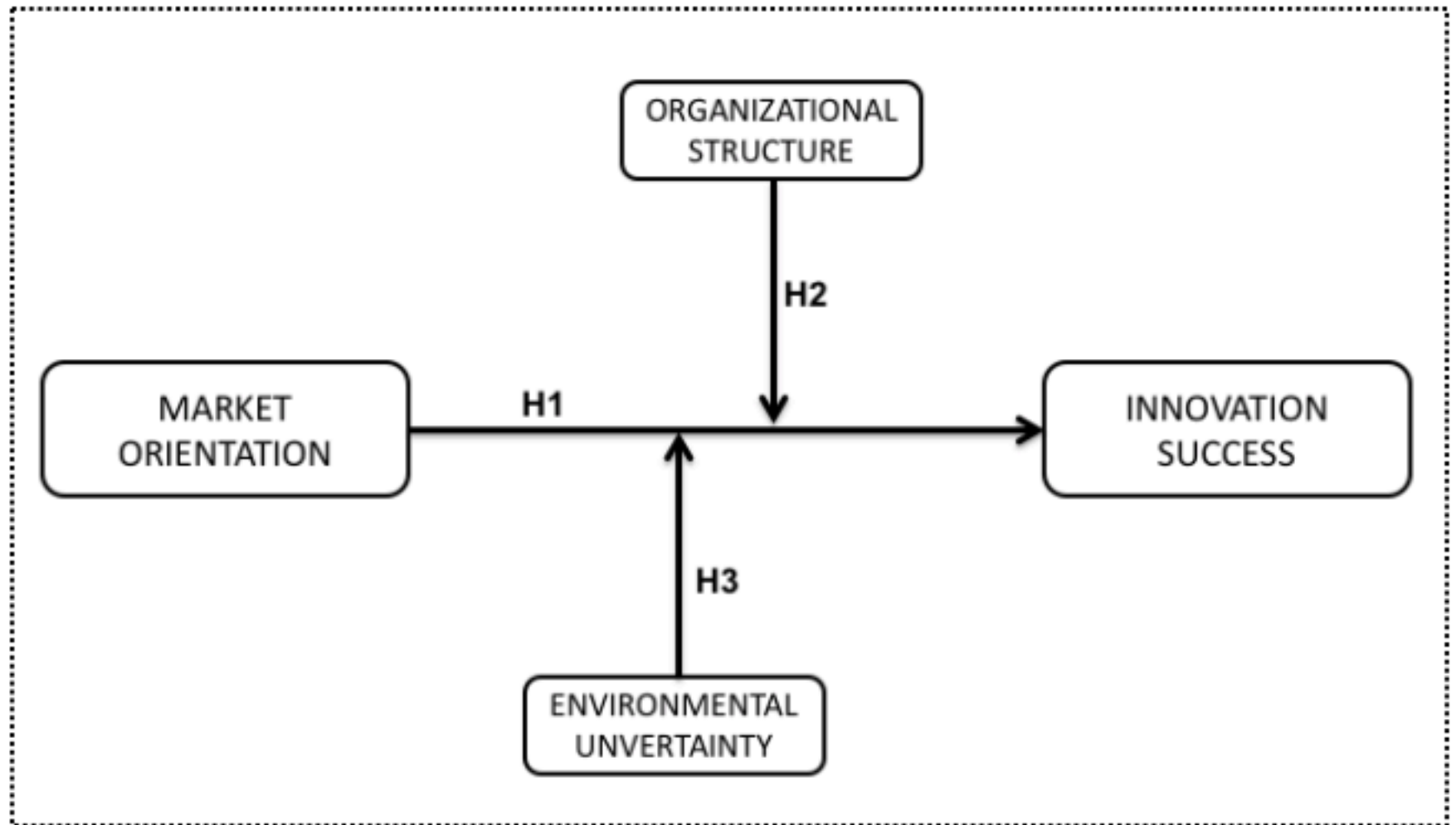
Authors as Kohli and Jaworski (1990) argue that settings where the competition is greater and more aggressive, companies must unveil client wishes (attained through high market orientation) and create superior value to satisfy them. Accordingly, the greater the competition, the more market-oriented a business must be in order to achieve superior performance (Slater & Narver, 1994).

Based on the above approaches, a third hypothesis is posed:

H3. Environmental uncertainty moderates the effects of the market orientation on the innovative success.

### **Figure 1**

Proposed model. Source: Personal proposal



## 3. Methodology

### 3.1. Sample

This study population consists of Colombian industrial companies. The database from a broader investigation is used. It contains: market orientation, innovation success, culture, structure, and environment, among other variables. All of these were measured using the Likert scale.

Information from companies involved in the study was gathered from a structured survey. The survey was addressed to directors with global visions of the variables involved in the study, market orientation and product innovation. The definitive sample was composed of seventy-seven (77) Colombian companies.

### 3.2. Measurement

For variable measurement: market orientation, product innovation, organizational culture, organizational structure, and environment, the five (5) point Likert scale from the literature was used. Furthermore, control variables, such as company age and size were taken into account.

So as not to detract from the significance of items that compose the scales, validation of the scales was performed and special attention was put into their translation into Spanish. Additionally, members of the team verified the interpretation through reverse translation. Likewise, a pilot study was conducted to detect comprehension errors and difficulties in the translated items, as well as to evaluate scale behavior.

- Innovation success. Innovation, as mentioned, is an extensive concept, which must be measured from different perspectives. In this study it is measured according to innovation success. Success is measured according to the (Baker & Sinkula, 1999, 2005, 2007) scales. The questions make reference to the number of newly introduced products, their degree of success, the degree of product differentiation, the degree to which they are difficult to imitate, and the speed of new product development (Appendix A. Scales).

- Market orientation. For this investigation, Deshpandé and Farley (2004b)'s scale, which is very consistent with those of Narver and Slater (1990) and (Jaworski and Kohli (1993) , was

used. Customer service, product development using market information, competitor knowledge, organization orientation toward competitors and clients, client value, and company differentiation in the market is measured with this scale (Appendix A. Scales).

- Organizational structure. The measurement used for this investigation was from (M. Song & Thieme, 2006). It integrates the two dimensions of structure: formalization and centralization, each of which is comprised of three items (Appendix A. Scales).
- Environment. The environment variable is measured according to three items: technological uncertainty, market uncertainty, and competitive intensity. The scale used is one created by (Naranjo-Valencia 2010). They, in turn, elaborate the scale with the measurements used by (De Luca & Atuahene-Gima, 2007; Jaworski & Kohli, 1993; K. Zheng, 2005).

Within the control variables company size was measured according to the number of employees. The age of the company was determined in accordance with the number of years it had been in the market.

### 3.3. Data Analysis

The data analysis methodology used in the present investigation is step by step linear regression with moderating effects. Moderation is given when a third variable modifies the causal effect in the relation (Wu & Zumbo, 2008). For regressions to be accepted, the adjusted  $R^2$  must be meaningful, just as independent variable b coefficients must be and their sign must coincide with the above. The independent and moderating variables are centered by the formation of their interactions. Including variable products allows one to discover the presence of the moderating relation.

Moderating variables affect the magnitude and/or direction of the relationship between the independent and the dependent variable. From the moderation hypothesis, the intent is to explain under what conditions the relationship between market orientation and innovation success becomes stronger or weaker.

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## 4. Results

Chapter 3 text Initially, control variables were introduced to the regression as independent variables (Model 0), and from there, the market orientation variable was added (Model 1). Equation interactions were subsequently added, where models two and three evaluate structure – two being formalization, and three centralization–. Model four was environment. Moderations were validated when the change in  $R^2$  was examined, given the added interactions. When including moderating variables in the models two, three, and four, it can be observed that in formalization ( $\Delta R^2:0,006$ ), centralization ( $\Delta R^2:0,000$ ) and environment variables ( $\alpha \Delta R^2:0,001$ ) the change is not significant. This indicates the opposite of what was expected, neither the structure nor the environment moderate the relationship between market orientation and innovation success.

The final model is explained significantly and is validated by the fulfilment of the assumptions of homoscedasticity, error normality, and non-collinearity of the variables. The results allow for confirmation that market orientation has a positive relationship with innovative success. This proves Hypothesis 1, which means that, in accordance with the statistical analysis, market-oriented companies tend to develop more successful innovations than those which are not. Nevertheless, this study does not support hypothesis two or three.

**Table 1**  
Regression model



	0	1	2	3	4
Market Orientation		1,065***	1,180***	1,072***	1,055***
Formalization			-0,112		
Centralization				-0,571	
Environment					0,072
MO by Formalization			0,085		
MO by Centralization				-0,010	
MO by Environment					-0,030
Age	-0,362	-0,192	-0,249	0,195	-0,188
Size	0,321	0,228	0,268	0,224	0,213
F	1,372	27,077***	20,318***	17,635***	15,359***
R <sup>2</sup>	0,041	0,563	0,582	0,567	0,569
Change in R <sup>2</sup>			0,006	0,000	0,001

Note. \*Significance at 0,05

\*\*Significance at 0,01

\*\*\* Significance at 0,001

Note.

\*Significance at 0,05

\*\*Significance at 0,01

\*\*\* Significance at 0,001

## 5. Conclusions

According to the literature, market orientation is one of the main organizational factors that comes into play in innovation in companies, and specifically, in NP success. However, there has been little investigation carried out which contributes evidence to the moderating role of organizational structure or the environment, in this relationship. Additionally, investigation regarding the incidence of market orientation in NP success in the Colombian context is quite scarce, with the exception of Osorio Tinoco et al.'s (2014) investigation, which examined the moderating role of orientation toward learning in the relationship between proactive and reactive market orientation and innovative success.

Companies from Latin America and the Caribbean have traditionally been quite weak in the production of new ideas capable of achieving technological development or the know-how appropriate for their marketing (Navarro & Olivari, 2016). In general, when comparing developed countries to Latin American countries, it is concluded that the latter rarely recur to innovation strategies in order to gain competitiveness against the rest of the world (Jiménez, 2008), increasing the gap between one and all.

Although Colombia is increasingly conscious of the importance of science, technology, and innovation, and strategies have been established which are directed toward innovation promotion (Gómez & Mitchell, 2014), it has been demonstrated that in the country, companies have traditionally focused on rationalization, cost reduction, and quality (Calderón-Hernández, Álvarez-Giraldo, & Naranjo-Valencia, 2008). This demonstrates a lack of orientation toward the market, which represents a limitation for company success when addressing innovation processes.

The results of the study indicate that market orientation plays a positive role in product innovation (Hypothesis 1), consistent with the findings of previous empirical studies (Atuahene-Gima, 1995; Baker & Sinkula, 2007; Laforet, 2009). This implies that business people should focus on the external environment, given that this allows them to anticipate the needs of clients, analyze and react to competitor movements, which will lead to the development of more successful products.



On the other hand, the results expected, with respect to the moderating relationships proposed, were not as anticipated. The second hypothesis proposed that the effects of market orientation were moderated by structure, and this was disproved. This is surprising, keeping in mind that, in general, the literature has revealed that environments with less formalization and centralization are more favorable for innovation generally (Damanpour, 1991; M. Song & Thieme, 2006; W. Zheng et al., 2010), and for success in particular (Ayers et al., 2001; Menguc & Auh, 2010; Naranjo-Valencia et al., 2017). Pierce and Delbecq (1977) believe that the role of structure should be less dominant, affirming that, "the discussion of innovation is incomplete without recognizing that organizational structure does not determine the innovation, rather it simply sends signals to organizational actors" (Pierce & Delbecq, 1977, p. 36).

There is also no support for the moderating role of the environment in the relationship between MO and innovation. Augusto and Coelho (2009), in relation to the moderating effects of the environment, have a mixed pattern of findings, and refer to other investigations in which something similar occurs (Gatignon & Xuereb, 1997; Li & Calantone, 1998) adding that this pattern could be explained by differences in industry. This affirmation makes sense, taking into account that the generation of successful products can vary across industries, and that industries (industrial sectors), depending on whether they are more or less dynamic, may be more or less sensitive to environmental conditions. Jiménez-Jiménez and Sanz-Valle (2012) argument can also illuminate these results. The authors propose that companies that present imitation strategies are more flexible, allowing them to adapt better to conditions of uncertainty and rapid technological advances, while those companies which create and develop innovations in environments with rapid change may see their products become obsolete, be surpassed by competitors, or not achieve a return on investment.

Finally, the fact that these moderating relationships do not receive support may also have to do with the size of the sample. Our sample size is small, and this may have had the effect of revealing only the strongest influences.

With respect to the control variables, results indicate that the size of the company does not present a relationship with innovative success. It warrants mention that Acs and Audretsch (1987) demonstrate that the relationship between the size of the organization and innovation varies, in accordance with the type of industry, which could constitute a future line of investigation.

With respect to the relationship between age and innovation, there was no relationship found between this and the innovative success of a product. In accordance with several authors, this relationship could be conditioned by other factors, such as R&D expenditures (Cohen & Klepper, 1996), which would also require additional investigation.

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## **Bibliographic references**

Acs, Z., & Audretsch, D. (1987). Innovation, market structure, and firm size. *Review of Economics and Statistics*, 69(4), 567–574. <https://doi.org/10.2307/1935950>

Albornoz, M. (2009). Indicadores de innovación: las dificultades de un concepto en evolución. *Revista Ciencia Tecnología Y Sociedad*, 5(13), 9–25. Retrieved from <http://ref.scielo.org/sjfkxz>

Atuahene-Gima, K. (1995). An exploratory analysis of the impact of market orientation on new product performance. *Journal of Product Innovation Management*. [https://doi.org/10.1016/0737-6782\(95\)00027-Q](https://doi.org/10.1016/0737-6782(95)00027-Q)

Augusto, M., & Coelho, F. (2009). Market orientation and new-to-the-world products: Exploring the moderating effects of innovativeness, competitive strength, and environmental forces. *Industrial Marketing Management*, 38(1), 94–108. <https://doi.org/10.1016/j.indmarman.2007.09.007>

Ayers, D., Gordon, G., & Schoenbachler, D. (2001). Integration and new product development success: the role of formal and informal controls. *The Journal of Applied Business Research*, 17(2), 133–148. <https://doi.org/10.19030/jabr.v17i2.2079>

- Baker, W. E., & Sinkula, J. M. (1999). The synergistic effect of market orientation and learning orientation on organizational performance. *Journal of the Academy of Marketing Science*, 27, 411–27. <https://doi.org/10.1177/0092070399274002>
- Baker, W. E., & Sinkula, J. M. (2005). Market orientation and the new product paradox. *Journal of Product and Innovation Management*, 22(6), 483–502. <https://doi.org/10.1111/j.1540-5885.2005.00145.x>
- Baker, W. E., & Sinkula, J. M. (2007). Does market orientation facilitate balanced innovation programs? An organizational learning perspective. *Journal of Product Innovation Management*, 24(4), 316–334. <https://doi.org/10.1111/j.1540-5885.2007.00254.x>
- Bodlaj, M., Coenders, G., & Zabkar, V. (2012). Responsive and proactive market orientation and innovation success under market and technological turbulence. *Journal of Business Economics and Management*, 13(4), 666–687. <https://doi.org/10.3846/16111699.2011.620143>
- Bstieler, L. (2005). The Moderating Effect of Environmental Uncertainty on New Product Development and Time Efficiency. *Journal of Product Innovation Management*, 22, 267–284. <https://doi.org/10.1111/j.0737-6782.2005.00122.x>
- Calantone, R., Garcia, R., & Dröge, C. (2003). The Effects of Environmental Turbulence on New Product Development Strategy Planning. *Journal of Product Innovation Management*, 20, 90–103. <https://doi.org/10.1111/1540-5885.2002003>
- Calantone, R. J., Harmancioglu, N., & Droge, C. (2010). Inconclusive innovation returns: A meta-analysis of research on innovation in new product development. *Journal of Product Innovation Management*, 27, 1065–1081. <https://doi.org/10.1111/j.1540-5885.2010.00771.x>
- Calderón-Hernández, G., Álvarez-Giraldo, C. M., & Naranjo-Valencia, J. C. (2008). *Estrategia empresarial y gestión humana en empresas Colombianas*. (U. N. de C. Unibiblios, Ed.). Bogotá.
- Cohen, W. M., & Klepper. (1996). Firm Size and the Nature of Innovation within Industries: The Case of Process and Product R&D. *Review of Economics and Statistics*, 78(2), 232–243. <https://doi.org/10.2307/2109925>
- Damanpour, F. (1991). Organizational Innovation: a Meta-Analysis of Effects of Determinants and Moderators. *Academy of Management Journal*, 34(3), 555–590. <https://doi.org/10.2307/256406>
- De Luca, L. M., & Atuahene-Gima, K. (2007). Market Knowledge Dimensions and Cross-Functional Collaboration: Examining the Different Routes to Product Innovation Performance. *Journal of Marketing*, 71(1), 95–112. <https://doi.org/10.1509/jmkg.71.1.95>
- Dekoulou, P., & Trivellas, P. (2017). Organizational structure, innovation performance and customer relationship value in the Greek advertising & media industry. *Journal of Business & Industrial Marketing*, 32(3), 385–397. <https://doi.org/10.1108/JBIM-07-2015-0135>
- Deshpandé, R., & Farley, J. U. (2004a). Organizational culture, innovativeness and market orientation in Hong Kong five years after handover: What has changed? *Journal of Global Marketing*, 17(4), 53–74. [https://doi.org/10.1300/J042v17n04\\_04](https://doi.org/10.1300/J042v17n04_04)
- Deshpandé, R., & Farley, J. U. (2004b). Organizational culture, market orientation, innovativeness, and firm performance: An international research odyssey. *International Journal of Research in Marketing*, 21(1), 3–22. <https://doi.org/10.1016/j.ijresmar.2003.04.002>
- Deshpandé, R., Farley, J. U., & Webster, F. E. (1993). Corporate Culture, Customer Orientation and Innovativeness Japanese Firms: A Quadrad Analysis. *Journal of Marketing*, 57(1), 23–37. <https://doi.org/10.2307/1252055>
- Frambach, R. T., Prabhu, J., & Verhallen, T. M. . (2003). The influence of business strategy on new product activity: The role of market orientation. *International Journal of Research in Marketing*, 20(4), 377–397. <https://doi.org/10.1016/j.ijresmar.2003.03.003>
- Gatignon, H., & Xuereb, J.-M. (1997). Strategic Orientation of the Firm and New Product

Performance. *American Marketing Association*, 34(1), 77–90.

<https://doi.org/10.2307/3152066>

Gómez, H. J., & Mitchell, D. (2014). *Innovación y emprendimiento en Colombia: balance, perspectivas y recomendaciones de política, 2014-2018*. Cuadernos Fedesarrollo.

Harris, L. C. (2000). The organizational barriers to developing market orientation. *European Journal of Marketing*, 34(5/6), 598–624. <https://doi.org/10.1108/03090560010321956>

Hayes, A. F. (2015). An Index and Test of Linear Moderated Mediation. *Multivariate Behavioral Research*, 50(1), 1–22. <https://doi.org/10.1080/00273171.2014.962683>

Henard, D. H., & Szymanski, D. M. (2001). Why Some New Products Are More Successful Than Others. *Journal of Marketing Research*, 38(3), 362–375.

<https://doi.org/10.1509/jmkr.38.3.362.18861>

Herhausen, D. (2016). Unfolding the ambidextrous effects of proactive and responsive market orientation. *Journal of Business Research*, 69(7), 2585–2593.

<https://doi.org/10.1016/j.jbusres.2015.10.139>

Jaworski, B., & Kohli, A. (1993). Market Orientation: Antecedents and Consequences. *The Journal of Marketing*, 57(3), 53–70. <https://doi.org/10.2307/1251854>

Jiménez-Jiménez, D., & Sanz-Valle, R. (2012). Efectos de la estrategia de innovación en el éxito de los nuevos productos: el papel moderador del entorno. *Revista Europea de Dirección Y Economía de La Empresa*, 21(4), 323–332.

<https://doi.org/10.1016/j.redee.2012.03.001>

Jimenez-Jimenez, D., Sanz-Valle, R., & Hernandez-espallardo, M. (2008). Fostering innovation The role of market orientation and organizational learning. *European Journal of Innovation Management*, 11(3), 389–412. <https://doi.org/10.1108/14601060810889026>

Jiménez, L. F. (2008). Capital de riesgo e innovación en America Latina. *Cepal*, (96), 173–187. Retrieved from <http://repositorio.cepal.org/handle/11362/11287>

Kaya, N., & Patton, J. (2011). The effects of knowledge-based resources, market orientation and learning orientation on innovation performance: an empirical study of turkish firms.

*Journal of International Development*, 23(2), 204–2019. <https://doi.org/10.1002/jid.1662>

Kohli, A., & Jaworski, B. (1990). Market orientation: the construct, research propositions, and managerial implications. *Journal of Marketing*, 54(2), 1–18.

<https://doi.org/10.2307/1251866>

Laforet, S. (2009). Effects of size, market and strategic orientation on innovation in non-high-tech manufacturing SMEs. *European Journal of Marketing*, 43(1/2), 188–212.

<https://doi.org/10.1108/03090560910923292>

Levitt, T. (1969). *The marketing mode*. McGraw-Hill.

Li, T., & Calantone, R. J. (1998). The impact of market knowledge competence on new product advantage: Conceptualization and empirical examination. *Journal of Marketing*,

62(4), 13–29. <https://doi.org/10.2307/1252284>

Lundstrom, W. J. (1976). The marketing concept: the ultimate in bait and switch. *Marquette Business Review*, 20(3), 214–230.

Lynskey, M. (2004). Determinants of innovative activity in Japanese technology-based start-up firms. *International Small Business Journal*, 22(2), 159–196.

<https://doi.org/10.1177/0266242604041312>

Markides, C. C. (2013). *Game-Changing Strategies: How to Create New Market Space in Established Industries by Breaking the Rules*. San Francisco: John Wiley & Sons.

Menguc, B., & Auh, S. (2010). Development and return on execution of product innovation capabilities: the role of organizational structure. *Industrial Marketing Management*, 39(5),

820–831. <https://doi.org/10.1016/j.indmarman.2009.08.004>

Monferrer, D., Blesa, A., & Ripollés, M. (2013). Orientación Al Mercado De La Red Y Capacidades Dinámicas De Absorción E Innovación Como Determinantes Del Resultado Internacional De Las Nuevas Empresas Internacionales. *Revista Española de Investigación*

Naranjo-Valencia, J. C. (2010). *La cultura organizacional como determinante de la innovación de producto. Un estudio empírico.*

Naranjo-Valencia, J. C., Jimenez-Jimenez, D., & Sanz-Valle, R. (2017). Impact of organisational culture on new product success: an empirical study of spanish firms. *European Management Review*. <https://doi.org/10.1111/emre.12116>

Naranjo-Valencia, J. C., Jimenez-Jimenez, D., & Sanz-Valle, R. (2017). Organizational culture and radical innovation: Does innovative behavior mediate this relationship? *Creativity and Innovation Management*, 26(4), 407–417. <https://doi.org/10.1111/caim.12236>

Narver, J. C., & Slater, S. F. (1990). The Effect of a Market Orientation on Business Profitability. *Journal of Marketing*, 54(4), 20–35. <https://doi.org/10.2307/1251757>

Navarro, J. C., & Olivari, J. (2016). *La política de innovación en América Latina y el Caribe: nuevos caminos. Banco Interamericano de Desarrollo.* Washington DC.

OECD, & Eurostat. (2005). *Manual de Oslo: Guía para la recogida e interpretación de datos sobre innovación* (Vol. 3). <https://doi.org/10.1787/9789264065659-es>

Osorio-Tinoco, F. F., Hernandez-Espallardo, M., & Rodríguez-Orejuela, H. A. (2014). Impacto de la orientación proactiva y reactiva al mercado sobre el éxito de la innovación. El papel moderador de la orientación al aprendizaje. *Cuadernos de Administracion*, 27(49), 109–133.

Ozkaya, H. E., Droge, C., Hult, G. T. M., Calantone, R., & Ozkaya, E. (2015). Market orientation, knowledge competence, and innovation. *International Journal of Research in Marketing*, 32(3), 309–318. <https://doi.org/10.1016/j.ijresmar.2014.10.004>

Pierce, J., & Delbecq, A. (1977). Organization Structure, Individual Attitudes and Innovation. *Academy of Management Review*, 2(1), 27–37. <https://doi.org/10.5465/AMR.1977.4409154>

Sainio, L.-M., Ritala, P., & Hurmelinna-Laukkanen, P. (2012). Constituents of radical innovation—exploring the role of strategic orientations and market uncertainty. *Technovation*, 32(11), 591–599. <https://doi.org/10.1016/j.technovation.2012.06.006>

Slater, S. F., & Narver, J. C. (1994). Does competitive environment moderate the market orientation-performance relationship? *Journal of Marketing*, 58(1), 46–55. <https://doi.org/10.2307/1252250>

Song, J., Wei, Y. (Susan), & Wang, R. (2015). Market orientation and innovation performance: The moderating roles of firm ownership structures. *International Journal of Research in Marketing*, 32(3), 319–331. <https://doi.org/10.1016/j.ijresmar.2015.03.005>

Song, M., & Thieme, J. (2006). A cross-national investigation of the R&D-marketing interface in the product innovation process. *Industrial Marketing Management*, 35, 308–322. <https://doi.org/10.1016/j.indmarman.2004.09.024>

Wang, G., & Miao, C. F. (2015). Effects of sales force market orientation on creativity, innovation implementation, and sales performance. *Journal of Business Research*, 68(11), 2374–2382. <https://doi.org/10.1016/j.jbusres.2015.03.041>

Wu, A. D., & Zumbo, B. D. (2008). Understanding and using mediators and moderators. *Social Indicators Research*, 87, 367–392. <https://doi.org/10.1007/s11205-007-9143-1>

Zaltman, G., Duncan, R., & Holbek, J. (1973). Innovations and organizations. *John Wiley & Sons.*

Zhang, H., Wu, F., & Shaojie, A. C. (2015). Balancing market exploration and market exploitation in product innovation: A contingency perspective. *International Journal of Research in Marketing*, 32(3), 297–308. <https://doi.org/10.1016/j.ijresmar.2015.03.004>

Zheng, K. (2005). Innovation, imitation, and new product performance: The case of China. *Industrial Marketing Management*, 35(3), 394–402. <https://doi.org/10.1016/j.indmarman.2005.10.006>

Zheng, W., Yang, B., & McLean, G. N. (2010). Linking organizational culture, structure, strategy, and organizational effectiveness: Mediating role of knowledge management. *Journal of Business Research*, 63(7), 763–771.

<https://doi.org/10.1016/j.jbusres.2009.06.005>

Zhou, K. . Z., Yim, C. . K., & Tse, D. . K. (2005). The Effects of Strategic Orientations on Technology- and Market-Based Breakthrough Innovations. *Journal of Marketing*, 69(2), 42–60. <https://doi.org/10.1509/jmkg.69.2.42.60756>

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