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# Family business performance in a post-disaster scenario: The influence of socioemotional wealth importance and entrepreneurial orientation

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ABSTRACT

Natural disasters are becoming more frequent and severe and pose a threat to family firms' survival. It is important to address the rarely examined question of how the variables of socioemotional wealth importance (SEWi) and entrepreneurial orientation (EO) interact to influence the performance of family businesses in a post-disaster scenario. This study is based on a sample of 307 family businesses that suffered damage as a result of the 2010 earthquake in the Province of Concepción, Chile. Comparative analysis was performed using partial least squares structural equation modeling (PLS-SEM) and qualitative comparative analysis (QCA). The PLS-SEM results support all study hypotheses. The QCA results yield five models that explain post-disaster performance. The model with the greatest coverage includes the EO variables of competitive aggressiveness, internal innovativeness, and external innovativeness. However, SEWi is relevant in terms of its interaction with the rest of the variables in three of the five models.

## 1. Introduction

The survival of family businesses is an issue that has received widespread academic interest. Researchers have made progress in understanding the determinants of family businesses' ability to survive across generations (Zellweger, Nason, & Nordqvist, 2012). Studies have investigated how family businesses manage to survive despite often having minimal financial returns (Glover & Reay, 2015). Other studies have examined the decision-making process that occurs within family businesses to determine whether they cease to develop their commercial activity (exit) or persist in implementing actions that allow them to survive (DeTienne & Chirico, 2013). However, research on the factors that determine family businesses' ability to survive external shocks such as natural disasters is still scarce and highly fragmented. To fill this gap, we build on the socioemotional wealth (SEW) perspective and the entrepreneurial orientation (EO) literature to respond to the following question: How do the variables of socioemotional wealth importance (SEWi) and EO interact to influence the performance of family businesses in a post-disaster scenario?

Research on small and medium-sized enterprises (SMEs), among which family firms are numerous, shows that approximately 20% of these enterprises close within five years following a natural disaster (Schrank, Marshall, Hall-Phillips, Wiatt, & Jones, 2013). Other research indicates that small businesses owned by women, minorities, and veterans have a higher probability of demise, whereas businesses led by owners with more industry experience, disaster experiences, or experience managing financial troubles are less likely to face closure (Marshall, Niehm, Sydnor, & Schrank, 2015). It has been suggested that family businesses that mix family and business resources and businesses that provide more income to the family are more likely to survive (Haynes, Danes, & Stafford, 2011). Danes et al. (2009) found that federal disaster assistance was relevant for explaining family firms' resilience to natural disasters. Previous research has made important progress in identifying demographic variables and resource asymmetries that determine firms' probability of surviving a natural disaster, but the roles of the motivations and priorities of family enterprises after a disaster are not yet clear. The SEW perspective suggests that SEWi play a role in defining family priorities and motivations and are central to explaining the family's proactiveness, willingness to take risks, and motivation to take every possible measure to survive when business continuity is under threat, such as when facing a natural disaster (Gomez-Mejia, Cruz, Berrone, & De Castro, 2011; Llanos-Contreras & Jabri, 2019). This framework has not been previously applied to understand the behavior of small and medium-sized family enterprises in a post-disaster scenario.

The study performs a comparative analysis using both partial least squares structural equation modeling (PLS-SEM) and qualitative comparative analysis (QCA). We contribute to the literature on the

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influence of EO on the performance of family businesses and to the literature on the SEW of family firms. Finally, we contribute by using non-linear methods that allow us to incorporate a new perspective to understand family businesses' behavior.

The next section discusses how EO and SEW influence the performance of family businesses in a post-disaster scenario. Then, a discussion of the research methods and analysis procedures is presented. The following section discusses the results, and the final section presents the conclusions, limitations, and implications of this research.

## 2. Literature review

The SEW perspective indicates that family firms are willing to do everything possible to survive when business continuity is at risk to preserve the non-economic wealth (or SEW) the business provides to the family (Gomez-Mejia, Haynes, Núñez-Nickel, Jacobson, & Moyano-Fuentes, 2007). The importance of preserving this wealth (SEWi) depends on the target and on personal and situational features (Zellweger & Dehlen, 2012). Accordingly, this theoretical perspective maintains that family firms' priorities and decisions change depending on their point of reference (situational features) at different moments in time. Empirical evidence confirms that the tendency of these organizations to make riskier decisions and to engage in entrepreneurial actions (higher EO) increases when their continuity is under threat (Berrone, Cruz, & Gomez-Mejia, 2012), which, for family firms, occurs after a major shock, such as a natural disaster.

Recent research on SEW has indicated that family priorities, as an expression of the SEWi assigned to their businesses, influence the EO of these firms (Llanos-Contreras & Alonso Dos Santos, 2018), and both factors are important in explaining firm performance (Binacci, Peruffo, Oriani, & Minichilli, 2016; Lee & Chu, 2017). Research on how family businesses survive a natural disaster has acknowledged the importance of the resources and capabilities of these firms to explain their ability to adapt to external disruptions (Haynes et al., 2011; Olugbola, 2017; Stafford, Danes, & Haynes, 2013). However, their motivation and ability to efficiently manage these resources and transform them into better performance is at least partially determined by the SEW and EO variables (Markin, Swab, & Marshall, 2017). While SEWi can be an expression of family business owners' willingness to continue, EO variables demonstrate business owners' ability to manage the crises generated by a natural disaster.

### 2.1. EO and family business disaster survival

EO, as an expression of corporate entrepreneurship, is considered critical for family businesses to explore new business opportunities, support long-term stability, and develop a competitive advantage (Covin, Slevin, & Heeley, 2000). Classically, EO has been defined in terms of innovativeness, proactiveness, and risk taking (Covin & Slevin, 1989). However, other authors, such as Lumpkin, Cogliser, and Schneider (2009), have added the dimensions of autonomy and competitive aggressiveness. A more fine-grained description of this construct is proposed by Zellweger and Sieger (2012), who not only acknowledge the previous dimensions but also distinguish between internal and external innovativeness, between internal and external autonomy, and among ownership risk, performance hazard risk, and control risk.

Many articles suggest that EO has a positive influence on firm performance (Engelen, Gupta, Strenger, & Brettel, 2012; Lee & Chu, 2017). However, because of the wide range of dimensions of this construct, Zellweger and Sieger (2012) note that high levels of all of its dimensions are not a necessary condition to explain a dependent variable. Accordingly, understanding how EO influences the performance of family firms in a post-disaster scenario requires an assessment of the influence of the individual variables that form it. Thus, this study focuses on exploring the dimensions of proactiveness and innovativeness, which are considered crucial in explaining family firm performance (Nordqvist, Habbershon, & Melin, 2008). We also include competitive aggressiveness because it is a good indicator of the availability of firms to do everything they can to retain family control (Gomez-Mejia et al., 2007).

Proactiveness refers to an orientation toward anticipating, being a first mover, and taking advantage of opportunities (Lumpkin & Dess, 1996). Because a natural disaster is an external disruption that challenges family businesses' management routines and resources, highly proactive family businesses increase their adaptive capacities, which in turn should give them a performance advantage in such a scenario (Stafford et al., 2013). From a system perspective, facing a natural disaster requires family businesses to make many complex decisions at the personal, family, and business levels. These decisions are interconnected; accordingly, it is expected that a proactive attitude in one part of the system positively influences the others, triggering a chain of decisions that lead to restoration, rebuilding, and recovery (Marshall & Schrank, 2014). This would logically have a positive influence on the performance of family businesses in a post-disaster scenario. Accordingly, we present the following hypothesis:

**H1.** Proactiveness has a positive, significant impact on the performance of small and medium-sized family enterprises in a post-disaster scenario.

Competitive aggressiveness is defined as a "*firm's propensity to directly and intensely challenge its competitors to achieve entry or improve position, that is, to outperform industry rivals in the marketplace*" (Lumpkin & Dess, 1996, p. 148). It has been suggested that competitive aggressiveness is less relevant than proactiveness in assessing EO in family businesses (Nordqvist et al., 2008). However, this is not the case when family businesses face external disruptions that threaten their continuity. Several articles have proposed that these firms make decisions focused primarily on preserving SEW (Cruz & Justo, 2017). Thus, family businesses owners seek to preserve not only the economic perks provided by the businesses but also non-economic perks, such as identity, reputation, and job stability. A natural disaster is a huge threat to a firm's ability to remain under family control and thus implies losses in economic wealth and SEW. Accordingly, it is expected that in a post-disaster scenario, family businesses will be especially open to competitive aggressiveness because it will increase their probability of survival.

By definition, competitive aggressiveness leads family businesses to deploy non-traditional methods of competition, such as developing new distribution and communication channels, to outperform their competitors (Wincent, Thorgren, & Anokhin, 2014). Thus, in a post-disaster context, competitive aggressiveness is a threat response that increases family businesses' chances of survival. This aggressiveness triggers behaviors that support these firms' recovery and thereby enhance their performance. Thus, we propose Hypothesis H2:

**H2.** Competitive aggressiveness has a positive, significant impact on the performance of small and medium-sized family enterprises in a post-disaster scenario.

Innovativeness is defined as firms' ability and willingness to engage in new ideas, novelty, experimentation, and creative processes to develop new products, services, or technological processes (Lumpkin & Dess, 1996, p. 142). Zellweger and Sieger (2012) distinguish between internal and external innovativeness. The former refers to implementing new processes, technologies, systems, and management structures; the latter refers to pioneering the introduction of new products or services and developing new markets.

Family business research provides empirical evidence that family firms are less innovative than non-family firms (Block, Miller, Jaskiewicz, & Spiegel, 2013). Innovativeness is considered a potential threat to the family's priority of preserving SEW because it increases the performance hazard risk. However, when their performance is below

expectations, family businesses are able to adopt a more innovative orientation and make riskier decisions (Patel & Chrisman, 2014). Thus, we believe that in a scenario of low economic returns (as in a post-disaster scenario), family businesses will have a high innovativeness orientation and that this orientation will positively influence their performance. We thus propose the following two hypotheses:

**H3.** Internal innovativeness has a positive, significant impact on the performance of small and medium-sized family enterprises in a post-disaster scenario.

**H4.** External innovativeness has a positive, significant impact on the performance of small and medium-sized family enterprises in a post-disaster scenario.

### 2.2. SEWi and family firm survival

SEW has been defined as the "*non-financial aspects of the firm that meet the family's affective needs, such as identity, the ability to exercise family influence and the perpetuation of the family dynasty*" (Gomez-Mejia et al., 2007, p. 106). The most well-known description of this construct is FIBER, which is defined by five dimensions: family control and influence, identification of the family members, binding social ties, emotional attachment of the family members, and renewal of the family bond through dynastic succession. This construct was assembled on the basis of 30 items from previous scales used to assess each of these dimensions. Recently, however, researchers have proposed a finer-grained measure called SEWi (Debicki, Kellermanns, Chrisman, Pearson, & Spencer, 2016) to assess family businesses owners and manage preferences with regard to an array of non-financial perks related to SEW. This construct assesses not only the factors that drive SEW but also the level of importance given by owners and managers to these factors. This study suggests that SEWi can be assessed in terms of the importance given to family prominence, family continuity, and family enrichment.

SEW is related to the non-financial perks that owner families gain from their firms, and it is reflected in their perception of firm value (Cruz & Justo, 2017). This perspective proposes that family businesses avoid losses of SEW and seek to keep the business under family control to avoid losing all of their wealth (Gomez-Mejia et al., 2007). Recent studies indicate that family business owners assess their economic and SEW (current and prospective) when making decisions (Gomez-Mejia, Patel, & Zellweger, 2018). It has been proposed that the decision to take actions to keep running the business is defined by a threshold of performance, which in turn is explained by the level of SEWi (DeTienne & Chirico, 2013). Thus, higher socioemotional attachment (or higher SEWi) increases the family benefits of continuing to run the business, which lowers the performance threshold (Llanos-Contreras & Alonso Dos Santos, 2018). Hence, it is expected that when SEWi is higher, family businesses are more willing to take actions to face the economic losses that result from a natural disaster. This increased willingness increases their adaptive and resilience capabilities and thereby improves their performance in a post-disaster scenario. The above analysis supports the following hypothesis, and Fig. 1 summarizes the complete model:

**H5.** SEWi has a positive, significant impact on the performance of small and medium-sized family enterprises in a post-disaster scenario.

## 3. Methods

### 3.1. Data collection and sample

The sample was chosen in November 2017. We surveyed 401 family businesses that suffered damage as a result of the 2010 earthquake in Concepción, Chile. There is no census to identify or quantify the number of companies affected by the earthquake. A quota sampling system was chosen as the sampling method. Each group represents a geographic area affected by the earthquake. The number of companies in each area was determined according to the size of the area.

Missing data and outliers were deleted according to the listwise method and the Mahalanobis (1936) distance, respectively. The final sample included 307 family businesses affected by the earthquake. Half of the companies suffered major damage, and the other half suffered minor damage. In 80% of the companies, > 80% of the company's ownership was controlled by the main owner. Forty-six percent of companies had one generation currently working in the company, 43% had two, and the rest had three or more. Restaurants represented the most common type of business in the sample, at approximately 10%. The other business types did not have significant representation in the sample.

### 3.2. Scales

Regarding the scales used in the questionnaire, external innovativeness (2 items), internal innovativeness (3 items), proactiveness (3 items), and competitive aggressiveness (3 items) were adapted from Zellweger and Sieger (2012). The SEWi scale was adapted from Debicki et al. (2016) and consisted of three subscales: family prominence (3 items), family continuity (3 items), and family enrichment (3 items). The scale to measure small firms' economic performance was adapted from Hernández-Carrión, Camarero-Izquierdo, and Gutiérrez-Cillán (2017). The adaptation of the scales consisted of their translation and adaptation to the local context due to linguistic differences. The questionnaire was translated into Spanish by Chilean natives and later revised by several family entrepreneurs. The questionnaire applied five-point Likert scales ranging from 1 = "strongly disagree" to 5 = "strongly agree."

### 3.3. Analysis procedure

First, PLS-SEM was used to verify the validity and reliability of the instrument using SmartPLS software (Ringle, Wende, & Becker, 2015). This method also allows hypotheses to be validated under a linear model. Subsequently, fuzzy-set QCA (fsQCA) was used to consider all logically possible combinations of the conditions that produce the expected results using fsQCA software (Ragin & Davey, 2014). Each method allows for an analysis of the behavior of the dependent variable under different perspectives. PLS-SEM is based on a sequence of regressions to identify symmetrical relationships, and QCA captures the asymmetry of relationships with a limited number of cases (Mendel & Korjani, 2012). QCA allows for an explanation of which combinations of independent variables determine firm performance. Therefore, the combined effect of the relationships rather than the net effect was the focus of this methodology (Lisboa, Skarmeas, & Saridakis, 2016).

## 4. PLS-SEM results

### 4.1. Evaluation of the measurement model

We first evaluated the measurement model by examining the reliability and validity using PLS-SEM (Hair, Sarstedt, Ringle, & Gudergan, 2017) (Table 1). The scales were generally reliable because the composite reliability indicator was > 0.8, Cronbach's α was > 0.7 (Hair et al., 2017), and the simple correlations of the indicators with their respective variables were > 0.7 (Hair et al., 2017). Two items of the SEWi and firm performance variables were lower but were not eliminated because they were significant. Regarding validity, the rho_A coefficient and analysis of variance (AVE) revealed convergent validity (> 0.5). Discriminant validity results were obtained via an analysis of the heterotrait-monotrait ratio (HTMT < 1), the Fornell-Larcker criterion, and cross-loadings. All three criteria supported discriminant

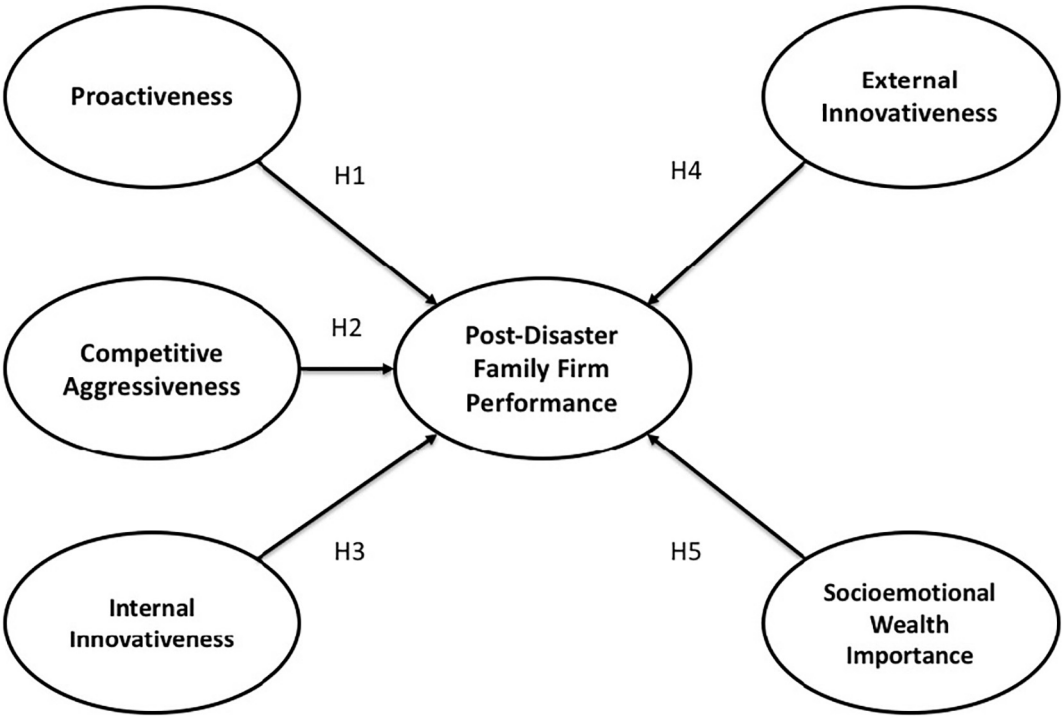


**Fig. 1.** Theoretical model.

**Table 1**
Evaluation of the measurement model.

| Construct | Cronbach's α | CR | rho_A | AVE | Factorial loads |
|---|---|---|---|---|---|
| Proactiveness | 0.719 | 0.842 | 0.723 | 0.641 | 0.779–0.852* |
| Internal innovativeness | 0.803 | 0.884 | 0.814 | 0.717 | 0.831–0.881* |
| External innovativeness | 0.672 | 0.859 | 0.772 | 0.753 | 0.863–0.872* |
| Competitive aggressiveness | 0.785 | 0.873 | 0.801 | 0.696 | 0.821–0.854* |
| SEWi | 0.816 | 0.855 | 0.834 | 0.502 | 0.425–0.711* |
| Firm performance | 0.822 | 0.877 | 0.871 | 0.643 | 0.687–0.889* |

* Significant factor loadings $p < 0.001$.

**Table 2**
Assessment of the structural model.

| Relationship | Path | $f^2$ | $R^2$ | $Q^2$ | SRMR |
|---|---|---|---|---|---|
| Proactiveness → Firm performance | 0.179** | 0.036 | | | |
| Internal innovativeness→ | 0.133** | 0.019 | | | |
| External innovativeness→ | 0.416** | 0.218 | | | |
| Competitive aggressiveness→ | 0.092** | 0.014 | | | |
| SEWi→ | 0.122*** | 0.025 | | | |
| Firm performance | | | 0.441 | 0.253 | |
| Common factor model | | | | | 0.07 |

Note: 5000 permutations. Significance level at 0.05 (two-tailed).
** $p < 0.05$.
*** $p < 0.001$.

validity.

### 4.2. Evaluation of the structural model

The coefficient of multiple correlations ($R^2 = 0.441$) and the coefficient of predictive relevance ($Q^2 = 0.253$, blindfolding procedure, omission distance = 7) indicated that the model was relevant and predictive. The effect size of the exogenous variables ($f^2$) was small for the SEWi, competitive aggressiveness, internal innovativeness, and proactiveness variables and medium for the external innovativeness variable (Chin, 1998). The standardized root mean square residual coefficient (SRMR = 0.07) exhibited an appropriate model fit. The results (Table 2) showed an appropriate model adjustment and predictive capacity ($R^2 = 0.441$; $Q^2 = 2532$ and SRMR = 0.07 (Hair et al., 2017). The outcomes of the analysis supported all proposed hypotheses because their significance was confirmed.

## 5. QCA results

### 5.1. Calibration

Calibration processes transform continuous variables or variables obtained from dimensions with different elements into variables compatible with a fuzzy set (Eng & Woodside, 2012). Calibration is performed by multiplying the scores among the variable items (Villanueva, Montoya-Castilla, & Prado-Gascó, 2017) and then recalibrated to three centile values (Ragin, 2008): 5%, 50%, and 95% of the data values.

### 5.2. Necessary and sufficient conditions

None of the variables analyzed was a necessary condition because the values of the consistency coefficients were < 0.9 (Ragin, 2008). We used the intermediate solution to analyze the results according to suggestions in the literature (Villanueva et al., 2017). A threshold above 0.8 (0.884) produced five causal combinations (Table 3). The models were ordered according to raw coverage (proportion of memberships in the outcome explained by each model). This solution was appropriate and informative because the consistency coefficient was 0.823 and the coverage coefficient was 0.693 (Ragin, 2008). All conditions were in the range of 0.25 to 0.65 (Eng & Woodside, 2012), and all variables were present in the solution.

Overall, the QCA results indicated that in the fsQCA model, 69% of firm performance was explained by the complete solution. In contrast, the PLS-SEM method explained 44% of the variance in firm performance.

**Table 3**
FsQCA results.

| Configuration | Solution | | | | |
|---|---|---|---|---|---|
| | Firm performance | | | | |
| | 1 | 2 | 3 | 4 | 5 |
| Proactiveness | | • | | • | • |
| Internal innovativeness | • | | | ⊗ | • |
| External innovativeness | • | • | • | • | |
| Competitive aggressiveness | • | | • | | • |
| SEWi | | ⊗ | • | | • |
| Raw coverage | 0.412 | 0.374 | 0.328 | 0.305 | 0.288 |
| Unique coverage | 0.013 | 0.056 | 0.015 | 0.034 | 0.024 |
| Consistency | 0.871 | 0.875 | 0.834 | 0.858 | 0.876 |
| Overall solution consistency | 0.823 | | | | |
| Overall solution coverage | 0.693 | | | | |
| Consistency cutoff | 0.884 | | | | |

### 5.3. Predictive validity and robustness of the results

The predictive validity test was implemented following Eng and Woodside's (2012) recommendations. The five steps used have been previously described in the academic literature (Mikalef & Pateli, 2017). The consistency shown in Fig. 2, which shows the XY plot graph from the Model 1 test in sub-sample 2, was > 0.8. Therefore, the models had high predictive capacity (Eng & Woodside, 2012).

A robustness analysis was performed to identify the extent to which the solution was sensitive to the complexity reduction procedure used for raw data processing (Skaaning, 2011). First, each model obtained using the fsQCA method was analyzed, and then the models were contrasted using PLS-SEM (Gonçalves, Lourenço, & Silva, 2016). All relationships between the models exhibited satisfactory results (SRMR between 0.071 and 0.077; $R^2$ between 0.315 and 0.441). Second, we analyzed the sensitivity of the results to changes in calibration systems (Gonçalves et al., 2016) using a more severe consistency threshold (0.9) (Ordanini, Parasuraman, & Rubera, 2014). The results did not differ substantially from those obtained initially, even though the literature recognizes that small changes can produce significant changes in the results (Skaaning, 2011). Therefore, the results of these analyses suggested that the findings were stable and robust (Ordanini et al., 2014).

## 6. Discussion and conclusions

This article makes progress in understanding how SEWi and EO variables interact to influence the performance of small and medium-sized family businesses in a post-disaster scenario. This understanding is important for several reasons. First, these types of events are becoming increasingly frequent and severe and pose a real threat to the survival of businesses in affected areas (Linnenluecke & McKnight, 2017). Second, family businesses are considered a predominant organizational structure (Poza & Dauguerty, 2014). Finally, recent studies suggest that the establishment (embeddedness) and linkage of family businesses with the productive structures of the territory in which they operate play a fundamental role in local economic development (Basco, 2015). Thus, family businesses' survival of these events is important not only for the firms themselves but also for the community as a whole.

The results demonstrate that the scales are viable and trustworthy. The PLS-SEM results support the five hypotheses. Thus, they corroborate the presumptions of Marshall and Schrank (2014) and Stafford et al. (2013), who indicate that proactiveness increases the adaptive capabilities of family businesses and gives them the ability to use their resources to benefit their performance in a post-disaster scenario. Along the same lines, in contrast with the general suggestion that competitive aggressiveness is a less relevant variable for EO assessment than the proactiveness variable, the results demonstrate that it is important and that it has a positive and significant impact on the performance of small and medium-sized family enterprises in a post-disaster scenario. This finding shows, in alignment with the SEW perspective, that these organizations are able to do everything possible to keep running their businesses (Gomez-Mejia et al., 2007). Thus, competitive aggressiveness can be considered an antecedent of proactiveness and innovativeness, which leads family firms to implement strategies and actions

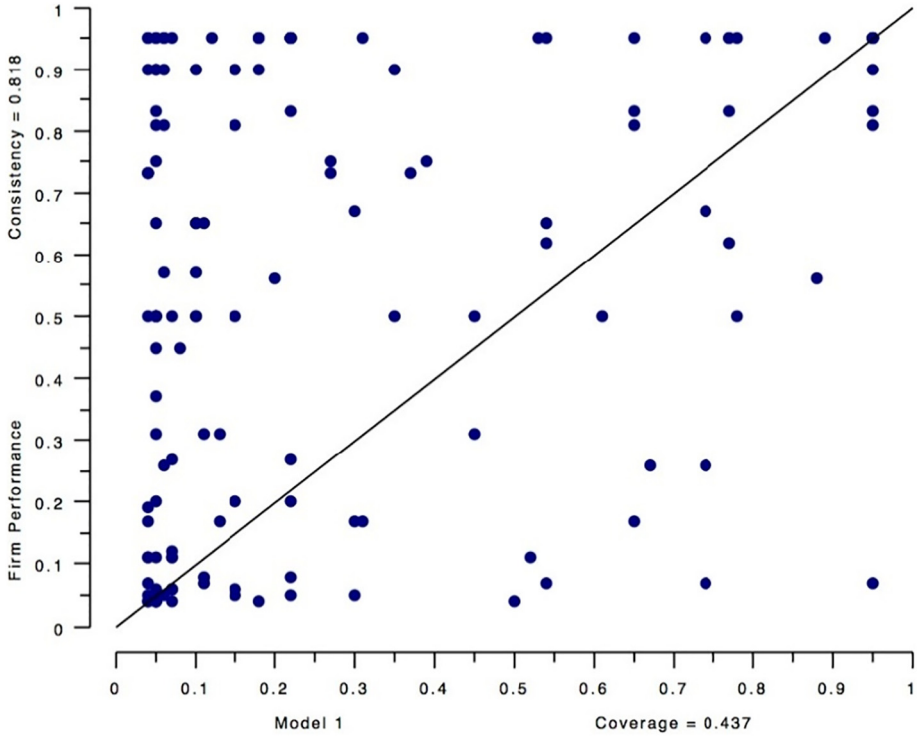


**Fig. 2.** Test of Model 1 in sub-sample 1 using data from sub-sample 2.

with the aim of outperforming their competitors (Zellweger & Sieger, 2012). Regarding innovativeness, the results also support previous findings in family business research, indicating that in a scenario of low economic returns, such as a post-disaster scenario, a high innovativeness orientation will lead to positive results in terms of performance (Patel & Chrisman, 2014).

The results from the fuzzy-set QCA yield five models that explain post-disaster performance. The causal combination with the highest relevance was competitive aggressiveness × internal innovativeness × external innovativeness. This finding supports the idea that competitive aggressiveness leads to innovation in deploying non-traditional process and market strategies, which in turn has a positive influence on firm performance (Wincent et al., 2014). The two best-performing models, in order of importance, were ~SEWi × proactiveness × external innovativeness and SEWi × competitive aggressiveness × external innovativeness. This finding aligns with the idea that family enterprises assess the gains and losses of both economic wealth and SEW (Cruz & Justo, 2017); accordingly, SEWi can be present or absent. Model 3 indicates that when SEWi is present and combined with competitive aggressiveness and external innovativeness, the family firm's performance in a post-disaster scenario improves. This result suggests that when the continuity of a family business is threatened, the priority of preserving SEW (presence of SEWi) could be an antecedent that triggers competitive aggressiveness and external innovativeness and supports firm performance. This conclusion aligns with the finding of Patel and Chrisman (2014) that when performance is lower than expected, family businesses make riskier research and development investments. Model 2 indicates that the absence of SEWi combined with proactiveness and external innovativeness leads to better performance in our sample. Family firms' priority of preserving SEW is related to lower innovativeness and proactiveness (Block et al., 2013). This result leads us to believe that the absence of SEWi enhances proactiveness and external innovativeness and in turn enhances firm performance.

Although previous evidence shows that EO positively influences firm performance (e.g., Lee & Chu, 2017), the QCA results confirm the relevance of assessing the influence of the specific variables that form this construct. The analysis indicates that none of the variables is a necessary condition, providing further support to Zellweger and Sieger (2012). Furthermore, the QCA provides several models showing how EO variables interact to influence the performance of family businesses. It also reveals the interaction between EO variables and SEWi, which allows the (indirect) assessment of the ability of family firms to manage their resources in a post-disaster context (Yunis, El-Kassar, & Tarhini, 2017) and their priority of maintaining the firm under family control when its continuity is threatened (Llanos-Contreras & Alonso Dos Santos, 2018) — in this case, as a consequence of a natural disaster.

This article contributes to the almost non-existent literature regarding how family businesses cope with natural disasters and to the few studies on small and medium-sized family businesses in Latin American countries. From a theoretical point of view, this study makes at least three important contributions. First, it elucidates the influence of four specific variables of the EO construct on small and medium-sized family enterprises in a post-disaster scenario (Schepers, Voordeckers, Steijvers, & Laveren, 2014). This result confirms the prediction that in a post-disaster scenario when business continuity is threatened (meaning a total loss of the family business), attributing greater importance to SEW increases the performance of family businesses (Gomez-Mejia et al., 2007). Finally, this research contributes by using non-linear methods, which have rarely been used in the analysis of family business behavior (Llanos-Contreras & Alonso Dos Santos, 2018). The combination of the PLS-SEM and QCA methods widens the understanding of the study phenomenon by broadening the capacity to explain variance: the conditional causal model explained 69% of the variance in firm performance, whereas the PLS-SEM method explained 44%. PLS-SEM validated the scales used and confirmed that all variables were significant in explaining the variation in the variance of the firm performance construct. However, the asymmetric vision of the QCA method captured the complexity of the interaction of the variables, exposing a more complex scenario than the one shown through PLS-SEM (the QCA indicated that any variable was a sufficient condition). This enables the understanding of how SEWi interacts with the entrepreneurial behavior variables, increasing the performance of companies when they face the consequences of a natural disaster.

All of these contributions indicate that willingness (assessed as SEWi) and ability (assessed as EO) are critical factors in the post-disaster performance of family firms. Accordingly, they are central in determining these firms' ability to recover. Theoretically, this research shows that the way these variables interact (their presence and absence) is also central for attaining higher levels of performance when business continuity is threatened. Thus, this research provides further insight into a central aspect of the SEW perspective and of the EO literature: the value creation dynamic when continuity is threatened.

Managers can benefit from this study to develop or strengthen the resilience of family business culture by enhancing the factors that increase firm performance after a disaster, which can also enhance firms' ability to face external shocks other than natural disasters. Because family firms are embedded in the territories in which they operate (Basco, 2015), they can become a critical echelon for enhancing community resilience. Accordingly, policy makers can learn by identifying firms with a strong willingness and ability to continue, which can lead to community recovery. The government could develop financial support programs that are particularly oriented to firms that are likely to pursue innovativeness in developing new products, opening new markets (external innovativeness), and/or introducing new technologies that lead to the improvement of their processes, management structures, and information systems (internal innovativeness).

This study is not without limitations, both geographical and cultural. The institutional context and government support may differ between regions and limit the generalizability of our results (Kedmenec & Strašek, 2017). The possibility that EO and SEW priorities influence firm performance in a post-disaster scenario depends on the resources available to be mobilized from these attitudinal elements. Additionally, future research can focus on directly determining the factors that favor family firms' resilience and recovery. Qualitative research would be useful to better explain the social and emotional processes that shape EO and adaptive capacities that lead to recovery. Understanding the interaction between the community, the government, and family businesses is also a stream of research that can be developed more deeply.

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