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Article

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ACCOUNTING, CORPORATE GOVERNANCE & BUSINESS ETHICS | RESEARCH ARTICLE

Analysis of the moderating effect of entrepreneurial orientation on the influence of social responsibility on the performance of Mexican family companies

Felipe Hernández-Perlines^{1*} and Manuel Alejandro Ibarra Cisneros²

Abstract: This study analyzes the entrepreneurial orientation's moderating effect on the influence of social responsibility on the performance of family companies in Mexico. To analyze the results, we propose the utilization of a method of second-generation structural equations (PLS-SEM) using SmartPLS 3.2.7 statistical software applied to data from 140 Mexican family businesses. The first important contribution of this work is that the analysis of corporate social responsibility via the elaboration of GRI memories is adequate, as the proposed measurements are reliable and valid. The second contribution is that in Mexican family businesses social responsibility actions also become outcome improvements, accomplishing substantial influence. Finally, the third contribution of this work is that entrepreneurial orientation reveals as a positive moderator on the effect of social responsibility on the performance of family businesses.

ABOUT THE AUTHORS

Felipe Hernández-Perlines holds a PhD in Economics and Business from the University of Castilla-La Mancha. He is a professor in strategic management and human resources in the Department of Business Administration. He has been a visiting professor at several universities in Italy, France, Mexico, Portugal, and the United States. His research focuses mainly on the strategic direction of human resources, strategic alliances, entrepreneurship orientation, and social responsibility, which have been published in journals such as *Journal Business Research*, *R & D Management*, *Journal of Promotion Management*, *European Journal of International Management*, *Sustainability*, *Psychology and Marketing*, *Frontiers in Psychology*.

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PUBLIC INTEREST STATEMENT

Corporate Social Responsibility and Entrepreneurial Orientation are revealed as two key elements for the performance of family businesses. This is clear from the study conducted in family businesses in Mexico. Family businesses that develop social responsibility activities can improve their performance substantially (the CSR is able to explain 43.8% of the variance of performance of family businesses). If, in addition, we consider the EO and the CSR, the influence on performance increases to 50.7%. This result shows the positive moderating role of EO on the effect of CSR on the performance of family businesses. Of the dimensions that have been considered to define CSR and EO, environmental dimension and innovation are those that have the greatest influence on the performance of family businesses. These results suggest that the CSR and the EO should be an important part of the design of the strategies of family businesses, especially green innovation.

Subjects: Environmental Economics; Strategic Management; Corporate Social Responsibility & Business Ethics; Entrepreneurship and Small Business Management

Keywords: social responsibility; entrepreneurial orientation; enterprise performance; family business; moderating effect; PLS

1. Introduction

In recent years, corporate social responsibility (CSR), entrepreneurial orientation (EO), and how to improve the performance of family businesses continue to focus academic and business interest, both in Mexico and in other developed and emerging countries. In this paper, we try to answer the previous concerns trying to verify the moderating effect of the EO in the influence of CSR in the performance of family businesses in Mexico.

The CSR has become an unavoidable priority for companies and executives (Lu, Chau, Wang, & Pan, 2014) and owing to its capacity to produce shared value (Porter & Kramer, 2011), it is placed at the core of the companies' productive activities. Although the analysis of CSR appeared early in the XX century (Barnard, 1938; Kreps, 1962), it was not until the 1980s when it came into vogue with the appearance of the Stakeholder theory (Freeman, 1984). The revision of literature demonstrates the disparity of results in the analysis of CSR in the performance of companies: positive relation, negative relation, or neutral relation (Margolis & Walsh, 2003; Orlitzky, Schmidt, & Rynes, 2003; Van Beurden and Gössling, 2008; Wu, 2006). In line with the above, derived from the fact that the analysis of the influence of CSR continues to be a non-conclusive line of research, one of the objectives of this paper is to analyze social responsibility in the performance of family businesses in Mexico.

On the other hand, we are witnessing the proliferation of numerous studies that analyze EO, as it is an emerging research field (Covin & Miller, 2014; Hernández-Perlines, 2016; Kropp, Lindsay, & Shoham, 2006). Some of these studies reveal the existence of a positive relation between EO and outcomes (Barringer & Bluedorn, 1999; Covin & Slevin, 1989; Miller, 1983; Wiklund & Shepherd, 2005; Zahra, 1991; Zahra & Covin, 1995;); this way, EO is a valuable predictor of entrepreneurial success (Kraus, Rigtering, Hughes, & Hosman, 2012).

This work is justified because even though we acknowledge CSR can be considered a source of competitive advantage for companies (Alvarado-Herrera, Bigné-Alcañiz, & Currás-Pérez, 2011), thus positively influencing the outcomes (García-Castro, Ariño, & Canela, 2010; Hernández-Perlines & Sánchez-Infantes, 2016; Miras-Rodríguez, Carrasco-Gallego, & Escobar-Pérez, 2015;), there exist some behaviors or processes in the companies that act as moderators of such relation. The theoretical framework we use to analyze the relationship between CSR is that proposed by Preston and O'bannon (1997). These authors consider the neutral approach, which allows to consider the moderation of certain variables, internal and external. In our case, we analyzed the moderating effect of EO in similar terms to what it has been in other studies (Li, Zhao, Tan, & Liu, 2008; Richard, Barnett, Dwyer, & Chadwick, 2004; Wales, Parida, & Patel, 2013). In this sense, the main objective of this work is to analyze the moderating effect of the EO on the influence of the CSR on the performance of family businesses in Mexico. Two others derive from this main objective; On one hand, analyze the influence of the CSR on the performance of family businesses in Mexico; and, on the other hand, to analyze the influence of EO on the performance of family businesses in Mexico. The main contribution of this work is the analysis of the moderating effect of the EO on the influence of the CSR on the performance of family businesses in Mexico, being, in this sense, a pioneering study.

The companies under study are family businesses located in Mexico. The justification of this election is the importance of these companies, which represent 99% of the total existing companies, with an average of 5.4 employees by company (INEGI, 2015). Thereby, we can state that this sort of companies is an important drive for economic growth and welfare, in general, and for Mexico in particular (Astrachan & Shanker, 2003).

To analyze data, in this work we propose to utilize a PLS-SEM structural equation model, through computer software SmartPLS 3.2.7 (Ringle, Wende, & Becker, 2015). Data on EO were obtained by means of a questionnaire sent via email to the CEO's of family businesses out of a sample of 900 companies listed in a directory published by the National Institute of Statistics and Geography (INEGI, 2015). Data on the companies' social responsibility were taken from sustainability memories. After this process, which lasted from November 2015 to February 2016, valid information from 140 family businesses was collected.

This work structures in such manner that after this introduction, in Section 2 the main theoretical aspects of CSR and EO are analyzed and the different hypotheses intended to contrast are presented. In Section 3, the research design is shown, including the model's approach, data gathering, the variables' measurement and the method to analyze the hypotheses. In Section 4, the main results of the performed analysis are presented. Finally, in Section 5, the most relevant conclusions as well as the main limitations of the study are offered and future research lines are also proposed.

2. Theory and hypotheses

2.1. Corporate social responsibility

There is no doubt that companies should think about how to be competitive in an increasingly larger market and subject to major changes. Therefore, it is necessary to analyze what factors affect their results, to support those that positively influence and reduce the effect of negative ones. In this sense, the social responsibility of the company has become an unavoidable priority for companies and their managers (Lu et al., 2014). Although the analysis of the company's social responsibility emerged at the beginning of the twentieth century, we can affirm that CSR has been placed at the core of the activity of companies because of their ability to "create shared value," since not only it creates value for the company, but also creates value for society (Porter & Kramer, 2011).

From the review of the literature on CSR we find works that highlight the divergence in the influence of CSR on its performance (Lu et al., 2014; Margolis & Walsh, 2003; Orlitzky et al., 2003; Wu, 2006). Therefore, some authors suggest continuing to analyze the relationship between CSR and its influence on the performance of companies (Miras et al., 2015). The theoretical approach that sustains this research is that proposed by Preston and O'Bannon (1997), which considers various possibilities to analyze the influence of the CSR on the performance of the companies.

From the multiple definitions of CSR, in this work we have used the one that links this concept with the presentation of sustainability reports, in order to inform the different interest groups and society in general, the actions on economic issues, social and environmental issues that the company is carrying out (Campopiano & De Massis, 2015; Castejón & López, 2016; Chen, Feldmann, & Tang, 2015; Gamerschlag, Möller, & Verbeeten, 2011).

The definition of CSR used in this work has a multidimensional nature, following the recommendations of Gémar and Espinar (2015). Specifically, the following three dimensions have been considered:

- Economic dimension: this dimension reflects honest practice, ethical management of the company and good governance.
- Social dimension: refers to issues related to the creation of employment, improvement of the professional development of employees, protection of health and safety at work.
- Environmental dimension: refers to the impact of the company's activity on the environment.

Focusing on family businesses, studies on CSR are relatively recent (De Massis, 2012). From the review, we distinguish two large bodies:

- (1) Researches focused on the comparative analysis of the different applications of social responsibility in family and non-family companies. In this body we distinguish works by Dyer (2003), Zellweger (2007), Long and Mathews (2011), Chrisman, Chua, Pearson, and Barnett (2012), and Kotlar and De Massis (2013), which underscore the ethical behavior of family businesses compared with those not owned by a family; Reid and Adams (2001), de Kok, Uhlaner, and Thurik (2006), and Colombo, Croce, and Murtinu (2014) distinguish how the familial nature of these companies influences their behavior in favor of stakeholders. For their part, Berrone, Cruz, Gomez-Mejia, and Larrazza-Kintana (2010) affirm that family businesses are more prone to fulfill the interests of different stakeholders. Finally, Kotlar and De Massis (2013) underscore that the behavior of family businesses is simultaneously driven by economic and non-economic objectives.
- (2) Researches that focus on family businesses and their heterogeneity. In this body we distinguish the following works: Dniz and Suárez (2005) analyze the family business' system of values and the social responsibility actions they develop; Niehm et al. (2008) show how social responsibility positively influences performance; Uhlaner et al. (2004) pay attention to relations between family businesses and stakeholders, establishing that family participation in the business positively influences the application of social responsibility; finally, Ding and Wu (2014) find that the youngest family business are not overly concerned about social responsibility, but are about socioemotional richness.

The opportunity of this work lies in the fact that the analysis of the effect of the CSR on performance continues to be a non-conclusive line of research and the need to analyze social responsibility in family businesses. In order to determine social responsibility, the use of data contained in sustainability reports submitted by family businesses has been opted for (Campopiano & De Massis, 2015; Chen et al., 2015). With this work we intend to contribute to the business literature of the family business by deepening on CSR in family businesses and their influence on the performance of them.

The idea behind this work is that CSR can be considered as a source of competitive advantage (Alvarado-Herrera et al., 2011; Bergamaschia & Randerson, 2016), and, therefore, positively influences its performance (García-Castro et al., 2010; Hernández-Perlines & Sánchez-Infantes, 2016; Martínez-Campillo, Cabeza-García, & Marbella-Sánchez, 2013; Miras-Rodríguez et al., 2015). The previous relationship also occurs in family businesses (Castejón & López, 2016), so we can state the hypothesis of the model we want to contrast:

H_1 : Social responsibility positively influences the performance of family companies in Mexico.

2.2. Entrepreneurial orientation

EO has become over recent years one of the most relevant topics in academic literature on companies, to the point that a large body of information has been produced (Arzubiaga Orueta, Iturralde Jainaga, & Maseda García, 2012; Covin & Miller, 2014; Covin & Slevin, 1991; Hernández-Perlines, 2016; Rauch, Wiklund, Lumpkin, & Frese, 2009). EO has experienced multiple reformulations since its original inception. This way, the first author to refer to entrepreneurial orientation was Miller, for whom EO can be understood as a company's behavior characterized by innovation, proactivity, and risk-taking (Miller, 1983). Later on, some authors completed this definition indicating that EO depends on the degree to which change, innovation, risk-taking, and aggressive competence are favored (George & Marino, 2011; Wiklund & Shepherd, 2005). But also, we can link the EO of a company to its capacity to undertake activities related to innovation, risk-taking, and being pioneers in new actions (Engelen, Gupta, Strenger, & Brettel, 2015). Indubitably, EO must be understood as a decision process that affects the company's willingness to innovate, be more proactive and aggressive than its competitors and take risks (Miller & Friesen, 1983).

In this work we have followed the definition of EO as a multidimensional composite that comprises constant search for innovation, proactivity, and willingness to take moderate risks (Miller, 1983). Innovation refers to a company's capacity to support new ideas and experimentation, introduce new products and utilize creative processes (Chandra, Styles, & Wilkinson, 2009; Kropp et al., 2006; Miller & Friesen, 1983). We can state that proactivity is the capability to involve the resources to introduce new products and services before competitors do (Rauch et al., 2009; Wiklund & Shepherd, 2005). Finally, taking risks implies the creation of audacious actions that involve significant levels of resources (Kraus et al., 2012).

EO has also been approached in family businesses, however not from the perspective of the influence of EO on their outcomes, but from a series of factors that influence the entrepreneurial orientation of such companies. This way, Naldi et al. (2007) state that in family businesses risk taking is an important and distinct dimension of EO, which positively associates with proactivity and innovation, while negatively with performance. For their part, Casillas and Moreno (2010) analyzed the effect of the environment on the relation between generational level, non-familial participation in management and the involvement of younger generations in the company and EO. For these authors the environment's dynamism has a significant moderating impact on the relation between next generation participation and EO. Moreover, the environment's hostility affects risk taking positively and proactivity negatively. For their part, Nordqvist and Melin (2010) analyzed the actors, activity, and entrepreneurial attitude of family companies. Weismeier-Sammer (2011) reach the conclusion that size influences the entrepreneurial behavior of family businesses. For Zellweger and Sieger (2012) EO is dynamically adapted in the oldest family businesses. For Cruz and Nordqvist (2012), the family business' generational level affects the correlation between external factors (perceptions of the competitive environment), internal factors (presence of non-familial managers) and EO. Vecchiarini and Mussolino (2013) affirm that family participation and management professionalization influence entrepreneurial orientation. Garcés-Galdeano et al. (2016) assert that socioemotional factors influence the entrepreneurial commitment of family companies. Only Kellermanns, Eddleston, and Zellweger (2012) recognize that the EO of family companies is an important factor in their success. Finally, Schepers et al. (2014) consider that EO improves the performance of family businesses, distinguishing some effects of socioemotional elements on such relation.

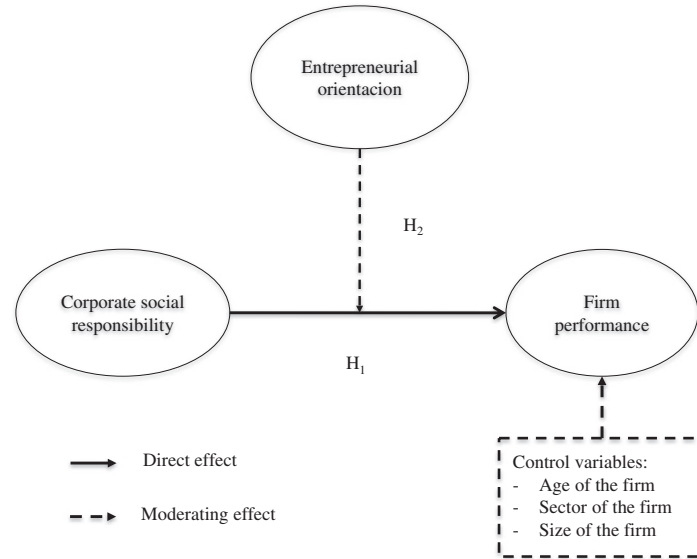
Earlier studies allow verifying the existence of a positive relation between the companies' EO and performance (Barringer & Bluedorn, 1999; Covin & Slevin, 1989; Miller, 1983; Wiklund and Shepherd, 2005; Zahra, 1991; Zahra & Covin, 1995); hence, EO is a valuable predictor of entrepreneurial success (Kraus et al., 2012). In the review of literature, in addition to the direct and positive relation, we also found some researches that analyze the mediating effect of EO (Alfin, 2015; Khedhaouria, Gurău, & Torrès, 2015; Rosenbusch, Rauch, & Bausch, 2013; Roxas & Chadee, 2013) and some others that analyze the moderating effect of EO (Celec, Globocnik, & Kruse, 2014; Luu, 2016; Mehdivand, Zali, Madhoshi, & Kordnaeij, 2012; Wales et al., 2013).

The idea of analyzing the moderating effect of EO arises from asking the following research question: is EO able to moderate the relation between CSR and the performance of family companies? As we have already noticed, this moderating role of EO is not new, nevertheless it is in the relation of CSR and family business performance. This allows us to put forward the following hypothesis:

H_2 : entrepreneurial orientation moderates the effect of corporate social responsibility on the performance of family companies in Mexico.

However, the conceptual model for analyzing the moderating effect of EO on the influence of CSR on the performance of family firms in Mexico is shown in Figure 1.

Figure 1. Proposed research model.



3. Methodology

3.1. Data

Data for EO and performance were collected by means of a questionnaire sent via email, using Limesurvey v. 2.5, to the highest-ranked executives (CEO) in a sample of 900 family companies in Mexico, taken from a listing published by the National Institute of Statistics and Geography (INEGI, 2015). The questionnaire had Likert-type questions (1–5). Data for CSR were obtained from sustainability memories published by such family companies. Before developing the field process, a pre-test was carried out to verify that the questions were well understood. For this, 5 CEO'S family businesses were selected at random and specialists on the subject matter.

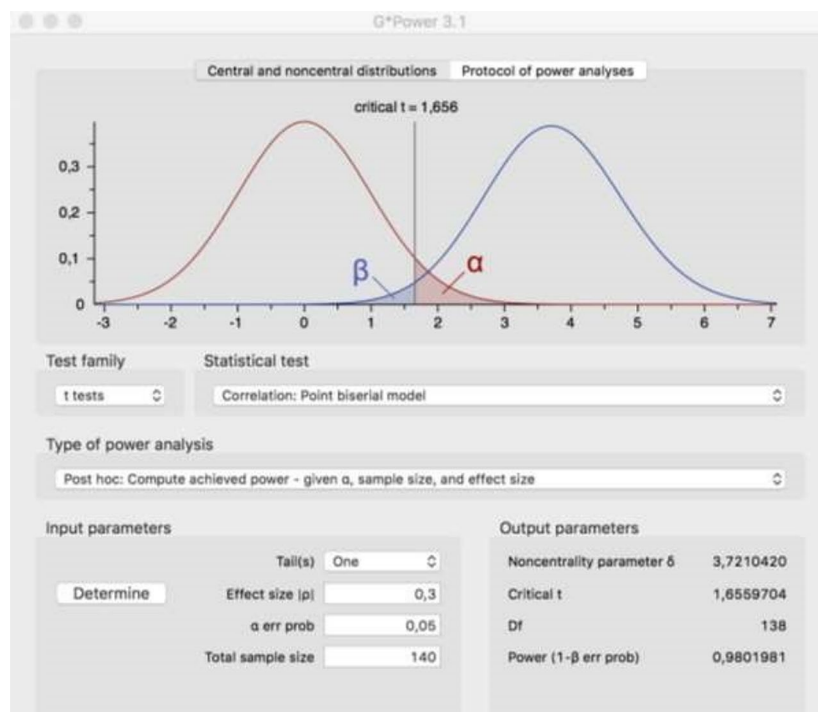
After fieldwork, which took place between November 2015 and February 2016, 140 valid answers were obtained (Table 1).

At this point, we have to calculate if the sample size is adequate to be able to apply the multiple regression of the SEM-PLS model. Following Barclay, Higgins, and Thompson (1995), the minimum number of cases to apply a heuristic regression comes from multiplying the number of scale indicators with the largest number of formative indicators by 10. In our case, the EO construct is formative and is composed of three variables, which in turn are defined by three dimensions; all of this supposes a total of nine indicators. Thereby, the minimum number of cases to be able to apply SEM-PLS is 90. We have 140, so we have overcome this limitation.

Table 1. Fieldwork data sheet

Sample size	900
Scope of application	Mexico
Answers obtained	140
Sampling procedure	Simple random
Confidence level	95%, $p = 50\%$; $\alpha = 0.05$
Response rate	15.55%
Sampling error	7.62%
Fieldwork	November 2015–February 2016

Figure 2. Sample statistical power.



We can also run an analysis of the sample statistical power by means of Cohen's (1992) retrospective test; to do so, we utilized G * Power 3.1.9.2 program (Faul, Erdfelder, Buchner, & Lang, 2009). The family business sample under study possesses a statistical power of 0.98 (over the limit established by Cohen (1992), 0.80) (Figure 2).

The most relevant characteristics of the companies in the sample are shown in Tables 2 and 3.

To contrast the hypotheses and analyze the moderating effect of EO, we have utilized the multivariate statistical technique of Partial Least Square (PLS) structural equations. This method is the most suitable to approach the stated research questions, owing to several reasons:

- (1) Its predictive nature (Hair, Sarstedt, Hopkins, & Kuppelwieser, 2014; Sarstedt, et al., 2014);
- (2) it allows observing different causal relations (Astrachan, Patel, & Wanzenried, 2014; Jöreskog and Wold, 1982); and,
- (3) because it is less demanding in relation to the minimum sample size (Henseler, Ringle, & Sarstedt, 2015).

Table 2. Respondents' characteristics

		N	%
Sex	Man	95	67.85
	Woman	45	32.15
Age	<25	36	25.72
	>25	104	74.28
Schooling level	No higher education	85	60.71
	University graduate	55	39.29

Table 3. Number of employees, sector, and generational level of the companies in the sample

	N	%
<i>Employees</i>		
10–49	43	30.71
50–249	48	34.28
>250	49	35.01
<i>Sector</i>		
Manufacturing	27	19.28
Services	58	41.42
Construction	9	6.42
Entertainment	17	12.14
Other	29	20.74
<i>Generational level</i>		
First	52	37.14
Second	57	40.71
Third and following	31	22.15

In addition, the software used allows solving the heterogeneity of responses used in the questionnaire (Likert type responses, numerical answers in absolute values and in relative values). The software to analyze data by means of SEM-PLS was SmartPLS v.3.2.7 (Ringle et al., 2015).

3.3. Variables' measurement

3.3.1. Corporate social responsibility

It is not easy to establish a measure of this compound. To establish how to measure CSR in this work, we started with the so-called sustainability indexes, which both Griffin and Mahon (1997) and Margolis and Walsh (2003) consider to better reflect the responsible performance of the company in relation to its economic performance - financial. In this work we have opted for the GRI, which allows us to combine the effects of different indices and the data of a questionnaire, in its format of Social Memories (Schadewith & Niskala, 2010) and which, in addition, allows comparisons between different companies. We have considered CSR as a composite of three dimensions, economic, social and environmental. This is what has come to be called as the Triple Result Account, "Triple Bottom Line" (TBL) (Chang & Kuo, 2008; Elkington, 2004).

Given that the economic, social, and environmental dimensions are measured by a large number of items, they were reduced. For this, the analysis of the loads or simple correlations of the items with their dimensions was used, in such a way that only items with a load greater than 0.7 were considered, following the recommendations of Carmines and Zeller (1979). Specifically, the following items were considered: (a) for the economic dimension: purchases, value of taxes, value of donations, value of reserves and value of provisions; (b) for the social dimension: personnel expenses, training expenses, employees with exclusion, prizes and interest groups and external initiatives; (c) for the environmental dimension: energy consumption, use of recycled material, and recycling of products.

3.3.2. Entrepreneurial orientation

To measure EO we have utilized the nine items comprised in innovation, proactivity, and risk-taking, according to the scale proposed by Miller (1983) modified by Covin and Slevin (1989), and Covin and Miller (2014).

3.3.3. Firm performance

In this research, we have measured the performance of the company according to the scale proposed by Wiklund and Shepherd (2005), Naldi et al. (2007), Chirico, Sirmon, Sciascia, and Mazzola (2011), Kellermanns et al. (2012) and Kraus et al. (2012) and composed of 4 items, which had a load greater than 0.7, following the recommendations of Carmines and Zeller (1979). In particular, we have considered the average annual sales growth in the last three years, average growth of the market share in the last three years, average profit growth in the last three years and average growth of the return on capital in the last three years.

3.3.4. Control variables

The control variables were family size (number of employees), age (number of years since the company's creation) and whether the sector had been used in previous studies on family firms (Chrisman, Chua, & Sharma, 2005).

4. Results

In order to ensure that the scales proposed for the measurements are valid and reliable, the two stages proposed by Barclay et al. (1995) have been followed:

- (1) assessment of the measurement model, and
- (2) assessment of the structural model

4.1. Assessment of the measurement model

Following Roldán and Sánchez-Franco's (2012) recommendations, our first step was to analyze the values of factorial loads, composite reliability, Cronbach's alpha, and average variance extracted (AVE). Tables 4–6 present the values of such indicators. As we notice, these indicators surpass the thresholds recommended by the literature.¹

We also calculated the discriminant validity that measures to what extent a composite is truly different from the other composites (Hair et al., 2014). For its calculation, we compared the values of AVE square root for each composite with the correlations between the constructs associated to such construction (Fornell & Larcker, 1981). In all cases (see Table 7), AVE values are greater than the corresponding correlations.

Table 4. Entrepreneurial orientation composite and indicators

Composite/indicators	Load	Composite reliability	Cronbach's alpha	AVE
Entrepreneurial orientation (type b second-order composite)		0.850	0.733	0.756
Innovation (type a first-order composite)		0.910	0.851	0.770
Innovation 1	0.872			
Innovation 2	0.878			
Innovation 3	0.883			
Proactivity (type a first-order composite)		0.772	0.765	0.612
Proactivity 1	0.720			
Proactivity 2	0.897			
Proactivity 3	0.855			
Risk-taking (type a first-order composite)		0.768	0.750	0.630
Risk-taking 1	0.775			
Risk-taking 2	0.836			
Risk-taking 3	0.749			

Table 5. Corporate social responsibility composite and indicators

Composite/ indicators	Path coefficient (β)	Composite reliability	Cronbach's alpha	AVE
Corporate social responsibility (type a second-order composite)		0.827	0.882	0.809
Economic dimension (type a first-order composite)	0.873	0.880	0.844	0.760
Social dimension (type a first-order composite)	0.893	0.923	0.914	0.732
Environmental dimension (type a first-order composite)	0.908	0.875	0.836	0.775

Table 6. Company performance composite and indicators

Composite/indicators	Load	Composite reliability	Cronbach's alpha	AVE
Company performance (type a first-order composite)		0.906	0.870	0.656
Company performance 1	0.852			
Company performance 2	0.793			
Company performance 3	0.857			
Company performance 4	0.825			

Table 7. Discriminant validity (*)

	Innovation	Proactivity	Risk-taking
Innovation	0.877		
Proactivity	0.440	0.782	
Risk-taking	0.463	0.348	0.793

*The diagonal presents the values of AVE square root (in bold).

Moreover, we can calculate HTMT index that allows calculating the discriminant validity between indicators of the same composite and between indicators of different composites. In order to comply with discriminant validity, HTMT ratio values must be lower than 0.85 (Henseler et al., 2015). As we notice in Table 8, all values are lower than 0.85.

Finally, discriminant validity is completed by the calculation of HTMT_{inference} ratio that comes from a 5000-subsample bootstrapping. When the resulting interval contains values below 1, there is discriminant validity. In our case, this condition is met (see Table 9).

All of this shows us that the indicators utilized to measure the different composites are reliable and have discriminant validity.

EO became operative as a type b second-order composite obtained in two stages through the scores of latent variables (Wright, Campbell, Thatcher, & Roberts, 2012). To validate the EO composite, Diamantopoulos' et al. (2008) recommendations were borne in mind. In this case, the indicators in each construction shall not present collinearity (Diamantopoulos & Winklhofer, 2001). Collinearity problems may appear when the variance inflation factor (VIF) reaches or surpasses the value of five (Kleinbaum, Kupper, Muller, & Nizam, 1988). In our case, no collinearity problems were observed (see Table 10).

Table 8. Heterotrait–monotrait ratio (HTMT)

	CSR	EO	ED	CompPerf	Pr	RT	SD	Gen	Sect	In	Size
CSR											
EO	0,743										
ED	0.707	0.723									
CompPerf	0.636	0.702	0.755								
Pr	0.683	0.738	0.752	0.8							
RT	0.647	0.744	0.775	0.587	0.88						
SD	0.726	0.688	0.766	0.612	0.767	0.668					
Gen	0.124	0.095	0.134	0.104	0.09	0.093	0.175				
Sect	0.802	0.723	0.756	0.773	0.862	0.469	0.764	0.074			
In	0.806	0.702	0.755	0.708	0.8	0.667	0.528	0.08	0.77		
Size	0.181	0.115	0.169	0.112	0.161	0.154	0.183	0.105	0.191	0.118	

Table 9. HTMTinference

	Original data (O)	Data mean (M)	5.0%	95.0%	Data mean (M)	Bias	5.0%	95.0%
CSR -> Economic dimension	0.707	0.881	0.85	0.905	0.881	0.001	0.847	0.903
CSR -> Company performance	0.636	0.412	0.275	0.557	0.412	-0.001	0.277	0.558
CSR -> Social dimension	0.726	0.895	0.872	0.915	0.895	0.002	0.865	0.911
CSR -> Environmental dimension	0.802	0.908	0.882	0.928	0.908	0	0.882	0.928
EO -> Company performance	0.702	0.414	0.258	0.558	0.414	-0.001	0.247	0.544
Proactivity -> EO	0.738	0.429	0.403	0.462	0.429	0	0.407	0.469
Risk taking -> EO	0.747	0.306	0.273	0.341	0.306	-0.002	0.277	0.343
Generation -> Company performance	0.104	0.001	-0.055	0.063	0.001	-0.001	-0.046	0.069
Innovation -> EO	0.702	0.479	0.451	0.512	0.479	0.001	0.456	0.518
Size -> Company performance	0.112	0.014	-0.043	0.1	0.014	0.012	-0.045	0.093

Table 10. Collinearity of entrepreneurial orientation

Factor	Loads (λ)	VIF
Innovation	0.478	1.905
Proactivity	0.429	1.703
Risk-taking	0.308	1.28

4.2. Structural model analysis

The analysis of the structural model verifies that CSR has a positive impact on the performance of Mexican family companies. Path coefficient is 0.536 (over the 0.2 that Chin (1998a, 1998b) proposes as a minimum limit). Besides, this effect is significant (the value of t is 8.143, based on $t(4,999)$ of a single queue and a significance level of $p < 0.001$), being social responsibility capable of explaining 43.8% of the variance of the performance of Mexican family businesses. Thereby, the first hypothesis is verified.

Separately, the moderating effect of EO is positive and significant, since path coefficient is 0.258 and the value of t is 4.139 (based on $t(4,999)$ of a single queue and a significance level of $p < 0.001$). Additionally, the moderating effect of EO makes the influence of social responsibility on the performance of family businesses increase to explain 50.7% of the variance. Finally, regarding the graduation of the moderating effect of EO, we verify it is moderate, as the value of f^2 is 0.18 (Chin, 2010) (Table 11).

None of the considered control variables is relevant and significant (coefficients are lower than 0.2 and t values are lower than the recommended value) (Table 12).

To complete the analysis of the structural model, we calculated the model's goodness of fit from the standardized root mean square residual (SRMR) proposed by Hu and Bentler (1998) and Henseler et al. (2015). In our case, the value of SRMR is 0.07 (below the 0.08 recommended by Henseler et al. (2015)).

5. Conclusions, limitations and future research lines

The first conclusion of this work is methodological. The study confirms that the measurement of CSR through the triple GRI account (Campopiano & De Massis, 2015; Chen et al., 2015; Gamerschlag et al., 2011) is also adequate in family businesses in Mexico, all the indicators show adequate values of reliability and validity. With this work we cover one of the gaps detected in the literature: the analysis of social responsibility in family businesses through sustainability reports.

The second methodological conclusion refers to the way in which the CSR compound has been constructed. In this work, the CSR has been operationalized as a second-order α -type compound reflecting the economic dimension, the social dimension and the environmental dimension (Campopiano & De Massis, 2015; Hernández-Perlines & Rung-Hoch, 2017).

Table 11. Structural model

	R^2	β	t -value
Model 1: CSR \rightarrow FP	0.438	0.536	8.143
Model 2: CSR \rightarrow FP	0.426	0.315	6.741
EO \rightarrow FP		0.513	5.632
Model 3: CSR*EO \rightarrow FP	0.507	0.398	3.657
		0.396	4.246
		0.258	4.139

Table 12. Control variables

Variable	β	t -value
Generation	0.065	0.840
Sector	0.082	0.635
Size	0.071	0.339

The third conclusion of this investigation is derived from the results obtained. The research confirms that family businesses in Mexico that develop CSR activities improve their performance. This result is consistent with the results of previous studies (Hernández-Perlines & Rung-Hoch, 2017; Herrera-Madueño, et al., 2016; Martínez-Ferrero et al., 2016; Perrini et al., 2011; Surroca, et al., 2010). In addition, this improvement in performance is substantial, since social responsibility is able to explain 43.8% of the variance in the performance of family businesses.

The fourth conclusion focuses on the dimensions of the CSR. Of the different dimensions of the CSR considered, the most important for family businesses in Mexico is the environmental one, as it happens in companies in other countries (Sweeney, 2007).

The fifth conclusion comes from the moderating effect of the EO. If we focus on the moderating effect, it is confirmed that the EO acts as a positive moderator in the influence of social responsibility on the performance of Mexican family businesses, as evidenced by the positive path coefficient (0.258) and that the variance explained by the performance goes to 50.7%. Therefore, if we combine CSR and EO, the effect on improving the performance of family businesses is important.

The sixth conclusion focuses on the dimensions of the EO. Of the three dimensions considered EO in this work, innovation is the most important for family businesses in Mexico.

From the above, it follows that family businesses that are able to innovate in environmental aspects may improve their performance.

The limitations of this study come from the configuration of both CSR and EO. Each of the dimensions could have been specified independently to verify the effect of each one on performance and analyze the moderating effect of each one of the dimensions of EO. Another limitation comes from not considering the effect of ownership on the influence of social responsibility in the family company. Or the environment's influence on the development of each dimension, both of CSR and EO. Another limitation would be to carry out a comparison of the behavior of family and non-family businesses to verify that EO exercises such moderating role as well as its effect.

As future research lines, it is possible to apply a transversal approach in the study carried out, and even a panel approach. Another line of research would be to analyze the CSR from the founding of the family business, and if its development is linked with the founder and / or with the successors. In this sense, it would be advisable to analyze in future investigations, the effect of the level of education of the managers/owners, the gender, the leadership, etc., and even the level of economic development of the country, carrying out a multi-country analysis.

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Note

1. Carmines and Zeller (1979) recommend values over 0.7 for factorial loads; while Fornell and Larcker (1981) recommend values over 0.7, 0.7 and 0.5 for composite reliability, Cronbach's alpha, and average variance extracted (AVE), respectively.

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