Family-managed firms and Employment Growth during an Economic Downturn: Does their Location Matter?

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Abstract

Purpose - This study investigates the relationship between family-managed firms and firm employment growth by considering the effects of location and economic crisis as moderating variables.

Design/methodology/approach – The study uses random-effect models on a large panel dataset of Spanish manufacturing firms covering 2003 to 2015 to estimate the joint effects of municipality size and economic crisis on firm employment growth.

Findings - The analysis reveals a positive association between family-managed firms and employment growth. However, this association is not uniform across space and time. When it considers location, the study finds that municipality size positively affects employment growth in family-managed firms but not in non-family firms. Additionally, while the study reveals that both firm types experience negative employment growth during the early stage of the global economic crisis (2007–08), it also finds that family-managed firms located in small municipalities downsize less than their non-family counterparts.

Originality/value - This study provides new evidence on the resilience of family-managed firms during economic crises, particularly those located in geographically bounded settings, such as small municipalities. When an adverse event, such as an economic crisis, jeopardizes

employment levels, the embedded and trust-based relationships between a family firm and its community leads them to prioritize employees' claims. However, family-managed firms' commitment to preserve jobs in small municipalities cannot be maintained over the long term; this effect disappears if the economic crisis is protracted. This study sheds new light on family-managed firms' distinctive behavior towards with local communities.
Keywords family firm, employment, embeddedness, proximity, municipality, manufacturing, economic crisis, Spain
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1. Introduction

The growing research on firm heterogeneity has advanced our understanding of why firms' behaviors (Greenaway and Kneller, 2007) and performance levels (Georgopoulos and Glaister, 2018) vary. One important source of firm heterogeneity is firms' nature as a family (i.e., owned, governed, or managed by a family) or non-family business (Casson, 1999). The research has focused on explaining the paradox whereby two highly intertwined domains—the firm and the business—can shape firm behavior and its effects on firm outcomes. The family business debate has overlooked the spatial (Stough *et al*., 2015) and temporal (Sharma *et al*., 2014) dimensions of the context in which family firms operate. For instance, there is evidence that Spanish family firms that survived the 2008 global economic crisis sacrificed profitability to keep jobs (ABC Economia, 2016); however, whether this effect was uniformly distributed across urban settings remains unexplored. This study investigates this issue to understand the role played by family firm location.

This research examines the spatial-temporal phenomenon of family and non-family firms by considering the impact of location and the 2008 economic crisis on firms' workforce growth. The study focuses on employment growth because it embodies significant non-economic goals among family firms (Chen *et al*., 2014). Previous studies have used this measure to explore family firms' resilience to economic crises (Lins *et al*., 2013) and their commitment to maintaining implicit contracts with employees during adverse events (Lee, 2006). This paper is guided by two research questions: 1) How does municipality size affect the relationship between the family/non-family firm distinction and employment growth, and 2) is this relationship affected by the economic crisis?

The study addresses these questions following the "regional familiness" approach (Basco, 2015), as it is a sociologically rooted analysis (Granovetter, 1985; Hess, 2004). Moreover, employing the concept of "proximity" (Boschma, 2005), this study posits that the economic, social, and emotional entrenchment of family firms in their home territory is the

basis of their distinctive behavior. This study conjectures that family-managed firms are more exposed to, and thus more influenced by, close social relationships than are their non-family counterparts because of the "nexus" between the family firm and its economic and social surroundings. However, this direct effect overlooks the importance of proximity as it manifests itself in a strong territorial identity (Dekker and Hasso, 2016), a historical trajectory based on a sense of belonging across generations (Cennamo *et al*., 2012), and the social capital of family members disseminated across localized social structures (Lähdesmäki and Suutari, 2012).

Therefore, the study hypothesizes that family-managed firms located in small local communities are endowed with the resources and capabilities required to exploit and appropriate the benefits of proximity factors, potentially affecting firms' employment growth. Finally, this research extends the hypothesis by arguing that the embeddedness effect of family firms in small municipalities may be more pronounced during adverse contingencies such as an economic crisis because family firms caught up in such crises are socially constrained to downsize less than their non-family counterparts, thus becoming a source of the local community's resilience (Steiner and Atterton, 2015).

These hypotheses are tested using a large panel dataset covering Spain's manufacturing firms from 2002 to 2015. Spain is considered because of data availability and the uneven distribution of the population across municipalities (Áreas Urbanas En España 2017). In general, the study finds that a family firm is positively associated with employment growth. However, when analyzing *where* and *when* growth occurs, the study somewhat unexpectedly finds a positive association between a municipality's size and family firms' employment growth. This result suggests that family-managed firms may derive greater advantage from external economies (i.e., Jacobs' externalities) arising from their concentration in more diversified socioeconomic settings, such as large urban areas. However, during an economic crisis, the negative impact on firm employment is less pronounced for family-managed firms

located in small municipalities. Reciprocal and trust-based relationships, which traditionally characterize small urban settings, shape a family firm's decisions about its employees, whom they view as prominent stakeholders requiring protection via the maintenance of employment levels when an economic downturn occurs. However, our result holds for the initial phase of the economic crisis—the 2007–2008 period. From 2009 onwards, the downsizing gap among family-managed firms and their non-family counterparts vanishes.

This study makes several contributions to the literature. First, we answer the call made by Stough *et al.* (2015) to link the family business and regional development research fields and provide evidence on the relationship between the spatial-temporal context and the nature of the firm to advance our understanding of firm employment growth/downsizing. The study offers new evidence on how family firms are affected by their surroundings, which are a source of advantage for, and a constraint on, firm decisions (Dahl and Nesheim, 1998). Second, the study contributes to the current debate regarding differences between family firms and non-family firms as well as the heterogeneity among family firms (Daspit *et al*., 2018) beyond the internal characteristics. Location and temporal dimensions are sources of heterogeneity in family firms and can thus alter their behavior and performance. Third, this research answers the call to include the temporal dimension in the family business debate (Sharma *et al*., 2014) by showing that it is an important factor for understanding how family firm behavioral patterns and employment decisions (i.e., downsizing) occur before and during economic crises. Finally, this study suggests that the "one-size-fits-all" approach cannot stimulate employment. The nature of the firm as a family-managed or non-family company, which determines local productive structures, is important for both creating and safeguarding employment levels, and is thus a determinant of local resilience.

The remainder of this paper is organized as follows. The next section reviews the literature on family firms and regional studies and proposes hypotheses. The third and fourth

sections describe the study's sample, variables, econometric model, and results. The fifth and final sections discuss the results, outline the limitations and contributions of the study, and offer suggestions for future research.

2. Theoretical background and hypothesis development

2.1. Literature review on family firms and employment outcomes

Employment growth, as a measure of firm performance, has been extensively employed in family business studies (Bird and Zellweger, 2018). Unlike other measures of performance (e.g., financial), employment growth reflects a concern for the firm's reputation and community (Chen *et al*., 2014). The maintenance of employment levels stands out as a measure of family firms' social responsibility toward their community. This makes them more fearful of the reputational damage associated with layoffs than their non-family counterparts (Block, 2010).

Empirical evidence (Chen *et al*., 2014; Lee, 2006) shows a positive association between family ownership and employment growth. Greater effectiveness in the monitoring function and resource allocation advantages (Amore *et al*., 2017) and longer horizons (Kappes and Schmid, 2013) have been proposed as the bases of the distinctive employment growth of family firms. However, these relationships can be contingent on organizational dimensions (Bjuggren *et al*., 2013) and the transfer of business control as formalized in a succession plan (Diwisch *et al*., 2009). Further empirical research has explored the different propensities of family businesses to downsize. Stavrou *et al.* (2007) and Block (2010) show that family-owned businesses downsize less than their non-family counterparts and that this behavior is independent of financial performance considerations. This happens because family firms' relationships with employees are based on normative and moral commitments, in addition to financial performance.

Most of the research locates the potential differences between family and non-family firms in differences in employment outcomes based on the specific characteristics of family

businesses (Tabor *et al.*, 2018). Family firms combine economic and non-economic goals (Basco, 2017) with social support, family status, altruistic behaviors (Tabor *et al*., 2018), and a deep sense of responsibility toward their employees, which override short-term profit motives (Zellweger *et al*., 2013). Additionally, the connection between family firms and employment is characterized by the embedded nature of business relationships. Here, embeddedness refers to the nature, depth, and extent of a firm's ties with the local community (Kalantaridis and Bika, 2006). Hence, for locally embedded family firms, shared identification with local actors (Capello, 2019), emotional closeness (Lähdesmäki *et al*., 2019), and the development of social bonds are likely to increase a sense of personal obligation (Nahapiet and Ghoshal, 1998), affecting family firms' employment growth. Considering these arguments, we propose the following hypothesis:

Hypothesis 1: There is a positive association between family-managed firms and employment growth.

However, this hypothesis disregards the spatial and temporal dimensions, which, with some exceptions (D'Aurizio and Romano, 2013), have not been explored simultaneously. Considering that both dimensions are important, the association between family firms and employment growth is not uniformly distributed across space and time. Therefore, while the existing research assumes an intrinsic relationship between family firms and their socioeconomic *milieu* (Backman and Palmberg, 2015) or with an economic crisis (Minichilli *et al*., 2016), no study has contextualized, from a spatial and temporal perspective, the relationship between family firms and employment growth simultaneously. The next section draws on the literature on social embeddedness and economic crisis as relevant moderating variables that may affect the proposed hypothesis (see Figure 1).

2.2. Moderating effect of location

Location matters for firms because it affects how economic actors not only co-ordinate resources internally and react to external changes but also capture the benefits of spatial micro-

processes (Basco, 2015). While large urban spaces facilitate access to different types of infrastructure, a qualified and diversified workforce, and (most importantly) advanced and complementary knowledge leading to incremental returns (i.e., urbanization economies or Jacobs externalities; Parr, 2002),[1] the economic activity and associated organizational outcomes in small municipalities are strongly affected by proximity as reflected in the perceptions of social, cultural, organizational, or physical closeness between economic actors (Boschma, 2005). Hence, the ability of firms to benefit from different dimensions of proximity —by sharing the same space of relationships with other economic actors—could be contingent on whether the firm is run by a family.

Social proximity generally refers to firms' affective involvement with stakeholders based on familiarity, emotional closeness, and a sense of personal obligation (Lähdesmäki *et al.*, 2019). It is widely recognized as an important dimension for explaining differences in organizational behavior and outcomes (Huber, 2012). Connections among actors, based on mutual trust, cooperation, and reciprocity, facilitate the exchange of tacit knowledge (Maskell and Malmberg, 1999) and impact organizational learning and innovation capabilities (Cooke *et al*., 2005), as well as financial performance (Adjei *et al*., 2016). Therefore, the effect of social proximity on a firm's behavior may be strongly dependent upon its socio-spatial context (Torre and Rallet, 2005).

Because the physical closeness between economic actors is likely to stimulate social interaction and trust building (Hansen, 2015; Huber, 2012), it is reasonable to infer that this is more likely to occur in small municipalities, where economic and social actors are closely

[1] A classic question in economic geography and regional studies revolves around the effects of two types of spatial agglomeration—localization economies and urban agglomerations—on a firm's economic performance and innovativeness. The former, also known as "Marshall-Arrow-Romer" (MAR) externalities, stem from the geographical concentration of similar industrial activities. By contrast, urban agglomerations, or Jacobs' externalities, occur among a set of firms from diverse industries, wherein the variety of local industries promotes the exchange of complementary knowledge. They depend fundamentally on the size of the cities. For more details, please refer to Galliano *et al.* (2015) and Parr (2002).

related (Lähdesmäki and Suutari, 2012). Firms should generally be regarded as operating under the influence of different social spheres (Granovetter, 1985; Kalantaridis and Bika, 2006). Therefore, norms, social expectations, formal and informal monitoring, and sanctioning mechanisms exert a greater effect on firms' decisions and behavior in small communities than they do in highly populated areas characterized by lower social proximity (Lähdesmäki *et al.*, 2019; Uzzi, 1999).

In fact, it is mostly in small communities, where access to agglomeration economies is more difficult, that social proximity plays a critical role (Gordon and McCann, 2000). Firms operating in large urban settings are in a better position to exploit the positive externalities stemming from labor market pooling and knowledge spillovers, either in the same industry or among similar ones (Galliano *et al*., 2015). Conversely, in small communities, the relative shortage of agglomeration economies is offset by the high-trust, cooperative, and reciprocal relationships firms establish among their members both at the organizational level (Arregle *et al*., 2007; Le Breton-Miller and Miller, 2009) and with their external network of local stakeholders (i.e., local community). These relationships may translate into knowledge creation and dissemination, thereby affecting organizational outcomes. The research has shown that social proximity affects firm performance most positively in small regions (Adjei *et al*., 2016).

However, not all firms are able to capitalize on the benefits of the socially proximate relationships characterizing small communities. For instance, in small municipalities—where the distinction among family, society, and businesses becomes blurred and economic actors are embedded more in the social structure—the relevance of a firm's responsibility toward the community in the form of labor safeguards can increase (Mitchell *et al*., 2010; Berrone *et al*., 2011). In this context, the social relationships among family members built on the basis of trust, reciprocity, identification, and obligations spread out from a family firm's boundaries and permeate the relationship with the community (Bird and Zellweger, 2018; Uzzi, 1997).

Moreover, the sensitivity to social expectations is more pronounced in family firms owing to their intention to pass on ownership and management to future generations (Dyer and Whetten, 2006) and their preference for non-economic gains (Cennamo *et al*., 2012; Gómez-Mejía *et al*., 2007). Accordingly, local embeddedness is found to exert a strong influence on the environment-friendly policies of family-managed firms (Berrone *et al*., 2010; Dekker and Hasso, 2016).

In addition, small urban settings are not only able to condition family managed firms' behavior but are also conducive to their formation (Bird and Wennberg, 2014) and growth (Backman and Palmberg, 2015) by providing critical knowledge and resources. Backman and Palmerg (2015) and Baù *et al.* (2018) show that the social, cultural, and historical connections of family firms give them a greater ability to create, develop, and allocate tangible and intangible resources in rural areas, thereby offering a competitive advantage in these geographical contexts. Considering this reasoning, we propose the following hypothesis:

Hypothesis 2: *Municipality size moderates the relationship between family-managed firms and firm employment growth in such a way that family-managed firms show higher employment growth in small municipalities than in big ones.*

The study's previous conjecture was that location affects the employment growth of family and non-family firms differently. Notwithstanding the significance of the socio-spatial context, the temporal dimension may also affect the socially embedded relationships in which economic activity is refracted. While the location of family firms arises as a stable and enduring contextual dimension, their economic activity is unavoidably exposed to contingent and exogenous events that may affect their functioning, performance, effectiveness, and, ultimately, their survival.

2.3. Joint moderating effect of location and economic crises

An economic recession represents a sudden shift in environmental munificence that indistinctly threatens the survival of all firms. It has been typically assumed as a unique temporal frame in which to investigate the strategic responses of firms coping with deteriorating macroeconomic conditions (Latham, 2009). During an economic downturn, personnel reduction is a logical organizational response to the loss of a company's efficiency and competitive position because of falling sales (Stavrou *et al*., 2007) or financing constraints (Campello *et al*., 2010). However, how family-managed firms are affected by, and react to, exogenous shocks may differ from how their non-family counterparts are affected.

Previous studies show the ability of family firms to achieve higher levels of profitability during periods of economic crisis, particularly those controlled by second and subsequent generations (Arrondo-Garcia *et al*., 2016) and those run by a family-member CEO (Minichilli *et al.*, 2016). Family firms have been found to generate greater employment stability during market declines (D'Aurizio and Romano, 2013; Lee, 2006) or industry shocks (Sraer and Thesmar, 2007), suggesting that they are less sensitive to temporary contraction in demand (Bjuggren, 2015). In contrast to non-family firms, family-managed firms seek to align economic and non-economic goals (Aparicio *et al*., 2017), thereby offering implicit employment protection (Bassanini *et al*., 2013). This is particularly common in nations whose governments offer insufficient workforce protection, where family-managed firms are found compensate for the relative shortage of public unemployment insurance systems (Ellul *et al*., 2018). Hence, considering the aforementioned arguments, we propose the following hypothesis:

Hypothesis 3: *Family-managed firms show a higher employment growth than their non-family counterparts during economic crises*.

However, the salience of workers as stakeholders, to whom families as owners ensure an adequate level of protection during an economic crisis, may vary in highly embedded

contexts such as small municipalities. Here, social closeness, facilitated by geographical proximity among economic actors, increases social capital (Lins *et al*., 2017; Nahapiet and Ghoshal, 1998). This may in turn result in a shared identification, interpersonal solidarity, and strengthened sense of moral obligation to act for the sake of employees (Cennamo *et al*., 2012). Despite the economic disadvantages, family firms may feel obligated to keep workers, with whom they share social bonds (Lähdesmäki *et al.*, 2019). From this perspective, D'Aurizio and Romano (2013) show that, during economic shocks, family firms tend to safeguard the workplaces nearest the headquarters to a greater extent than their non-family counterparts do.

Furthermore, in social proximity relationships, reputation arises as a symbolic resource that increases stakeholder expectations regarding proper firm behavior. This is particularly true for family firms, wherein the reputations of family and firm are strongly tied to each other (Deephouse and Jaskiewicz, 2013). Thus, a good image in the eyes of the community represents an "affective endowment," which family firms strive to preserve and enhance over time (Naldi *et al*., 2013). In fact, the risks associated with the loss of social status and exclusion from social relationships are higher in small communities, where firms rely heavily on a few stakeholders and their activities are under greater scrutiny (Lähdesmäki *et al*., 2019).

Therefore, it is inferred that socially proximate relationships emerge strongly during an economic downturn, forcing family-managed firms to prioritize employee claims. However, this effect is higher in small urban settings characterized by denser networks and closer social ties among local actors (Granovetter, 2005; Hess, 2004). Combining these arguments, we propose the following hypothesis:

Hypothesis 4: *During economic crises, municipality size moderates the relationship between family-managed firms and firm employment growth in such a way that family-managed firms located in small urban settings show higher employment than their non-family counterparts.*

--- INSERT FIGURE 1 HERE ---

3. Methods

3.1. Sample

The study tests its hypotheses using micro-data obtained through a survey of a representative sample of Spanish manufacturing firms. The survey, *Encuesta sobre Estrategias Empresariales* (ESEE, or *Survey on Business Strategies*), is conducted by the SEPI Foundation, in collaboration with the Ministry of Industry, Trade and Tourism of Spain. The ESEE captures information about a firm's strategies, technological activities, manufacturing processes, markets served, and employment. The ESEE provides fine-grained information about the number of employees working in the firm and its structure according to the type of contract, making it particularly suitable for the purpose of the study. The sample's representativeness is ensured by combining exhaustiveness and random sample criteria. In particular, while all companies with more than 200 workers were surveyed, firms employing 10 to 200 workers were selected based on a stratified, proportional, and systematic sampling.[2] The final sample consists of 2,862 firms distributed across 20 different manufacturing industries (NACE Rev. 2-digit level)[3] and 17 Spanish autonomous communities (NUTS 2).[4] It consists of 18,153 firm-year observations covering 2002 to 2015.

3.2. Variables

[2] The survey began in 1990 and takes the Spanish economy as a whole as its geographical scope of reference. The ESEE employs yearly variables covering the following eight business categories: i) activity, products, and manufacturing processes; ii) customers and suppliers; iii) costs and prices; iv) markets served; v) technological activities; vi) foreign trade; vii) employment; and viii) accounting data. For more information, please visit https://www.fundacionsepi.es/investigacion/esee/en/spresentacion.asp.

[3] "NACE" is an acronym for *Nomenclature statistique des activités économiques dans la Communauté européenne* and represents the European standard classification of productive economic activities.

[4] "NUTS" stands for "Nomenclature of Territorial Units for Statistics" and represents the levels of territorial division. The Spanish territory is classified into the following levels: NUTS 1, consisting of seven groups of autonomous communities (*Agrupación de comunidades autónomas*); NUTS 2, comprising 19 autonomous communities and cities (*Comunidades y ciudades autónomas*); and NUTS 3 made up of the 59 Provinces, Islands, and Ceuta and Melilla (Provincias*, Islas, Ceuta y Melilla*). However, ESEE surveys exclude the autonomous cities of Ceuta and Melilla; hence, there are 17 autonomous communities.

*3.2.1. Dependent variable***.** Following the literature (Ellul *et al*., 2018), the study captures the specificities of family-managed firms, as reflected in the growth of their workforce, by considering the employment growth for each firm *i* at time *t* (*Employment growth*$_{i,t}$) taking the difference between the logarithm of the number of workers in the current year and that in the previous year as follows:

$$\textit{Employment growth}_{i,t} = \ln[\text{no. of } \textit{employees}_{i,t}] - \ln[\text{no. of } \textit{employees}_{i,t-1}]. \quad (1)$$

The study transforms the skewed distribution to a normal distribution by taking the logarithm of the dependent variable.[5]

3.2.2. Independent variables. The definition of "family firm" is a matter of longstanding debate among researchers (Mazzi, 2011). This study embraces the "demographic approach" to identifying family firms, which considers the involvement of a family in a firm—in its ownership, control, and management—as a sufficient condition for capturing family influence on businesses (Basco, 2013). Because the ESEE reports the number of owners and relatives holding management positions, the study defines family firms as those in which two or more members of the controlling family hold managerial positions (Amato *et al.*, 2020). Therefore, the study adopts a binary variable (*Family-managed firm*) coded "1" when the company is a family-managed firm and "0" otherwise.

The size of the municipality (*Municipality size*) where the firms are registered is measured by the number of inhabitants. The ESEE reports a categorical variable based on five different municipality sizes: fewer than 2,000, 2,001 to 10,000, 10,001 to 50,000, 50,001 to 500,000, and more than 500,000. This classification is consistent with Sørensen's (2012) testing of the higher social capital hypothesis in rural communities; it is also used by Spanish authorities to identify functional urban areas (Áreas Urbanas En España, 2017).

[5] Please note that this formula is equivalent to the following*:* *Employment growth*$_{i,t}$= ln[no. of employees$_{i,t}$/no. of employees$_{i,t-1}$].

As a temporal frame variable, the study adopts a dichotomous variable (*Economic crisis*) that takes a value of "1" for the years 2007 and 2008 and "0" otherwise. This two-year period is considered because it was in 2007 that the Spanish economy's downturn phase in its expansion cycle begun due to the combined effect of the global financial crisis (i.e., the "great recession") and the explosion of the national property bubble (Carballo-Cruz, 2011; Jimeno and Santos, 2014). Additionally, the industrial unemployment rate in the Spanish economy started to rise in 2007, indicating that firms anticipated the economic crisis and adjusted their internal cost structure to reflect the negative economic outlook. Even though Spain's economic crisis lasted longer than the global crisis (i.e., Spain was still in recession in the first quarter of 2012), the differences between family-managed and non-family firms should emerge during the early stages of the economic crisis. Further, as the crisis deepens, the differences disappear because the likelihood of firm survival is correlated with its ability to adjust its cost structure and cope with a lack of liquidity.

3.2.3. Control variables. The study controls for variables that may affect a firm's employment growth. First because exporting might affect the choice of a firm to increase or reduce its number of employees, a measure of export intensity (*Export intensity*) is used, which is the ratio of a firm's foreign sales to total sales. Given that R&D represents a source of competitive advantage that influences firm growth, the study controls for R&D activity intensity (*R&D intensity*), as measured by the ratio of R&D expenditures to total sales. To account for the liability of newness, the study controls for the age of the firm (*Age*), defined as the number of years the firm has existed. Because the value of prior investments might affect employment growth, the study controls for firm size (*Size*), which is taken as the log-transformation of total assets. Given that changes in employment level can result from financial distress, the study controls for financial constraints (*Financial constraints*), as measured by the ratio of the book

value of debt to total assets. To account for differences in firm profitability, the study controls for the gross operating margin *(Profitability*).

The study controls for the firm's listing (*Listed*) because operating in stock exchange markets typically involves a series of formal constraints, requirements, and transparency in business operations, including employment policies; this is a dummy variable taking a value of "1" if the firm is listed on the stock exchange and "0" otherwise. The study controls for group affiliation given that employment dynamics may be affected by both capital and labor reallocations among firms affiliated with business groups. Accordingly, the study introduces a dichotomous variable (*Group*) that takes a value of "1" if the firm is part of a corporate group and "0" otherwise. Because the market structure may influence a firm's growth, the study introduces a dummy variable (*Competitors*) taking a value of "1" if the firm reports that there are more than 10 companies with significant market share in its main product's market and "0" otherwise.

The study includes the ratio of labor costs to total sales (*Labor cost ratio*) because businesses with high labor costs are motivated to reduce their personnel as a way of reducing costs. The study considers the ratio of expenses in employee training to labor cost (*Employee training intensity*) to control for firms' investments in employee training to prevent layoffs. Firms may use both fixed-term contracts and part-time personnel to adjust to demand fluctuations and simultaneously reduce the turnover of permanent workers. The share of non-permanent workers is computed by dividing by the total number of employees the number of workers with temporary contracts (*Temporary employee ratio*) and those with part-time contracts (*Part-time employee ratio*). In addition, to account for time-invariant heterogeneity across industries and regions, the study includes a series of dichotomous variables corresponding to the NACE two-digit code level (*Industry*) and dummy variables corresponding to the Spanish Autonomous Communities in which firms have their

headquarters (*Region*). Finally, a series of dummy variables is used to control for the years associated with each observation (*Year*).

3.3. Econometric analysis

The study performs a poolability test (Wooldridge, 2010) to ascertain whether panel data treatment was preferable to pooled data treatment, thus leading regressors to benefit from more variability and less collinearity. Following Almodóvar *et al*. (2016), the study selects random effects to control for unobserved heterogeneity. Additionally, even though both fixed and random effects models provide very similar findings[6] and preferences according to the Hausman test for fixed effects (Chi-square = 150.40, $p<0.001$), the study opts for a random effects model because firms' family status changes very little across time and the main exploratory variables (i.e., family-managed firms) thus have low "within" variance.[7] Due to the unbalanced panel, the study checks the stationarity of the data by using the Fisher unit-root test.[8] The null hypothesis is that all panels contain a unit root—that is, all series are non-stationary. The study obtains *p* values lower than 0.05, rejecting the null hypothesis; thus, the data have stationarity.

Therefore, the study estimates the following model to investigate the association between the family nature of the firm and employment growth, together with the moderating influence of firm location and economic crisis:

$$Employment\ growth_{i,t} = \alpha_0 + \beta_1 Family\text{-}managed\ firm_{i,t} + \beta_2 Municipality\ size_{i,t} + \beta_3 Economic\ crisis_t + \gamma X_{i,t} + \delta C_{i,t-1} + \chi T_i + \psi S_{i,t} + \omega R_{i,t} + \varepsilon_{i,t} \quad (1)$$

where α_0 is the constant; β_1, β_2, and β_3 are the direct effects of our three main variables on *employment growth*; $X_{i,t}$ is a matrix containing all two- and three-way interaction terms for our three main regressors; γ is the corresponding vector of coefficients; $C_{i,t}$ is a matrix of additional

[6] The results obtained with the fixed effects model are similar to those found using the random-effect model.
[7] Other studies such as Minichilli *et al.* (2016) follow the same approach.
[8] The command on Stata for the Fisher unit-root test is "xtunitroot fisher." This test combines the *p*-value from the panel-specific unit-root tests using the four methods suggested by Choi (2001).

control variables that capture heterogeneity among firms, which may influence a firm's employment growth; δ is the vector related to coefficients; T_i, S_i, and R_i are time- , industry- , and region-specific dummy effects, respectively; χ, ψ, and ω are the vectors corresponding to coefficients; and $\varepsilon_{i,t}$ is the error term.

The study addresses endogeneity concerns in several ways. First, it rules out any reverse causality issues between the dependent variable and the variables of interest (i.e., family firm, municipality size, and economic crisis). While the possibility that employment growth rate could explain the probability of a given firm being family managed can be reasonably excluded, the study also excludes the possibility that a single firm by itself can significantly alter the structural composition of an urban setting or exacerbate the economic cycle contraction. The study also eases the risk of a two-way causal relationship between employment growth and profitability by lagging it by one year (Muñoz-Bullón and Sánchez-Bueno, 2014). Second, regarding the endogeneity caused by the omitted variables or unobserved heterogeneity, the study controls for a wide array of firm characteristics that may affect employment growth. Among these, the study includes variables reflecting the type of employment contract (i.e., temporary and part-time) without which the degree of a firm's flexibility to adjust its labor force to business cycle fluctuations would be overlooked. Third, while one may be concerned that the sample composition changed during the economic crisis, this is not the case. Indeed, the sample's proportion of family managed firms is relatively stable before, during, and after the economic crisis period (19%, 24%, and 25%, respectively). Finally, the study addresses heteroscedasticity concerns in the estimations by calculating heteroscedasticity-robust standard errors.

4. Empirical results

4.1. Descriptive statistics

The study's descriptive statistics and pairwise correlation results are reported in Tables 1 and 2, respectively. Panel 1A provides the summary statistics for the whole sample. While the

average employment growth rate across the 14 years is negative, family-managed firms account for 23% of the sample, and the sampled firms are, on average, 29 years old. For a more straightforward depiction of the difference between family and non-family firms, Panel 1B shows the mean of the variables grouped according to the nature of the firm (family *vs.* non-family), along with the results of a test for differences in the means and the results of Wilcoxon rank-sum tests. While the average employment growth rate across the 14 years is negative, family-managed firms account for 23% of the sample, and the sampled firms are, on average, 29 years old. The employment growth rate of non-family firms is negative, in contrast to the sluggish growth of family firms (-0.004 *vs.* 0.002, $p<0.10$). Concerning firm characteristics, export intensity, R&D intensity, and firm size are all significantly higher in non-family firms than in their family counterparts; however, the latter are found to be more profitable (0.081 *vs.* 0.077, $p<0.01$). Additionally, family firms operate in less concentrated markets than their non-family counterparts (0.641 *vs.* 0.697, $p<0.01$). An analysis of the variance inflation factors (VIFs) suggests that multicollinearity is not a concern because all the VIF coefficients are below the generally accepted threshold of 5 (Hair *et al*, 1998).

--- INSERT TABLE 1 and 2 AROUND HERE ---

4.2. Regression results

The results of the econometric analyses are reported in Table 3. Model 1 shows the estimation results obtained by considering only the control variables and the explanatory variable *Family managed firms*. While *Export intensity* is negative but not statistically significant, higher levels of *R&D intensity*, *Profitability,* and *Size* are associated with greater employment growth. In fact, the coefficients are positive and highly significant. Additionally, the coefficient of *Competitors* is negative and statistically significant (β= -0.009, $p<0.05$), suggesting an adverse effect of market concentration on employment growth. While higher labor cost is found to negatively affect employment growth, the share of non-permanent workers— *Temporary*

employee ratio and *Part-time employee ratio*—are both positive and statistically significant (p<0.001). The coefficient of our first explanatory variable, *Family-managed firm*, is found to be positive and statistically significant (β = 0.029, p<0.001). Hence, Hypothesis 1 is supported.

INSERT TABLE 3 ABOUT HERE

In Model 2, the study adds the two explanatory variables, *Municipality size* and *Economic crisis*. Despite being positive, the coefficient of *Municipality size* is not statistically significant. Conversely, *Economic crisis* is found to negatively affect employment growth (β = -0.078, p<0.001) for both family and non-family firms. Model 3 tests Hypothesis 2 by introducing the moderating effect of *Municipality size*. The interaction term is positive and statistically significant (β = 0.008, p<0.05). The study plots the two-way interaction in Figure 2. Contrary to expectations, family firms located in large municipalities achieve higher employment growth than their non-family counterparts. Hence, Hypothesis 2 is not supported. Model 4 tests Hypothesis 3 by interacting with *Family-managed firms* with *Economic crisis.* Despite being positive, the coefficient is not statistically significant, which suggests that, during an economic downturn, family firms do not differ from their non-family counterparts in terms of employment growth. Hence, Hypothesis 3 is not supported.

--- INSERT FIGURE 2 HERE ---

Finally, to test Hypothesis 4, the study employs a three-way interaction among *Family-managed firm*, *Economic crisis*, and *Municipality size*. The interaction term shown in Model 5 is negative and statistically significant (β = -0.022, p<0.05). To interpret this result, the study plots the interaction in Figure 3. The figure shows that, during stable periods, family-managed firms exhibit higher employment growth than non-family firms in larger municipalities. The right side of the figure shows that, though the economic crisis forces both family and non-family firms to reduce their workforce, the employment growth gap between the two types of

firms is wider in small municipalities; thus, family firms in small municipalities are more likely to preserve jobs. Hence, Hypothesis 4 is supported.

--- INSERT FIGURE 3AROUND HERE ---

4.3. Robustness check

The study performs several sensitivity analyses to corroborate the results.[9] First, in lieu of the dichotomous variable, the study uses a continuous measure of family involvement in managerial positions (*Family management*). Second, the study adopts an alternative measure of employment growth by considering the growth rate of permanent workers exclusively. In doing so, the study removes from the total personnel the number of non-permanent employees—those tied to the company by fixed-term contracts or engaged on an intermittent basis (temporary personnel). Third, the study considers part-time employees to be non-permanent. Non-permanent employment allows businesses to adjust their workforce according to cyclical or unexpected changes in demand. Consequently, firing part-time employees is less expensive, and firms tend to lay them off first. The estimations confirm that, during a recessionary shock, the contraction of the permanent workforce in family-managed firms located in small municipalities is less pronounced than that in their non-family counterparts; this result is in line with the study's theoretical predictions. Fourth, the study adopts a more restrictive definition of family-managed firm by raising the threshold of family involvement in managerial positions (three or more family members). Even in this case, the results are substantially similar to those reported in the main analysis. Finally, as the study restricted its main analysis to the initial stage of the global economic crisis (2007–2008), it extends the timeframe to 2009. The analysis shows that the locational effect on the downsizing employment gap between family and non-family firms disappears. This result suggests that,

[9] More information is available in the online supplementary material.

even in a highly embedded spatial context (i.e., small municipalities), family-managed firms are unable to shield their workforce from unemployment risk when the crisis is protracted (i.e., persisting sales contraction and state of financial distress).

5. Conclusions

5.1. Discussion

Spatial and temporal dimensions, understood broadly as a set of events, relationships, or environments that are external to the firm and are capable of influencing it, have only recently been fruitfully incorporated in family business studies (James *et al.*, 2020). Space and time serve as fine lenses with which to reveal the characteristics that distinguish family firms from non-family firms and distinguish between the different types of family firms. Actors (e.g., family and non-family firms), space, and time emerge jointly as essential elements for uniting the field of family business studies and regional studies (Stough *et al*., 2015). This study enriches the growing debate on contextualizing the family firm phenomenon.

The study found that family-managed firms have a higher employment growth ratio than non-family firms, regardless of location and time. However, in contrast to the theoretical reasoning that family firms located in small municipalities will show higher employment growth than non-family firms because of their higher ability to leverage localized knowledge and resources, the employment growth gap between family and non-family firms was found to be higher when the size of the municipality increased. These results question the existing evidence (e.g., Backman and Palmberg, 2015; Baù *et al.*, 2018) that family firms located in less-populated settings such as rural areas have a higher employment growth ratio than non-family firms. One possible explanation for this study's result is that family firms benefit more than non-family firms from the concentration of economic activity in more diversified economic settings, which facilitates access to a qualified and diversified workforce and to various types of infrastructure, community facilities, and activities (i.e., urbanization economies; Galliano *et al*., 2015).

This study challenges the literature on the importance of firm location as a moderator variable (e.g., Backman and Palmberg, 2015; Baù *et al.*, 2018) by considering the temporal dimension as another contingency variable acting in conjunction with that of location and potentially affecting firms' employment growth. This study finds that the location of family firms in small municipalities influences employment only during the early stage of an economic crisis. It seems that an economic crisis triggers specific family firm attitudes toward employment decisions. Therefore, the study's results are in line with previous research on family firms' employment responses to an exogenous shock (e.g., Bjuggren, 2015; Lee, 2006). The study reveals that, although the initial wave of an economic crisis forces both family and non-family firms to restructure their labor force, family-managed firms located in small municipalities appear to be less willing to translate early exogenous shocks into changes in employment (downsizing practices). It is during contingent and adverse events, such as an economic crisis, that the embedded nature of economic activities in the localized network of relationships that characterize less-populated areas seems to emerge. However, the downsizing gap between family-managed firms and their non-family counterparts disappears if the economic crisis is protracted.

By restoring the social dimension of economic activity (Cooke *et al.*, 2005), the embeddedness approach provides theoretical support to the study's results if one assumes that economic agents behave according to norms of reciprocity, trust, and non-monetary exchanges. This seems particularly evident in a territorially bounded *milieu* such as small municipalities characterized by socially proximate relationships among economic actors. In these contexts, during an economic crisis that reduces employment, shared identification, interpersonal solidarity, and a sense of moral obligation toward employees force family firms to prioritize their claims.

5.2. Contributions

This study answers the call to integrate the fields of family business and regional development made by Stough *et al.* (2015) and has several theoretical and practical implications. First, regarding regional research, this study is one of the first to empirically analyze the joint effect of location and temporal dimensions on the employment growth of family and non-family firms. This study provides new insights into the nature of the firm and its local embeddedness by considering employees as distinct stakeholders requiring protection when an economic downturn occurs. The study enriches current evidence (D'Aurizio and Romano, 2013) on the effect of geographically bounded settings on family firms' decisions and outcomes and establishes them as major players in the community resilience literature (Martin *et al*., 2016). Local embeddedness seems to play an important role in attenuating firms' employment contraction in times of economic crisis but only for family-managed firms. This result advances the literature's understanding of the micro-behavioral and micro-territorial foundations of family firms (Maskell, 2001).

Second, unlike family business research that focuses on internal dynamics to understand family firms and address the call made by Gomez-Mejia *et al*. (2020), this study finds that location and temporal context significantly shape their behavior. The study provides evidence that differences between family firms and non-family firms and the heterogeneity among family firms are also attributable to how firms benefit from their location (municipality size) and react to specific temporal (economic crisis) contingencies. Another important contribution to the family business field is the study's finding that family firms are not homogeneous insofar as contextual factors such as location and shape their behavior. This is important because family business researchers have focused on internal specificities to explore family firm heterogeneity, while ignoring the contingency dimension that may also explain the differences in family firm behavior and performance.

Third, this study answers the call made by Sharma (2014) to introduce the time dimension into family business research. The study extends the consideration of the temporal dimension in the family business debate beyond the traditional proxies for time based on a firm's longevity and number of generations running it. Examining family businesses through particular temporal lenses can be extremely helpful for unveiling their unique behavioral patterns and outcomes. By investigating the impact of an economic crisis on employment growth for both family and non-family firms, this study highlights the need to properly consider the temporal dimension while examining differences in behavior and performance across types of firms and locations.

Finally, this study identifies the dimensions that regional policies should consider given the distinction between family and non-family firms. There is no "one-size-fits-all" solution to stimulate employment given the heterogeneity of firms and their varied behavior across space and time. Considering the nature of firms in regional development policy debates could help policymakers differentiate between economic actors based on their advantages and disadvantages for economic and social development across locations and under particular contingencies. From this perspective, this study shows that family firms play an important role in small municipalities during the early stage of an economic crisis by containing the drop in employment. Family firms seem to act as a buffer during economic crises, thereby contributing to local and regional resilience. Thus, policymakers should also consider the local embeddedness of family firms during recessionary shocks.

5.3. Limitations and future research directions

This study has several limitations that provide opportunities for future research at the intersection of regional and family business studies. First, the study assumes a micro-level perspective in investigating the employment growth of family and non-family firms during an economic downturn. Future research should conduct macro-level analysis to examine the collective aggregate actions of family firms as regional actors (Block and Spiegel, 2013).

Future research could also explore family firms as a source of such resilience at an aggregate level during a period of economic downturn.

Second, the study focuses on Spain, the European country that experienced the sharpest GDP contraction due to the combined effect of the bursting of the property bubble and the global financial crisis. The nation represents an interesting geographical context because of its regional disparities and the importance of the family in its economic activities. However, future research should replicate this study's investigation for different societal and institutional environments, covering both countries and regional contexts (Dahl and Nesheim, 1998). It is reasonable to expect that national and regional differences in, for instance, regulatory (e.g., statutory law, collective agreements, welfare provisions) and normative (i.e., values and norms that prescribe layoff behaviors) environments affect firms' sensitivity and responses such as employment-level adjustments to business cycle fluctuations.

Third, the study's two main explanatory variables, *Municipality size* and *Family-managed firm*, have limitations. Future research should complement the municipality measure with an alternative measure to better understand the spatial effect on firm employment—for instance, by operationalizing a firm's local embeddedness (Dekker and Hasso, 2016). Future studies should also improve the study's methodological approach by using hierarchical (or multilevel) linear modeling to exploit the nested structure of the data (Van Essen *et al.*, 2015). Moreover, the study used a dummy variable to distinguish between family and non-family firms but did not explore potential heterogeneity between them. Future studies could explore how the results change when, for instance, different family effects—such as family ownership, the proportion of family members in the top management team, or the number of generations involved in the business—are considered for the family firm group. Finally, this study's sample comprises only manufacturing firms. Future research should investigate the relationship between family firms, context, and employment decisions by considering a more

heterogeneous sample containing both manufacturing and service firms, which may exhibit different patterns of growth and survival.

Figure 1: Theoretical Model

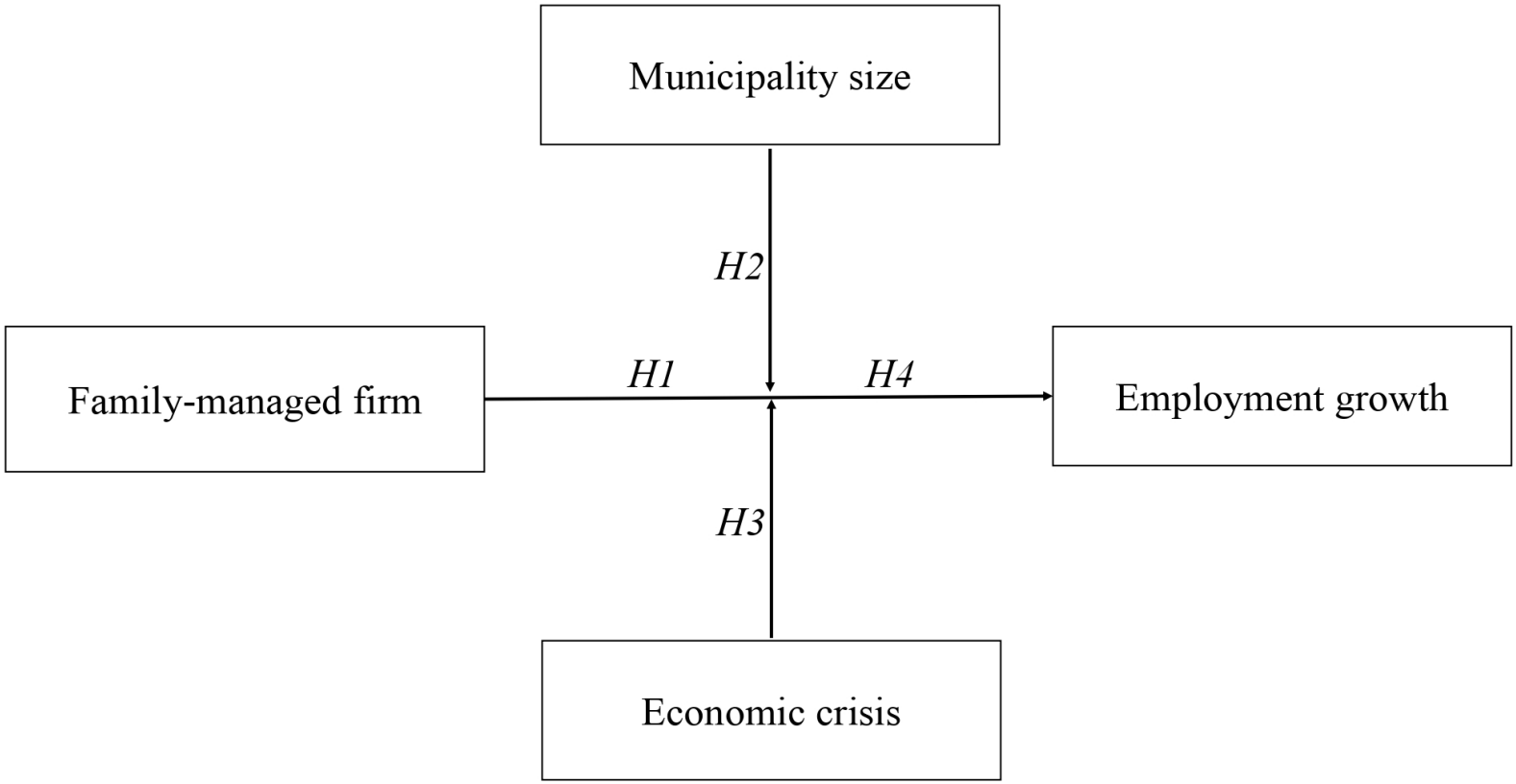


Table 1. Descriptive statistics

Panel 1A: summary statistics for whole sample

Variable	Obs.	Mean	St. dev.	Min	Max
Employment growth^{A}	*18,153*	-0.003	0.238	-0.937	10.636
Employment growth^{L}	*18,153*	-0.021	0.187	-2.772	2.454
Family-managed firm	*18,153*	0.229	0.420	0	1
Municipality size	*18,153*	3.138	1.097	1	5
Export intensity	*18,153*	21.963	28.290	0	100
R&D intensity	*18,153*	0.780	2.473	0	98.924
Firm Age	*18,153*	29.109	20.436	0	174
Firm Size^{L}	*18,153*	15.896	2.065	8.816	23.965
Financial constraints	*18,153*	53.430	23.267	0	99.979
Profitability^{w}	*18,153*	0.078	0.119	-0.505	0.401
Listed	*18,153*	0.020	0.119	0	1
Group	*18,153*	0.362	0.480	0	1
Competitors	*18,153*	0.684	0.464	0	1
Labor cost ratio^{w}	*18,153*	27.199	16.311	3.900	94.394
Employee training intensity	*18,153*	0.233	1.104	0	90.7
Temporary employee ratio	*18,153*	11.544	16.669	0	100
Part-time employee ratio	*18,153*	2.630	6.042	0	95.238

Panel 1B: difference of means and Wilcoxon rank-sum test

Variable	Non-family firms	Family-managed firms	Test for difference of means		Wilcoxon rank-sum test[a]
			Difference of means	t-statistics	z-statistics
Employment growth^{A}	-0.004	0.002	-0.007	-0.007^{+}	-4.878***
Employment growth^{L}	-0.023	-0.013	-0.010	-3.198***	-4.878***
Municipality size	3.160	3.067	0.092	4.801***	5.077***
Export intensity	23.584	16.638	6.945	14.066***	12.484***
R&D intensity	0.832	0.612	0.220	5.075***	12.401***
Age	29.342	28.341	1.001	2.792**	-1.145
Size^{L}	16.101	15.220	0.881	24.746***	24.316***
Financial constraints	54.429	53.436	-0.006	-0.016	-0.339
Profitability^{w}	0.077	0.081	-0.004	-1.892**	-2.092**
Listed	0.024	0.006	0.175	7.137***	7.128***
Group	0.434	0.125	0.309	38.118***	36.679***
Competitors	0.697	0.641	0.055	6.866***	6.857***
Labor cost ratio^{w}	26.703	28.828	-2.125	-7.437***	-9.199***
Employee training intensity	0.249	0.181	0.067	3.487***	15.172***
Temporary employee ratio	11.515	11.639	0.124	-0.425	5.505***
Part-time employee ratio	2.546	2.907	-0.361	-3.404***	-1.745^{+}
Observations	*13,917*	*4,236*			

[A]Expressed in absolute terms. [L]Expressed in natural logarithm. [W]Winsor at 1 and 99% tail. Level of statistical significance + $p < 0.10$, *$p < 0.05$, **$p < 0.01$, ***$p < 0.001$. [a]The Wilcoxon rank-sum test analyses whether the two samples are from different distributions (Sample 1: Non-family firms; Sample 2: Family-managed firms).

Table 2. Pearson correlation coefficients

	VIF	*Employment growth*	*Family-managed firms*	*Municipality size*	*Economic crisis*	*Export intensity*	*R&D intensity*	*Age*	*Size*	*Financial constraints*
Employment growth	-	1.000								
Family-managed firm	1.10	0.029*	1.000							
Municipality size	1.23	-0.002	-0.035*	1.000						
Economic crisis	1.01	-0.043*	0.003	0.026*	1.000					
Export intensity	1.44	0.039*	-0.102*	-0.026*	-0.051*	1.000				
R&D intensity	1.16	0.030*	-0.035*	0.063*	-0.013	0.165*	1.000			
Age	1.27	0.009	-0.019*	0.169*	-0.013	0.164*	0.078*	1.000		
Size	2.73	0.094*	-0.178*	0.093*	0.003	0.425*	0.183*	0.330*	1.000	
Financial constraints	1.11	0.000	-0.004	-0.025*	0.040*	-0.023*	0.018*	-0.125*	0.008	1.000
Profitability	1.25	0.097*	0.014	-0.004	0.051*	0.036*	0.003	0.003	0.141*	-0.131*
Listed	1.06	0.017*	-0.055*	0.048*	-0.012	0.095*	0.036*	0.066*	0.184*	0.006
Group	1.77	0.033*	-0.272*	0.064*	-0.008	0.330*	0.146*	0.163*	0.622*	0.011
Competitors	1.12	0.018*	-0.054*	0.030*	0.033*	0.097*	0.060*	0.099*	0.282*	0.001
Labor cost ratio	1.77	-0.165*	0.053*	0.025*	-0.028*	-0.203*	0.015*	-0.106*	-0.507*	-0.069*
Employee training intensity	1.02	0.021*	-0.043*	0.020*	0.015*	0.083*	0.103*	0.053*	0.132*	0.004
Temporary employee ratio	1.17	0.146*	-0.004	-0.061*	0.015*	-0.041*	-0.039*	-0.134*	-0.013	0.121*
Part-time employee ratio	1.07	-0.005	0.031*	-0.023*	-0.015*	-0.055*	-0.032*	-0.021*	-0.151*	0.002

continues

	VIF	*Profitability*	*Listed*	*Group*	*Competitors*	*Labor cost ratio*	*Employee training intensity*	*Temporary employee ratio*	*Part-time employee ratio*
Profitability	-	1.000							
Listed	-	0.008	1.000						
Group	-	0.054*	0.121*	1.000					
Competitors	-	0.052*	0.053*	0.195*	1.000				
Labor cost ratio	-	-0.242*	-0.065*	-0.282*	-0.182*	1.000			
Employee training intensity	-	0.026*	0.022*	0.102*	0.046*	-0.065*	1.000		
Temporary employee ratio	-	0.062*	-0.009	-0.054*	0.012	-0.046*	-0.016*	1.000	
Part-time employee ratio	-	-0.051*	-0.014	-0.095*	-0.058*	0.057*	0.010	-0.077*	1.000

Note: Number of observations: *18,153.* Mean VIF=1.89. Level of statistical significance *$p < 0.05$.

Table 3. Family-managed firms, municipality size, economic crisis and employment growth

	Model (1)	Model (2)	Model (3)	Model (4)	Model (5)
Export intensity	-0.000^{+}	-0.000^{+}	-0.000^{+}	-0.000	-0.000
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
R&D intensity	0.003***	0.003***	0.003***	0.003***	0.003***
	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
Age	-0.000	-0.000	-0.000	-0.000	-0.000
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Size	0.008**	0.008**	0.008**	0.006*	0.006*
	(0.003)	(0.002)	(0.002)	(0.003)	(0.003)
Financial constraints	-0.000	-0.000	-0.000	-0.000	-0.000
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Profitability	0.001***	0.001***	0.001***	0.001**	0.001**
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Listed	-0.006	-0.007	-0.006	-0.001	-0.001
	(0.009)	(0.009)	(0.009)	(0.009)	(0.009)
Group	-0.015**	-0.015**	-0.015**	-0.013*	-0.013*
	(0.005)	(0.005)	(0.005)	(0.006)	(0.006)
Competitors	-0.009*	-0.009*	-0.009*	-0.012**	-0.012**
	(0.004)	(0.004)	(0.004)	(0.004)	(0.004)
Labor cost ratio	-0.002***	-0.002***	-0.002***	-0.003***	-0.003***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Employee training intensity	0.001	0.001	0.001	0.001	0.001
	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
Temporary employee ratio	0.003***	0.003***	0.003***	0.003***	0.003***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Part-time employee ratio	0.002***	0.002***	0.002***	0.002***	0.002***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Family-managed firm	0.028***	0.029***	0.003	0.007	-0.005
	(0.005)	(0.005)	(0.014)	(0.015)	(0.015)
Municipality size		0.004	0.002	0.000	-0.001

		(0.003)	(0.003)	(0.003)	(0.003)
Economic crisis		-0.078***	-0.078***	-0.065***	-0.080***
		(0.008)	(0.008)	(0.015)	(0.017)
*Family-managed firm*Municipality size*			0.008*	0.007+	0.011*
			(0.004)	(0.004)	(0.005)
*Family-managed firm*Economic crisis*				-0.000	0.070*
				(0.009)	(0.031)
*Municipality size*Economic crisis*				0.013**	0.017***
				(0.004)	(0.005)
*Family-managed firm*Municipality size*Economic crisis*					-0.022*
					(0.009)
Regions	Yes	Yes	Yes	Yes	Yes
Industry	Yes	Yes	Yes	Yes	Yes
Year	Yes	Yes	Yes	Not	Not
Constant	-0.146***	-0.154***	-0.149***	-0.132**	-0.129**
	(0.042)	(0.043)	(0.043)	(0.043)	(0.043)
WaldChi2	926.29	937.16	938.25	557.95	564.29
Prob>Chi2	0.0000	0.0000	0.0000	0.0000	0.0000
Number of firms	2,862	2,862	2,862	2,862	2,862
Observations	*18,153*	*18,153*	*18,153*	*18,153*	*18,153*

Note: The table presents random-effect models based on a panel dataset with at least 10 employees over the period 2003-2015. *Family-managed firm* is a dummy variable coded "1" if two or more family members are involved in the management of the firm and "0" otherwise. *Municipality size* records the number of inhabitants of the town council on which the company has its social domicile: less than 2,000, 2,001-10,000, 10,001-50,000, 50,001-500,000, more than 500,000. *Economic crisis* is a dummy variable coded "1" for the years 2007 and 2008 during the which the international financial crisis together with the Spanish property bubble occurred, and "0" otherwise. Robust standard errors are reported in parentheses. Level of statistical significance + $p < 0.10$, *$p < 0.05$, **$p < 0.01$, ***$p < 0.001$.

Figure. 2 Municipality size and employment growth among family-managed and non-family firms

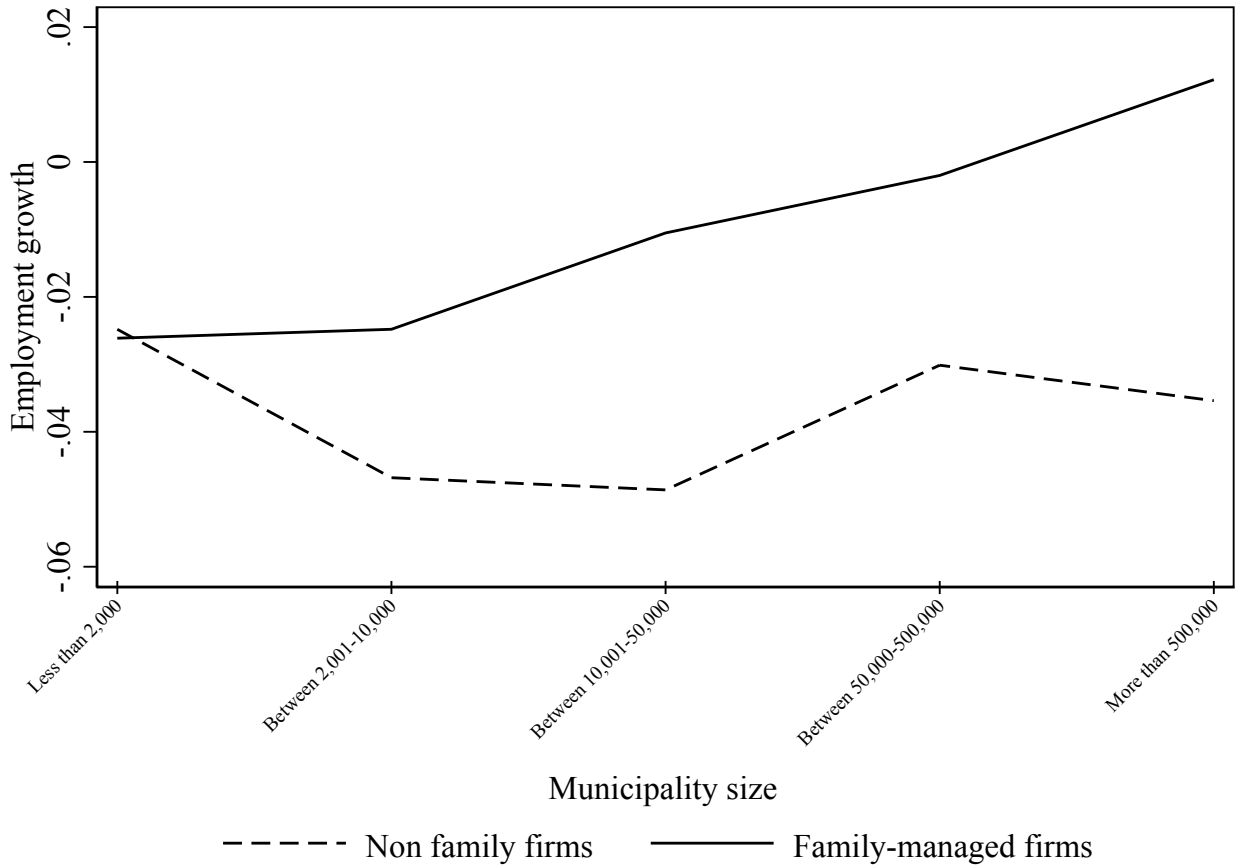
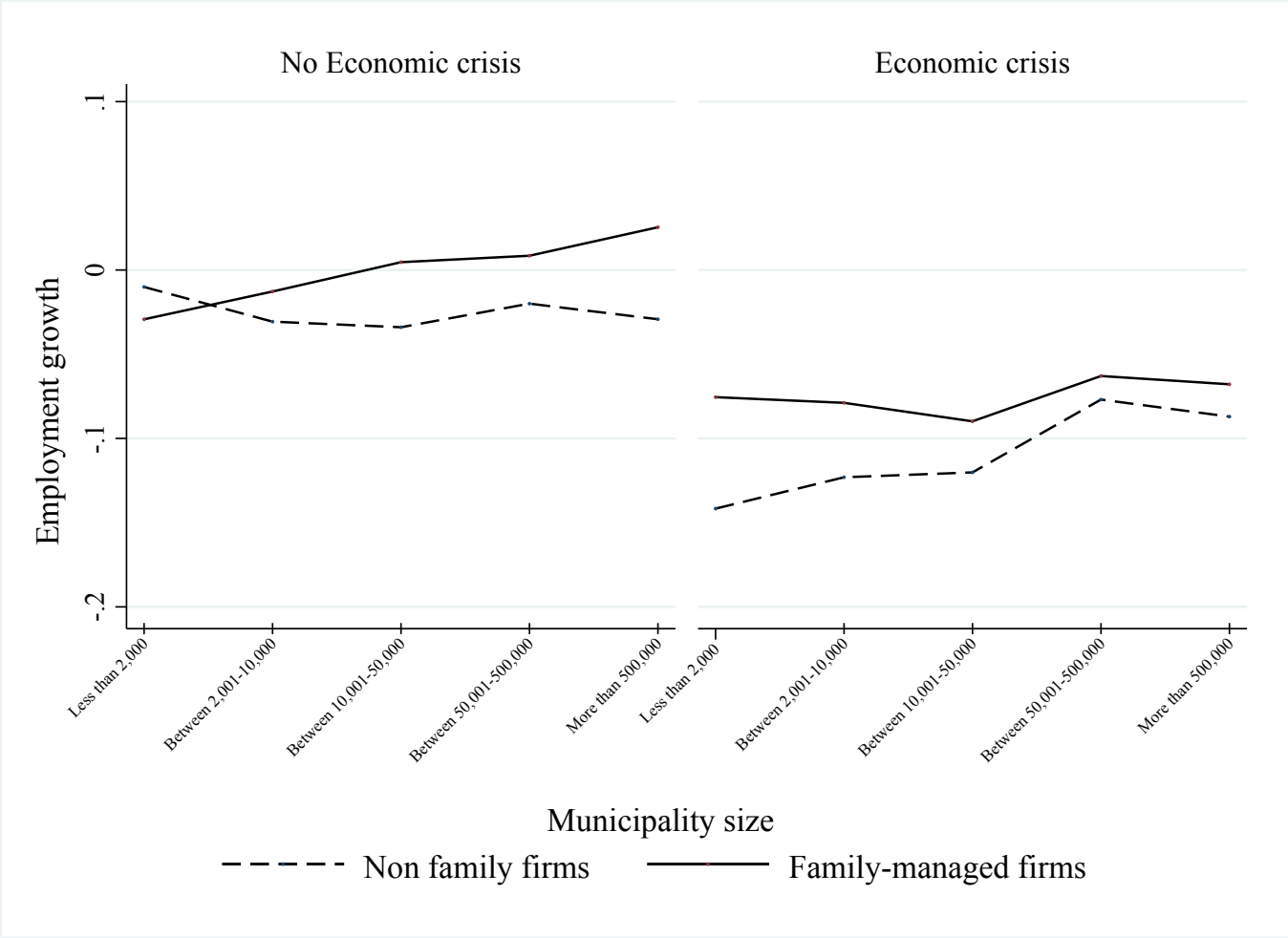


Figure. 3 Municipality size, economic crisis and employment growth among family-managed and non-family firms



References

ABC Economia. (2016). “Las empresas familiares generan el 67% del total del empleo privado que se crea en España”.

Adjei, E.K., Eriksson, R.H. and Lindgren, U. (2016), “Social proximity and firm performance: The importance of family member ties in workplaces”, *Regional Studies, Regional Science*, Vol. 3 No. 1, pp. 303–319.

Almodóvar, P., Verbeke, A. and Rodríguez-Ruiz, Ó. (2016), “The Internationalization of Small and Medium-Sized Family Enterprises: The Role of Human Asset Quality”, *Journal of Leadership and Organizational Studies*, Vol. 23 No. 2, pp. 162–174.

Amato, S., Basco, R., Backman, M. and Lattanzi, N. (2020), “Family-managed firms and local export spillovers: evidence from Spanish manufacturing firms”, *European Planning Studies*, pp. 1–25.

Amore, M.D., Miller, D., Le Breton-Miller, I. and Corbetta, G. (2017), “For love and money: Marital leadership in family firms”, *Journal of Corporate Finance*, Vol. 46 No. 7, pp. 461–476.

Aparicio, G., Basco, R., Iturralde, T. and Maseda, A. (2017), “An exploratory study of firm goals in the context of family firms: An institutional logics perspective”, *Journal of Family Business Strategy*, Vol. 8 No. 3, pp. 157–169.

Arregle, J.-L., Hitt, M.A., Sirmon, D.G. and Very, P. (2007), “The Development of Organizational Social Capital: Attributes of Family Firms”, *Journal of Management Studies*, Vol. 44 No. 1, pp. 73–95.

Arrondo-Garcia, R., Fernández-Méndez, C. and Menéndez-Requejo, S. (2016), “The growth and performance of family businesses during the global financial crisis: The role of the generation in control”, *Journal of Family Business Strategy*, Vol. 7 No. 4, pp. 227–237.

Backman, M. and Palmberg, J. (2015), “Contextualizing small family firms: How does the urban-rural context affect firm employment growth?”, *Journal of Family Business Strategy*, Vol. 6 No. 4, pp. 247–258.

Basco, R. (2013), “The family’s effect on family firm performance: A model testing the demographic and essence approaches”, *Journal of Family Business Strategy*, Vol. 4 No. 1, pp. 42–66.

Basco, R. (2015), “Family business and regional development-A theoretical model of regional familiness”, *Journal of Family Business Strategy*, Vol. 6 No. 4, pp. 259–271.

Basco, R. (2017), “‘Where do you want to take your family firm?’ A theoretical and empirical exploratory study of family business goals”, *BRQ Business Research Quarterly*, Vol. 20 No. 1, pp. 28–44.

Bassanini, A., Breda, T., Caroli, E. and Rebérioux, A. (2013), “Working in Family Firms: Paid less but more secure? Evidence From French-Matched Employer-Employee Data”, *ILR Review*, Vol.

66 No. 2, pp. 433–466.

Baù, M., Chirico, F., Pittino, D., Backman, M. and Klaesson, J. (2018), "Roots to Grow: Family Firms and Local Embeddedness in Rural and Urban Contexts", *Entrepreneurship Theory and Practice*, Vol. 43 No. 2, pp. 360–385.

Berrone, P., Cruz, C., Gomez-Mejia, L.R. and Larraza-Kintana, M. (2010), "Socioemotional Wealth and Corporate Responses to Institutional Pressures: Do Family- Controlled Firms Pollute Less?", *Administrative Science Quarterly*, Vol. 55 No. 1, pp. 82–113.

Bird, M. and Wennberg, K. (2014), "Regional influences on the prevalence of family versus non-family start-ups", *Journal of Business Venturing*, Vol. 29 No. 3, pp. 421–436.

Bird, M. and Zellweger, T.M. (2018), "Relational embeddedness and firm growth: Comparing spousal and sibling entrepreneurs", *Organization Science*, Vol. 29 No. 2, pp. 191–355.

Bjuggren, C.M. (2015), "Sensitivity to shocks and implicit employment protection in family firms", *Journal of Economic Behavior and Organization*, Vol. 119, pp. 18–31.

Bjuggren, C.M., Daunfeldt, S.O. and Johansson, D. (2013), "High-growth firms and family ownership", *Journal of Small Business and Entrepreneurship*, Vol. 26 No. 4, pp. 365–385.

Block, J.H. (2010), "Family Management, Family Ownership, and Downsizing: Evidence from S&P 500 Firms", *Family Business Review*, Vol. 23 No. 2, pp. 109–130.

Block, J.H. and Spiegel, F. (2013), "Family firm density and regional innovation output: An exploratory analysis", *Journal of Family Business Strategy*, Vol. 4 No. 4, pp. 270–280.

Boschma, R. (2005), "Proximity and innovation: A critical assessment", *Regional Studies*, Vol. 39 No. 1, pp. 61–74.

Le Breton-Miller, I. and Miller, D. (2009), "Agency vs. stewardship in public family firms: A social embeddedness reconciliation", *Entrepreneurship: Theory and Practice*, Vol. 33 No. 6, pp. 1169–1191.

Campello, M., Graham, J.R. and Harvey, C.R. (2010), "The real effects of financial constraints: Evidence from a financial crisis", *Journal of Financial Economics*, Vol. 97 No. 3, pp. 470–487.

Capello, R. (2019), "Interpreting and understanding territorial identity", *Regional Science Policy and Practice*, Vol. 11 No. 1, pp. 141–158.

Carballo-Cruz, F. (2011), "Causes and consequences of the Spanish economic crisis: Why the recovery is taken so long?", *Panoeconomicus*, Vol. 58 No. 3, pp. 309–328.

Carney, M., Duran, P., van Essen, M. and Shapiro, D. (2017), "Family firms, internationalization, and national competitiveness: Does family firm prevalence matter?", *Journal of Family Business Strategy*, Vol. 8 No. 3, pp. 123–136.

Casson, M. (1999), "The economics of the family firm", *Scandinavian Economic History Review*,

Vol. 47 No. 1, pp. 10–23.

Cennamo, C., Berrone, P., Cruz, C. and Gomez-Mejia, L.R. (2012), "Socioemotional Wealth and Proactive Stakeholder Engagement: Why Family-Controlled Firms Care More About Their Stakeholders", *Entrepreneurship: Theory and Practice*, Vol. 36 No. 6, pp. 1153–1173.

Chen, Q., Hou, W., Li, W., Wilson, C. and Wu, Z. (2014), "Family Control, Regulatory Environment, and the Growth of Entrepreneurial Firms: International Evidence", *Corporate Governance: An International Review*, Vol. 22 No. 2, pp. 132–144.

Choi, I. (2001), "Unit root tests for panel data", *Journal of International Money and Finance*, Vol. 20 No. 2, pp. 249–272.

Cooke, P., Clifton, N. and Oleaga, M. (2005), "Social capital, firm embeddedness and regional development", *Regional Studies*, Vol. 39 No. 8, pp. 1065–1077.

D'Aurizio, L. and Romano, L. (2013), *Family Firms and the Great Recession: Out of Sight, out of Mind?*, No. 905, *Temi Di Discussione (Working Papers)*, available at:https://doi.org/10.1162/JEEA.2008.6.6.1109.

Dahl, S.-Å. and Nesheim, T. (1998), "Downsizing strategies and institutional environments", *Scandinavian Journal of Management*, Vol. 14 No. 3, pp. 239–257.

Daspit, J.J., Chrisman, J.J., Sharma, P., Pearson, A.W. and Mahto, R. V. (2018), "Governance as a Source of Family Firm Heterogeneity", *Journal of Business Research*, Vol. 84, pp. 293–300.

Deephouse, D.L. and Jaskiewicz, P. (2013), "Do Family Firms Have Better Reputations Than Non-Family Firms? An Integration of Socioemotional Wealth and Social Identity Theories", *Journal of Management Studies*, Vol. 50 No. 3, pp. 337–360.

Dekker, J. and Hasso, T. (2016), "Environmental Performance Focus in Private Family Firms: The Role of Social Embeddedness", *Journal of Business Ethics*, Vol. 136 No. 2, pp. 293–309.

Diwisch, D.S., Voithofer, P. and Weiss, C.R. (2009), "Succession and firm growth: Results from a non-parametric matching approach", *Small Business Economics*, Vol. 32 No. 1, pp. 45–56.

Dyer, W.G. and Whetten, D.A. (2006), "Family Firms and Social Responsibility: Preliminary Evidence from the S&P 500", *Entrepreneurship Theory and Practice*, Vol. 30 No. 6, pp. 785–803.

Ellul, A., Pagano, M. and Schivardi, F. (2018), "Employment and wage insurance within firms: Worldwide evidence", *Review of Financial Studies*, Vol. 31 No. 4, pp. 1298–1340.

Van Essen, M., Strike, V.M., Carney, M. and Sapp, S. (2015), "The Resilient Family Firm: Stakeholder Outcomes and Institutional Effects", *Corporate Governance: An International Review*, Vol. 23 No. 3, pp. 167–183.

Galliano, D., Magrini, M. and Triboulet, P. (2015), "Marshall 's versus Jacobs 'Externalities in Firm

Innovation Performance: The Case of French Industry", *Regional Studies*, Vol. 49 No. 11, pp. 1840–1858.

Georgopoulos, A. and Glaister, K.W. (2018), "Firm Heterogeneity and Performance in a Turbulent Economic Environment: Evidence from Greece", *European Management Review*, Vol. 15 No. 2, pp. 237–254.

Gomez-Mejia, L., Basco, R., Gonzalez, A.C. and Muller, C.G. (2020), "Family business and local development in Iberoamerica", *Cross Cultural and Strategic Management*, forthcoming.

Gómez-Mejía, L.R., Haynes, K.T., Núñez-Nickel, M., Jacobson, K.J.L. and Moyano-Fuentes, J. (2007), "Socioemotional Wealth and Business Risks in Family-controlled Firms: Evidence from Spanish Olive Oil Mills", *Administrative Science Quarterly*, Vol. 52 No. 1, pp. 106–137.

Gordon, I.R. and McCann, P. (2000), "Industrial clusters: Complexes, agglomeration and/or social networks?", *Urban Studies*, Vol. 37 No. 3, pp. 513–532.

Granovetter, M. (1985), "Economic Action and Social Structure: The Problem of Embeddedness", *American Sociology Review*, Vol. 91 No. 3, pp. 481–510.

Granovetter, M. (2005), "The Impact of Social Structure on Economic Outcomes Social Networks and Economic Outcomes: Core Principles", *The Journal of Economic Perspectives*, Vol. 19 No. 1, pp. 33–50.

Greenaway, D. and Kneller, R. (2007), "Firm Heterogeneity, Exporting and Foreign Direct Investment", *The Economic Journal*, Vol. 117 No. 517, pp. 134–161.

Hair, J. F., Black, W. C., Babin, B. J., Anderson, R. E., & Tatham, R. L. (1998). *Multivariate data analysis* (Vol. 5, No. 3, pp. 207-219). Upper Saddle River, NJ: Prentice hall.

Hansen, T. (2015), "Substitution or Overlap? The Relations between Geographical and Non-spatial Proximity Dimensions in Collaborative Innovation Projects", *Regional Studies*, Vol. 49 No. 10, pp. 1672–1684.

Hess, M. (2004), "'Spatial' relationships? Towards a reconceptualization of embeddedness", *Progress in Human Geography*, Vol. 28 No. 2, pp. 165–186.

Huber, F. (2012), "On the Role and Interrelationship of Spatial, Social and Cognitive Proximity: Personal Knowledge Relationships of R&D Workers in the Cambridge Information Technology Cluster", *Regional Studies*, Vol. 46 No. 9, pp. 1169–1182.

James, A., Hadjielias, E., Guerrero, M., Discua Cruz, A. and Basco, R. (2020), "Entrepreneurial families in business across generations, contexts, and cultures", *Journal of Family Business Management*, forthcoming.

Jimeno, J.F. and Santos, T. (2014), "The crisis of the spanish economy", *SERIEs*, Vol. 5 No. 2, pp. 125–141.

Kalantaridis, C. and Bika, Z. (2006), "Local embeddedness and rural entrepreneurship: Case-study evidence from Cumbria, England", *Environment and Planning A*, Vol. 38 No. 8, pp. 1561–1579.

Kappes, I. and Schmid, T. (2013), "The effect of family governance on corporate time horizons", *Corporate Governance: An International Review*, Vol. 21 No. 6, pp. 547–566.

Lähdesmäki, M., Siltaoja, M. and Spence, L.J. (2019), "Stakeholder Salience for Small Businesses: A Social Proximity Perspective", *Journal of Business Ethics*, Springer Netherlands, Vol. 158 No. 2, pp. 373–385.

Lähdesmäki, M. and Suutari, T. (2012), "Keeping at Arm's Length or Searching for Social Proximity? Corporate Social Responsibility as a Reciprocal Process Between Small Businesses and the Local Community", *Journal of Business Ethics*, Vol. 108 No. 4, pp. 481–493.

Latham, S. (2009), "Contrasting strategic response to economic recession in start-up versus established software firms", *Journal of Small Business Management*, Vol. 47 No. 2, pp. 180–201.

Lee, J. (2006), "Family Firm Performance: Further Evidence", *Family Business Review*, Vol. 19 No. 2, pp. 103–114.

Lins, K. V., Servaes, H. and Tamayo, A. (2017), "Social Capital, Trust, and Firm Performance: The Value of Corporate Social Responsibility during the Financial Crisis", *Journal of Finance*, Vol. 72 No. 4, pp. 1785–1824.

Martin, R., Sunley, P., Gardiner, B. and Tyler, P. (2016), "How Regions React to Recessions: Resilience and the Role of Economic Structure", *Regional Studies*, Vol. 50 No. 4, pp. 561–585.

Maskell, P. (2001), "The Firm in Economic Geography", *Economic Geography*, Vol. 77 No. 4, pp. 315–328.

Maskell, P. and Malmberg, A. (1999), "Localised learning and industrial competitiveness", *Cambridge Journal of Economics*, Vol. 23 No. 2, pp. 167–185.

Mazzi, C. (2011), "Family business and financial performance: Current state of knowledge and future research challenges", *Journal of Family Business Strategy*, Vol. 2 No. 3, pp. 166–181.

Minichilli, A., Brogi, M. and Calabrò, A. (2016), "Weathering the Storm: Family Ownership, Governance, and Performance Through the Financial and Economic Crisis", *Corporate Governance: An International Review*, Vol. 24 No. 6, pp. 552–568.

Ministerio de Fomento Dirección General de Arquitectura Vivienda y Suelo. (2017), *Áreas Urbanas En España 2017.*, available at: http://atlasau.fomento.gob.es/.

Mitchell, R.K., Agle, B.R., Chrisman, J.J. and Spence, L.J. (2011), "Toward a Theory of Stakeholder Salience in Family Firms", *Business Ethics Quarterly*, Vol. 21 No. 2, pp. 235–255.

Muñoz-Bullón, F. and Sánchez-Bueno, M.J. (2014), "Institutional determinants of downsizing",

Human Resource Management Journal, Vol. 24 No. 1, pp. 111–128.

Nahapiet, J. and Ghoshal, S. (1998), "Social Capital, Intellectual Capital and the Organizational Advantage", *Academy of Management Review*, Vol. 23 No. 2, pp. 242–266.

Naldi, L., Cennamo, C., Corbetta, G. and Gomez-Mejia, L. (2013), "Preserving socioemotional wealth in family firms: Asset or liability? The moderating role of business context", *Entrepreneurship: Theory and Practice*, Vol. 37 No. 6, pp. 1341–1360.

Parr, J.B. (2002), "Missing Elements in the Analysis of Agglomeration Economies", *International Regional Science Review*, Vol. 25 No. 2, pp. 151–168.

Sharma, P., Salvato, C. and Reay, T. (2014), "Temporal Dimensions of Family Enterprise Research", *Family Business Review*, Vol. 27 No. 1, pp. 10–19.

Sørensen, J.F.L. (2012), "Testing the Hypothesis of Higher Social Capital in Rural Areas:The Case of Denmark", *Regional Studies*, Vol. 46 No. 7, pp. 873–891.

Sraer, D. and Thesmar, D. (2007), "Performance and Behavior of Family Firms: Evidence from the French Stock Market", *Journal of the European Economic Association*, Vol. 5 No. 4, pp. 709–751.

Stavrou, E., Kassinis, G. and Filotheou, A. (2007), "Downsizing and stakeholder orientation among the fortune 500: Does family ownership matter?", *Journal of Business Ethics*, Vol. 72 No. 2, pp. 149–162.

Steiner, A. and Atterton, J. (2015), "Exploring the contribution of rural enterprises to local resilience", *Journal of Rural Studies*, Vol. 40, pp. 30–45.

Stough, R., Welter, F., Block, J.H., Wennberg, K. and Basco, R. (2015), "Family business and regional science: 'Bridging the gap'", *Journal of Family Business Strategy*, Vol. 6 No. 4, pp. 208–218.

Tabor, W., Chrisman, J.J., Madison, K. and Vardaman, J.M. (2018), "Nonfamily Members in Family Firms: A Review and Future Research Agenda", *Family Business Review*, Vol. 31 No. 1, pp. 54–79.

Torre, A. and Rallet, A. (2005), "Proximity and localization", *Regional Studies*, Vol. 39 No. 1, pp. 47–59.

Uzzi, B. (1997), "Social Structure and Competition in Interfirm Networks : The Paradox of Embeddedness", *Administrative Science Quarterly*, Vol. 42 No. 1, pp. 35–67.

Uzzi, B. (1999), "Embeddedness in the Making of Financial Capital: How Social Relations and Networks Benefit Firms Seeking Financing", *American Sociological Review*, Vol. 64 No. 4, p. 481.

Wooldridge, J.M. (2010), *Econometric Analysis of Cross Section and Panel Data*, Second Edi., The

MIT Press.

Zellweger, T.M., Nason, R.S., Nordqvist, M. and Brush, C.G. (2013), “Why do family firms strive for nonfinancial goals? An organizational identity perspective”, *Entrepreneurship Theory and PracticeTheory and Practice*, Vol. 37 No. 2, pp. 229–248.