





## INNOVATION AND PERFORMANCE IN LATIN-AMERICAN SMALL FAMILY FIRMS




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### ABSTRACT

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The study of innovation in family firms is gaining more and more interest among researchers and academics. Although it is a relatively recent issue in the literature, there is not enough theoretical and empirical evidence of the existing relationship with other constructs, such as the case of business performance. Therefore, using a sample of 1,400 family small businesses from 20 Latin American countries and applying a structural equations modeling of second order, which allows to know in greater depth the relationship between innovation and business performance. The fundamental objective of this empirical study is to investigate the relationship between innovation and business performance in family small business in Latin America. The results indicate that the innovation has a significant positive effect on the business performance of Latin American family small business.

**Contribution/ Originality:** This study is one of very few studies, which have investigated the analysis, and discussion of the relationship between innovation and business performance in Latin American family small and medium-sized enterprises (SMEs).

## 1. INTRODUCTION

The interest in the analysis and discussion about the importance of innovation in small and medium-size family enterprises (SMEs) is increasing constantly in the current literature of business and management sciences (Brines *et al.*, 2013) especially since researchers, scholars and professionals in the field of family firms have seen the economic importance that this type of enterprises have any country of the world (Sharma, 2004) as well as the rise in the innovation skills that family SMEs have (Brouthers *et al.*, 1998; Richbell *et al.*, 2006; Le Breton-Miller and Miller, 2008). More specifically, there is an increasing interest in analyzing the fundamental role of innovation in the business performance in this type of family enterprises (Kraus *et al.*, 2012).

Similarly, some investigations published in the current literature have considered the need to analyze in detail the innovation activities of small family firms not only to identify and explore new market opportunities but also to increase significantly their business performance, and continue with the success of the family enterprise through different generations (Zahra, 2005; Craig and Moores, 2006; Naldi *et al.*, 2007; Kellermanns *et al.*, 2012). Therefore,

there are several researches published in the current literature that have analyzed and discussed innovation in family SMEs from different contexts including business performance (e.g. (Litz and Kleysen, 2001; Gudmundson *et al.*, 2003; Craig and Dibrell, 2006; Craig and Moores, 2006; Kellermanns and Eddleston, 2006; McAdam *et al.*, 2010; Kellermanns *et al.*, 2012)).

Accordingly, other investigations published in the current literature establish the existence of significant differences in the relation between innovation and business performance when comparing family and non-family firms (e.g. Kraus *et al.* (2012)) and such differences are more evident between family and non-family SMEs (Brines *et al.*, 2013). Moreover, in a research by Patel and Fiet (2011) it was established that family firms have several advantages that non-family ones do not have, especially those activities related to the exploitation of new opportunities that the market offers since family companies have some characteristics (i.e. long term orientation, low rotation of personnel, long term leadership and strong family bonds), that allow them to increase significantly their competitive advantages (Patel and Fiet, 2011) and improve their level of innovation and business performance (Sirmon and Hitt, 2003).

In a more recent investigation published in the current literature, De Massis *et al.* (2013) made an extensive review of the literature, analyzed and organized the innovation activities of family firms but they focused only in the analysis of technological innovation and they did not consider other types of innovation in family SMEs. Consequently, there are few investigations in the current literature of business and management sciences that analyze the dimensions or factors of innovation and its relation with business performance (Padilla-Meléndez *et al.*, 2015). Due to the importance of this topic, the innovation and their relation with business performance within a context of family SMEs, this is a topic that must be widely analyzed and discussed by researchers, scholars and professionals in the field of marketing (Casillas and Acedo, 2007; Wright and Kellermanns, 2011).

In this regard, the future of family SMEs will depend mostly on the level of innovation that the very organization has, since this will allow them not only to achieve a higher level of business performance, but also to survive in a globalized and highly competitive market (Xia, 2005). Likewise, considering there are relatively few investigations published in the current literature that analyze and discuss innovation and business performance in SMEs (e.g. (McDermott and Prajogo, 2012; Brines *et al.*, 2013)) and there are even less researches focused in family firms (Dzikowski, 2012; Liu and Chen, 2014). The main contribution of this empirical research is the analysis and discussion of the relation between innovation and business performance in Latin American family SMEs, as recommended by Tuominen and Toivonen (2011); von Koskull and Fougere (2011); Perks *et al.* (2012); Brines *et al.* (2013); Laforet (2013) as well as Padilla-Meléndez *et al.* (2015).

## 2. LITERATURE REVIEW

There is in the current literature of business and management sciences an extensive debate and discussion among researchers and scholars, about the concept of family firm and there is no consensus about a specific definition that satisfies everyone (Wortman, 1994; Upton and Heck, 1997; Upton *et al.*, 2001). Furthermore, previous investigations published in the literature have attempted to identify the intrinsic qualities and the essential nature of family enterprises to incorporate them in a single definition but with no results (Padilla-Meléndez *et al.*, 2015). Nonetheless, there seems to be a consensus among researchers and scholars that the essence of a family firms is a developed view for a by a coalition ruled and controlled by the members of one family, or by a small group of families who keep the ownership of the enterprise through the generations of the family or relatives (Chau *et al.*, 1999).

Prior to this, Handler (1994) and Litz (1995) had already considered that in order to define accurately a family firm, it should have some considerations but these authors did not establish such considerations. Later, a research made by Sharma *et al.* (1997) concluded that the main conditions that enterprises should have in order to be considered as family firms were that the manager must be the owner, that the family has the control of the

enterprises, the influence of the family in the company's decision making and that there is a transfer of the enterprise's control to the next generations of the family.

Moreover, family firms are different from others (non-family) because they have different resources and unique skills as a result of the constant interactions among family members, among businesses, among family members individually (Habbershon and Williams, 1999; Habbershon *et al.*, 2003) and because they have a socio-emotional richness (Gómez-Mejía *et al.*, 2007). Thus, some researchers and scholars have considered in their definition of family firm objective criteria such as the percentage of the family ownership of the enterprise, or the number of members of the family that take administrative posts (Dyer, 2006) whereas other researchers and scholars have considered subjective aspects such as whether managers believe that their enterprise can be considered as a family firm (Smith, 2007).

These are the main characteristics that are usually considered by researchers and scholars in order to define a family enterprise besides the fact that family firms, particularly SMEs, usually do not make a strategic planning (Ward, 1987;1988; Brown, 1995; Silverzweig and D'Agostino, 1995; Rue and Ibrahim, 1996) but they plan a succession of the enterprise (Handler, 1994; Upton and Heck, 1997). This can be understandable since small family firms are usually considered in the literature as a hybrid between family and enterprise where both parts are equally important in terms of status that workers, employees and owners of enterprises have (Liu and Chen, 2014) since the most important thing of small family firms are not the families themselves that own the companies but rather the family business (Drucker, 1999).

On the other hand, researchers and scholars have analyzed for many years the importance of innovation as an essential resource to obtain more competitive advantages (Dess and Picken, 2000) and as a business practice that produces different results (Crossan and Apaydin, 2010). Furthermore, innovation is regularly regarded in the literature as an idea, practice or object which is perceived as new by an individual (Rogers, 1983) and that is developed as an answer to the changes of the firms and market environment (Nohria and Gulati, 1996) which establishes a way of change for the organization (Damanpour, 1991) and that it can generate better results through the creation of new products, services or management techniques (Porter, 1990).

In this regard, it is possible to identify in the current literature two main tendencies in the theoretical and empirical investigations that are published. There are components of innovation such as types of innovation, stages and dimensions of innovation or innovation factors that affect the adoption of innovation in enterprises (Rogers, 1983) and the results of innovation which increase the ability of companies to survive and evolve through the adoption and implementation of innovation creating with this better results including a higher level of business performance (Regine and Lewin, 2000; Fuller and Moran, 2001; McKelvey, 2004; Surie and Hazy, 2006; Goldstein *et al.*, 2008) or to be able to distinguish between innovation in family and non-family enterprises, and even discriminate between family and non-family small firms (Padilla-Meléndez *et al.*, 2015).

Regarding innovation and its results between family and non-family small business, some theoretical and empirical researches published in the current literature have provided evidence of the negative existing relation among small family firms in the investment in research and development (R+D) (Padilla-Meléndez *et al.*, 2015) as Schmid *et al.* (2014) for example, found in an investigation that the force and investment in R+D is a lot higher in small family firms that are not managed by the family than those administered by the family. Likewise, Kotlar *et al.* (2014) proved that the objectives of profitability and control follow a logical sequence in small family firms, but family enterprises react with more strength when the negotiation power of the supplier is increased rather than when the expected levels of profitability have been reached by family enterprises (Padilla-Meléndez *et al.*, 2015).

Accordingly, other investigations have provided dissimilar empirical evidence regarding the results obtained from the adoption and implementation of innovation in family enterprises including business performance (Classen *et al.*, 2014; De Massis *et al.*, 2015; Matzler *et al.*, 2015). Thus, Block *et al.* (2013) for example, analyzed the effects of the density of family firms in the results of regional innovation and did not significant results. In a similar trend,

Kraiczy *et al.* (2014) analyzed in detail how the organizational context of family enterprises interacts with the tendency of risk taking in the innovation of new products from executives. The researchers found that executives have a higher tendency to risk taking when they try to increase the portfolio or new, innovative products and, with this, obtain more and better business performance.

Likewise, Clausen and Pohjola (2013) analyzed thoroughly how far family enterprises have moved forward in the incremental innovation of products, but did not find significant results, while (Shan and Jolly, 2013) concluded that the different technological abilities of family firms have a positive impact in the products innovation, which allows small family companies not only to increase significantly their production capacity, but also to invest every time more economic and financial resources in the development of innovation skills which improves significantly the level of business performance.

Moreover, Matzler *et al.* (2015) established that the participation of the family in the management and governance of small family enterprises, usually have a negative impact in the adoption and implementation of innovation, but they also found a positive and significant influence in the results of innovation, including business performance, since the members of the family are not in favor of risk taking in the investment of innovation, but at the same time they are also more effective in the results of innovation (Matzler *et al.*, 2015). Accordingly, Classen *et al.* (2014) found in their research significant differences between small family and non-family firms regarding the investment in innovation, innovation in products and processes, labor productivity and business performance.

In a similar trend, Price *et al.* (2013) analyzed the existing relation between innovation and knowledge in small family and non-family firms. They found that small family firms that are more innovative have a higher level of business performance. Furthermore, Chrisman *et al.* (2014a) proposed a model in which families have a strong influence in the management of innovation and business performance, based almost entirely in the skill (discreteness to act) and satisfaction (willingness to act), which are to essential elements that clearly identify small family and non-family firms, which also create the existing heterogeneity among small family firms themselves (Padilla-Meléndez *et al.*, 2015).

Chrisman *et al.* (2014b) analyzed in detail how the heterogeneity in the family itself that owns the enterprise (i.e. the management, continuity, community), and the relations need the multifaceted influence and potential of the family members, when the strategic decisions are analyzed regarding the results of innovation of small family and enterprises, such as business performance. Consequently, it is possible to consider that innovation in small family firms is the result of the creation of new ideas as a consequence of heterogeneity of the family members, which in turn produce more and better results such as business performance (Emmendoerfer and Helal, 2008).

In this regard, the innovation considered as a business strategy can create more benefits to a small family firms, such as the increase of its market position (McCann *et al.*, 2001) which is generally considered in the literature as part of their long-term evolution (Barnett and Storey, 2000). However, small family firms have fewer opportunities to establish routines, technology and new products inside the organizations (De Jong and Vermeulen, 2006) since this kind of enterprises do not normally have a formal strategy in their production and management process (Huang *et al.*, 2002). For this reason, Craig and Moores (2006) considered that the establishment of small family firms in any economy and society in the world, have an essential importance in both the practices and the innovation strategies as this can produce a higher level of business performance.

In addition to what was previously mentioned, Aronoff (1998) had already considered that small family firms are more innovative and aggressive companies in the market, where they belong which allows them to obtain a higher level of business performance. Similarly, Hausman (2005) concluded that young small family firms are more innovative and have better level of business performance than more mature enterprises. Similar results were obtained by Koberg *et al.* (1996) as well as Craig and Moores (2006) when considering that innovation is closely linked to the stages of maturity of the organization itself, since in the early stages of existing the small family firms usually have a higher level of innovation and business performance.

On another research paper, [Avermaete et al. \(2003\)](#) concluded that mature small family firms have higher availability to introduce products that are partially or entirely new in the market section, where they participate whereas young small family firms have a higher tendency to introduce innovations that have a higher impact in the level of business performance. These results are very consistent with the ones obtained by [Lumpkin and Dess \(2001\)](#) who found in their research that both the increase in sales, the profit and the business performance are positively linked with the dynamism of the proactivity and innovation of small family firms. Therefore, considering the information presented above, it is possible to establish the following research hypothesis:

*H1: The higher level of innovation, higher level of business performance*

### 3. METHODOLOGY

An empirical research in small and medium-size enterprises in Latin America was carried out in order to answer the research hypothesis by taking as reference 1,400 small family firms in 20 Latin American countries in 2011. The questionnaires were applied to 1,400 enterprises in two main parts: one was related to the innovation activities carried out by SMEs in the two years prior to conducting the survey, and the other one was related to the business performance achieved by SMEs in 2011.

Accordingly, managers were asked to indicate if the enterprise had had innovation activities in the two previous years in order to measure the innovation activities. In order to measure the importance of innovation, managers were asked to evaluate the innovation in products, processes and management systems through a Likert-type scale of five positions from “1 = not important at all to 5 = very important” as limits, which was adapted from [Zahra and Covin \(1993\)](#); [Kalantaridis and Pheby \(1999\)](#); [Frishammar and Hörte \(2005\)](#) as well as [Madrid-Guijarro et al. \(2009\)](#). Moreover, the business performance was measured through a scale of three items (1: return of investment, 2: profits compared with the competitors, and 3: market participation compared with the competitors). This scale was adapted from [Tan and Litschert \(1994\)](#) and measured through a Likert-type scale of five positions from “1 = completely disagree to 5 = completely agree” as limits.

Additionally, the reliability and validity of the innovation and business performance scales were evaluated with a Confirmatory Factorial Analysis (CFA) of second order, by using the method of maximum likelihood with the software EQS 6.2 ([Bentler, 2005](#); [Brown, 2006](#); [Byrne, 2006](#)). Furthermore, the reliability was measured through Cronbach's alpha and the Composite Reliability Index (CRI) ([Bagozzi and Yi, 1988](#)). The results obtained of the implementation of the FCA of second order are presented in Table 1 and they indicate that the model has a good adjustment of data ( $S-BX^2 = 104.667$ ;  $df = 28$ ;  $p = 0.000$ ;  $NFI = 0.980$ ;  $NNFI = 0.988$ ;  $CFI = 0.992$ ;  $RMSEA = 0.044$ ), and the Cronbach's alpha and the CRI values are higher than 0.7, which indicates the reliability of both scales which justifies the internal reliability of the scales used in the theoretical model ([Nunnally and Bernstein, 1994](#); [Hair et al., 1995](#)).

Likewise, as evidence of the convergent validity the results obtained in CFA of second order show that all the items of the factors related are significant ( $p < 0.01$ ), the value of all the standardized loads are above 0.60 ([Bagozzi and Yi, 1988](#)) and the Extracted Variance Index (EVI) of each pair of constructs of the theoretical model of innovation and business performance, has a value above 0.50 as it has been recommended by [Fornell and Larcker \(1981\)](#). These values indicate that the theoretical model has a good adjustment of data.



Table-1. Internal consistency and convergent validity of the theoretical model

Variable	Indicator	Factorial Loading	Robust t-Value	Cronbach's Alpha	CRI	EVI
Product Innovation (F1)	INP1	0.958***	1.000 <sup>a</sup>	0.962	0.963	0.928
	INP2	0.969***	90.960			
Process Innovation (F2)	INR1	0.953***	1.000 <sup>a</sup>	0.900	0.901	0.899
	INR2	0.944***	77.241			
Management System Innovation (F3)	ISG1	0.957***	1.000 <sup>a</sup>	0.969	0.970	0.915
	ISG2	0.967***	90.100			
	ISG3	0.946***	76.663			
Innovation	F1	0.757***	21.140	0.858	0.859	0.671
	F2	0.850***	43.722			
	F3	0.847***	22.442			
Business Performance	REN1	0.884***	1.000 <sup>a</sup>	0.879	0.880	0.710
	REN2	0.829***	16.109			
	REN3	0.815***	16.218			

$S-BX^2$  (df = 28) = 104.667; p < 0.000; NFI = 0.980; NNFI = 0.988; CFI = 0.992; RMSEA = 0.044

<sup>a</sup> = Parameters limited to that value in the identification process.  
 \*\*\* = p < 0.01

The analysis of the discriminant validity of the theoretical model of innovation and business performance was measured through two tests, which are shown in Table 2. The first one is the *reliability interval test* (Anderson and Gerbing, 1988) which establishes that with an interval of 95% of reliability none of the individual latent elements of the matrix of correlation must have a value of 1.0. Secondly, the *extracted variance test* (Fornell and Larcker, 1981) establishes that the extracted variance between each pair of constructs is higher than their corresponding square covariance. Therefore, based on the results obtained from both tests, it can be concluded that that both measurements provide enough evidence of discriminant validity of the theoretical model.

Table-2. Discriminant validity of the theoretical model

Variables	Innovation	Business Performance
Innovation	<b>0.671</b>	0.107
Business Performance	0.295 – 0.359	<b>0.710</b>

Above the diagonal the estimated correlation of factors is presented with 95% confidence interval of the Family SMEs. Below diagonal, the estimated correlation of factors is presented with 95% confidence interval of the Non-Family SMEs.

#### 4. RESULTS

In order to answer the research hypothesis presented in this empirical research, a structural equations model of second order was applied with software EQS 6.2 (Bentler, 2005; Brown, 2006; Byrne, 2006) in which the nomological validity of the theoretical model of innovation and business performance was examined through Chi-square test, which compared the results obtained between the theoretical model and the measurement model. Such results indicate that the differences between both models are not significant, which can offer an explanation of the relationships observed among the latent constructs (Anderson and Gerbing, 1988; Hatcher, 1994). Table 3 shows these results in a more detailed way.

Table-3. Results of the structural equation model

Hypothesis	Structural Relationship	Standardized Coefficient	Robust t-Value
H1: Higher level of innovation, higher level of business performance.	Innovation → Busin <sup>ss</sup> P.	0.609***	23.152

$S-BX^2$  (df = 22) = 104.665; p < 0.000; NFI = 0.980; NNFI = 0.984; CFI = 0.991; RMSEA = 0.066

\*\*\* = P < 0.01

Table 3 shows the results obtained from the implementation of the structural equations model of second order. Regarding the hypothesis **H1**, the results obtained ( $\beta = 0.609$ ,  $p < 0.01$ ), indicate that the innovation has positive and significant effects in the level of business performance of the small family firms from Latin America. Therefore, it is possible to assert that the different activities of innovation carried out by the small family firms, will have positive effects in their level of business performance.

## 5. CONCLUSIONS AND DISCUSSION

The results obtained in this empirical research allow us to conclude in three main aspects. Firstly, it is possible to measure the innovation in small family firms of Latin America through three dimensions: *product innovation*, *process innovation*, and *management systems innovation*. Thus, it is possible to conclude that innovation in small family firms of Latin America is where practically most of the changes or improvements take place regarding their products or services, their production processes and management systems. In other words, they develop an *incremental innovation* through which small family firms essentially accomplish only some changes or small upgrades to the products, processes and management systems that they currently have and, in most cases, they put aside the development of new products or services that do not exist in the market where they participate (*radical innovation*).

Secondly, considering that most or all-small family firms of Latin America (and from anywhere else) have as one of their main goals and targets to increase their level of business performance, then they have to find existing different business strategies and choose the best one that fulfills their needs and structural organization. Therefore, it is possible to conclude that innovation can be considered as one of the business strategies that better suits to the organizational structure of small family firms in order to achieve a higher increase in their level of business performance as well as to survive in an unknown business environment and in a highly globalized and competitive market.

Thirdly, if we take into account that innovation is regarded in the current literature not only as a business strategy, but also as one of the main intangible assets of small family firms then it is possible to conclude that when Latin American small family firms adopt or implement efficiently innovation activities of products or services, processes and management systems they will have higher possibilities of increasing significantly their level of business performance. This will provide them with basic and essential economic and financial resources not only to continue with the activities of incremental innovation, but also to implement new innovation activities such as the development of new products, processes and management systems.

Similarly, the results of this empirical research also have a series of implications for both managers and/or owners of the small family firms and for the organization as a whole. The first one of them is that innovation activities carried out by Latin American small family firms are often an incremental innovation. That is why managers and/or owners of family SMEs have to try harder to implement a radical innovation, that is, to develop new products, processes and management systems that do not exist in the market where they participate. For that, they will have to invest a higher amount of economic resources for R+D, as well as take risks implied in this type of activities. Nonetheless, this will allow them to obtain a higher level of business performance.

A second implication obtained from these results is that Latin American small family firms cannot consider innovation activities just as a business strategy, but rather as a series of everyday activities because innovation demands constant and permanent changes. That is why managers and/or owners of small family firms will have to adopt and implement innovation in a complete way in the functional areas or departments of the organization. In order to produce better results and a higher level of business performance it is necessary the participation of all the organization as a whole, it is the only way to streamline the innovation processes in products, processes and management systems.

A third implication of the results obtained from this empirical research is that managers and/or owners of Latin American small family firms have to design and implement a series of training programs for executives,

employees and workers from the company or take advantage of the different training programs offered by business associations, international associations and government authorities from the three levels in each one of the countries of Latin America regarding the improvement of innovation activities and team work as this will allow small family firms not only to increase their level of business performance significantly, but also attain more and better competitive advantages than their main competitors and improving with this their market ranking.

A final implication of the results in this empirical investigation is that managers and/or owners of Latin American small family firms have to create an organizational atmosphere that promotes the adoption and implementation of innovation activities in all the organization and try, as much as possible, to eliminate the attitudes of employees and workers towards the resistance to change that innovation needs and requires. At the same time, it is necessary that all the personnel of the enterprise adopts a positive and proactive attitude towards innovation activities that the small family firms will develop because if executives are not able to create an organizational culture of innovation then the growth of the level of business performance would be in danger as well as the very survival of the Latin American family enterprise.

Additionally, this empirical research has a series of limitations that are important to consider. The first limitation is the one regarding the sample as only the small family firms that had between 5 and 250 workers were considered. That is why future investigations will have to consider those enterprises with less than 5 workers and more than 250 workers in order to verify the results obtained. A second limitation is that the questionnaire was applied only to small family firms from 20 countries in Latin America and an average of 70 questionnaires were applied in each country, which is not representative of every country. Future researches will need to apply the instrument of data collection in all the countries of Latin America and for a representative sample of each country to verify if the results obtained are similar to the ones presented here.

A third limitation are the scales used to measure the innovation and business performance since only three dimensions and seven items were considered for the measurement of innovation and three items for the measurement of business performance. The following investigations will need to use other types of scales to confirm the results obtained. A fourth limitation is that only qualitative variables were considered to measure the innovation and the business performance activities so in the future it will be necessary to consider quantitative variables or hard data of the enterprises such as the investment in R+D and the number of registered patents in order to verify the existence or absence of significant differences in the results obtained.

A fifth limitation is that the instrument to collect data was applied only to the managers and/or owners of the small family firms. This created the assumption that these executives had a wide knowledge about innovation activities and business performance of the organization. Future researches will need to apply the same questionnaire to a different population such as suppliers, clients and employees of the small family firms in order to confirm the results obtained. Finally, the last limitation is that high percentage of small family firms considered that the information requested was confidential so the results obtained do not necessarily reflect the reality in which Latin American small family firms live regarding the effects that innovation has in the business performance.

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