Postprint

This is the accepted version of a paper published in Entrepreneurship: Theory & Practice. This paper has been peer-reviewed but does not include the final publisher proof-corrections or journal pagination.

Citation for the original published paper (version of record):

http://dx.doi.org/10.1111/etap.12069

Access to the published version may require subscription.

N.B. When citing this work, cite the original published paper.

Permanent link to this version:
http://urn.kb.se/resolve?urn=urn:nbn:se:hj:diva-23434
PRESERVING SOCIOEMOTIONAL WEALTH IN FAMILY FIRMS: ASSET OR LIABILITY? THE MODERATING ROLE OF BUSINESS CONTEXT

LUCIA NALDI*
Jönköping International Business School,
Box 1026, 551 11, Jönköping,
Sweden
(46) 36-101852
Lucia.naldi@jibs.hj.se

CARMELO CENNAMO
Bocconi University
Dept. of Management & Technology
Via Roentgen, 20136 Milano, Italy
(39) 0258363459
carmelo.cennamo@unibocconi.it

CORBETTA GUIDO
Bocconi University
Dept. of Management & Technology
Via Roentgen, 20136 Milano, Italy
(39) 0258362538
guido.corbetta@unibocconi.it

LUIS GOMEZ-MEJIA
Texas A & M University
Department of Management, Mays Business School
420 C Wehner Building, 4221 TAMU
College Station, Texas 77843-4221
lgomez-mejia@mays.tamu.edu

* Corresponding author
PRESERVING SOCIOEMOTIONAL WEALTH IN FAMILY FIRMS: ASSET OR LIABILITY? THE MODERATING ROLE OF BUSINESS CONTEXT

ABSTRACT
We ask whether choices aimed at preserving socioemotional wealth (SEW) represent an asset or a liability in family-controlled firms. Specifically, we consider one major SEW-preserving mechanism – having as CEO a member of the controlling family – and hypothesize that this choice is (1) an asset in business contexts, such as industrial districts, in which tacit rules and social norms are relatively more important, but (2) a potential liability in contexts like stock exchange markets, where formal regulations and transparency principles take centre stage. The results from our empirical analysis confirm these hypotheses.

INTRODUCTION
The socioemotional wealth (SEW) perspective recognizes that the uniqueness of family firms resides in having nonfinancial, as well as financial, objectives that affect how problems are framed and what actions are taken (see Gomez-Mejia, Cruz, Berrone, & DeCastro, 2011, for a comprehensive review). In other words, family principals tend to make decisions that enhance or preserve the stock of affect-related value invested in the firm (Berrone, Cruz, Gomez-Mejia, & Larraza-Kintana, 2010; Gomez-Mejia, Haynes, Nuñez-Nickel, Jacobson, & Moyano-Fuentes, 2007). SEW has proved valuable in predicting differences in the strategic choices of family firms compared to non-family firms with respect, for instance, to corporate and technological diversification (e.g., Berrone et al., 2010; Gomez-Mejia, Hoskisson, Makri, & Campbell, 2011b), proactive stakeholder engagement and environmental management (Berrone et al., 2010; Cennamo, Berrone, Cruz, & Gomez-Mejia, 2012), and, generally, risk-taking choices (Gomez-Mejia et al., 2007, 2011a).

When it comes to predicting the performance effects of SEW-preserving choices, or differences across family firms, the theory does not go much further than saying that family principals can take decisions to preserve SEW even when these harm financial performance. However, preserving SEW may also be positive for financial performance, and this effect may
vary across family firms. If the SEW paradigm aspires to become a “complete” theory of family firms, it must be able to predict when SEW-based choices will improve or impair firm performance. This requires a delineation of factors that condition the impact of those choices.

Our study offers a first attempt to examine the SEW-financial performance relationship as a function of the environment in which the firm operates. Building on the recommendation of contingency theory to consider successful performance as the result of a proper fit between organizational structure/choices and contextual variables (Hofer, 1975; Powell, 1992; Thompson, 1967), we propose that choices to preserve SEW will enhance financial performance when there is a proper alignment (or fit) between the family’s SEW objectives and the prevailing institutional logics (formal and informal norms) characterizing the environment, and will hinder financial performance when such a fit is missing. Heeding warnings against the risks of an “oversocialized” perspective (Gomez-Mejia, Wiseman, & Dykes, 2005), we begin by considering variation in some aspects of the institutional environment while keeping other factors constant. Specifically, within the same national context (Italy), we consider the formal or informal prevailing character of the institutional environment. North (1990: 3) defines institutions as “the humanly devised constraints that structure human interaction”, which include formal rules, such as laws and regulations, and informal constraints, such as customs, norms and cultures. While in most business contexts formal and informal institutions coexist and reinforce each other, the relative importance of the formal or informal component imposes different constraints on firms operating therein (Peng & Jiang, 2010; Sauerwald & Peng, 2012), providing insights into the conditions under which the effects of SEW preservation choices on performance might be expected to vary.

Our analysis considers one major SEW-preserving mechanism: having as the firm’s CEO a member of the controlling family. This practice is in line with and ensures the achievement of SEW underlying more specific objectives (Berrone, Cruz, & Gomez-Mejia,
2012), namely (1) retaining control over the firm’s assets and activity (Chua, Chrisman, & Sharma, 1999); (2) guaranteeing firm continuity for future family generations; and (3) sustaining firm reputation, which is often associated with the family image (Berrone et al., 2010; Berrone et al., 2012; Gomez-Mejia, Cruz, Berrone, & DeCastro, 2011a). Compared to non-family CEOs, family CEOs give the family a greater control over day-to-day operations and decisions (Hall & Nordqvist, 2008), are part of and will remain attached to the firm, are more identified with the firm (Zellweger, Nason, Nordqvist, & Brush, forthcoming), have a stronger emotional attachment with the firm (Zellweger & Astrachan, 2008) and closer ties with the local community (Berrone et al., 2010).

We propose that SEW may be an asset that family CEOs can use in business contexts in which tacit rules and social norms prevail, whereas it represents a potential liability for family CEOs in business contexts in which formal rules take central stage. Our study offers several contributions. By showing that the value of SEW for financial performance depends on the fit (or lack thereof) between SEW objectives and formal-informal logics of the environment, we extend the SEW perspective, which, in its current form, is mainly agnostic about the performance implications of choices targeted at preserving SEW. Also, whereas much family business research has compared family versus non-family firms, we examine the heterogeneity among family firms. Furthermore, by providing a more nuanced perspective on the performance benefits and disadvantages of having a family CEO, our study helps to disentangle an issue that has long puzzled researchers. Finally, we adopt a robust longitudinal, panel data approach, which represents a major methodological improvement over the typical cross-sectional design that examines the influence of family ownership on performance. Next, we introduce our theoretical framework and develop the study’s hypotheses, explain the research method, and present the results. We close by discussing these findings and their implications for the theory of SEW, and, more generally, for family business research.
AN ENVIRONMENTAL CONTINGENCY APPROACH TO SEW

The SEW perspective seeks to explain the behaviour of family firms, starting from the objectives that drive how problems are framed and what actions are taken. It is based on behavioural agency theory (see Wiseman & Gomez-Mejia, 1998), which argues that decision-makers are driven by the desire to avoid losses. Applied to the case of family firms, family owners are loss-averse with respect to SEW. Specifically, Gomez-Mejia and his colleagues suggest that the main reference point of family firms is the preservation of SEW – i.e., the affect-related value the family derives from its controlling position in a particular firm. Preserving SEW entails a number of underlying, more specific objectives and related strategic behaviours, namely, (1) keeping control and influence over the firm’s operations and ownership; (2) perpetuating the family dynasty, ensuring that the business is handed down to future generations; and (3) sustaining family image and reputation. Table 1 summarizes the features of the three objectives by listing the expected strategic behaviours associated with each of them.

We premise that having a family member as CEO is a way for family firms to achieve these three objectives, thus preserving and enhancing socioemotional wealth (Berrone et al., 2010; Gomez-Mejia et al., 2011a; Gomez-Mejia et al., 2007; Gomez-Mejia & Nuñez-Nickel, 2001). Having a family member at the helm is what ultimately allows the family to manage the firm in the particular way required to preserve socioemotional wealth (Zellweger, Kellermanns, Chrisman, & Chua, 2012). Indeed, as noted by Schulze, Lubatkin, and Dino (2003b: 182), “[t]he CEO of a family firm generally wields power that is disproportionate to
his or her share of ownership; this disproportionate power stems from familial sources (for instance, status as the head of the family), hierarchical sources (such as status as the head of the firm), and (because the firm is privately held) freedom from the oversight and discipline provided by the market for corporate control and other sources of external governance”. In addition, family CEOs will pursue the SEW objectives of the family more than non-family CEOs because personal attachment and self-identification with the firm are stronger in family managed firms than in professionally managed firms (Gersick, Lansberg, Desjardins, & Dunn, 1999; Gomez-Mejia et al., 2007).

Some of these SEW objectives, such as sustaining the firm reputation, would be expected to generally benefit financial performance (e.g., Berrone et al., 2010), but others, like retaining control, may be at odds with financial objectives (e.g., Gomez-Mejia et al., 2007; Thomsen & Pedersen, 2000). Still others, like perpetuating the family dynasty, can have a positive effect since they imply a long-term investment horizon, but also a negative effect since they can lead to favouring family members for key management positions over external, more qualified candidates (Cruz, Justo, & De Castro, 2012). Our position is that while family CEOs will pursue SEW preservation objectives more than non-family CEOs regardless of the environment in which the firm is operating, the performance implications of these choices cannot be determined in isolation, but vary depending on the business context.

Contingency theory has long suggested that firm performance is the result of a proper fit between strategic and environmental attributes (Powell, 1992). Accordingly, we focus on the institutional logics defining the firm’s environment, because these logics shape firm behaviour, expectations, and eventually performance. Given the consensus among leading institutional theorists that institutions, as “the rules of the game”, consist of both formal and informal norms, and that each type of institution poses different constraints on firms (Jiang & Peng, 2011; North, 1990; Scott, 2007), we consider business contexts which differ remarkably
in the relative importance exerted by formal and informal rules. In order words, whilst formal and informal rules coexist in all settings, we argue that differences in the prevailing formal or informal component of the business context offer the possibility of clarifying the conditions under which SEW preservation is an asset or a liability.

We choose to focus on industrial districts as business contexts in which the informal component of the institutional environment takes central stage, and on stock markets, in which the formal component of the institutional environment is at the fore.

Industrial districts – also defined as industry/industrial clusters (Bell, 2005) or geographical clusters (Porter, 1998; Poudre & Caron, 1996) – are clusters of geographically proximate firms in the same or closely related industries, characterized by a unique inter-firm collaboration, webs of relationships, and social, unwritten norms (Bell, 2005; Paniccia, 1998; Porter, 1998; Tallman, Jenkins, Henry, & Pinch, 2004). In this context, although firms are subject to and follow formal laws and regulations, there are numerous reasons why one might expect the informal component of the institutional environment to exert a relatively stronger impact on firms’ behaviour as compared to other contexts. In industrial districts, economic actors are bound geographically and historically (Oba & Semerciöz, 2005). Frequent face relationships, and a shared language and dialect translate into the development of a common culture and shared norms (Becattini, 1990). There is evidence that firms in industrial districts tend to develop subcultures (Lorenz, 1992); and, especially in the Italian context, research shows that districts have culturally homogenous populations (Lazerson & Lorenzoni, 1999). Moreover, in industrial districts there are local organizations, such as professional training centres, industrial policy agencies, and even universities and research centres in some cases, which contribute to the development of specific rules of conduct, practices, norms and cultures (Tallman et al., 2004; Vicedo & Vicedo, 2011). Quite the reverse is observed in stock markets, where formal rules exercise greater control over firms than in other business
contexts. The main objectives of these rules are objectivity, transparency of business operations, and independence between firm business activities and governance bodies (Fama & French, 1993; Villalonga & Amit, 2006). For example, key requirements imposed by the Italian regulations on companies that file for an IPO regulate crucial processes such as admission, oversight and disclosure. Also, social norms and behavioural expectations are important, but to a less degree.

In short, the differences in the prevailing formal or informal character of the institutional environment translate into specific – and well-documented – conditions that need to be met by firms operating therein (Becattini, 1990; Peng, 2004; Peng & Jiang, 2010). Table 2 summarizes these conditions and highlights the expected fit/misfit with each of the three SEW-preservation objectives, expectations that we explain more fully below.

Location in Industrial Districts

Firm location, especially if within the so-called industrial districts, is an important business context that has long interested scholars. In 1919, Alfred Marshall defined industrial districts as localized economies of specialization characterized by an industrial atmosphere and intense networking. Informal rules – that is, traditions, customs, moral values and beliefs – play a central role in these business contexts and impose specific constraints and conditions on businesses operating therein (Inkpen & Tsang, 2005; Johannisson & Monsted, 1997; Paniccia, 1998). Although firms in industrial districts are subjected to formal rules and regulations, research shows that informal institutions influence important aspects of their operations (Oba & Semerciöz, 2005). Commercialization and/or growth strategies, for example, are designed and/or implemented through the long-term collaboration that bonds firms. This long-term strategizing is often disjoint from pure private economic calculus, and
based rather on common understanding of the logics governing the industrial district environment, and a shared vision and leadership of the district (Lorenz, 1992). Further, informal rules in districts act to stabilize economic practices. As noted by Floysand and Jakobsen (2001: 38), “[d]ifferent performances of firms depend upon how well they are able to coordinate, and hence also upon rules of conduct. Such rules are often informal and conventional, and influence managers’ expectation about each other.” Oba and Semercioz (2005) also argue and show that inter-firm conflicts are settled by the firms themselves in accordance with customs, norms and codes of conduct that underline the relations within a specific district.

Under these circumstances, SEW preservation –manifested by having a family CEO at the helm of the organization – is a key asset for family firms. First, the strategic behaviours that family CEOs adopt to keep control over the business facilitate the company’s adherence to informal rules and codes of conduct. Family CEOs tend to hire relatives (Chung & Chan, 2012), and in general prefer to recruit people who will uphold their values, including cultural heritage (Cruz, Firfiray, & Gomez-Mejia, 2011). This fosters the continuous socialization of firms into the informal rules prevailing in the district. In a study of the Norwegian fish-processing cluster, Floysand and Jakobsen (2001: 38) show that shared understanding and rules of conduct develop and are passed on from one generation to another within local families. Family CEOs also have the authority to commit the firm to business relationships without formal or written agreements – e.g., just on a handshake. It would be difficult for non-family CEOs “to rationalize and justify those commitments, which may be viewed as favoritism or cronyism” (Carney, 2005: 259).

Second, the long-term perspective attached to SEW preservation – including the concern for perpetuating the business and willingness to hand it down to future generations – encourages collaborations and reciprocity (Becattini, 1990), increasing the socialization of the
business into rules of conduct and ways of doing business (Oba & Semerciöz, 2005). As noted by Oba and Semercioz (2005), time is an important component of the relationships established in industrial districts. The longer the firm perspective, the more chances there are that the firm is engaged in relationships based on trust.

Third, the concern for the image and reputation of family makes family CEOs, much more than non-family CEOs, reluctant to infringe codes of conducts and violate moral codes (Dyer & Whetten, 2006; Oba & Semerciöz, 2005). Research shows that to sustain the reputation of the family and the business in the community, family CEOs strive to be a trustworthy partner (Miller & Le Breton-Miller, 2003b), pursue environmental actions (Berrone et al., 2010), and conform to social norms (Fombrun & Shanley, 1990).

In sum, for family firms operating in industrial districts, SEW represents an asset that allows them to align the firm’s objectives and business practices with those of the environment, and thereby achieve higher performance as a result of the proper fit between the firm’s objectives and the requirements of the environment. Family CEOs, in preserving SEW, will deploy greater commitment to cooperation (Inkpen & Tsang, 2005), reciprocity (Oba & Semerciöz, 2005), and shared leadership among leading firms of the district; superior knowledge of the traditions and web of informal relationships among district firms; better use of internal and external resources (from partners) based upon unwritten business practices (Inkpen & Tsang, 2005); higher trustworthiness, and bonds with other firms belonging to the district (Oba & Semerciöz, 2005). This alignment, in turn, will strengthen the firm performance. Therefore:

**Hypothesis 1:** Compared to non-family CEOs, family CEOs exert a more positive influence on the financial performance of family-controlled firms operating in industrial districts than on the financial performance of other family firms.
Stock Exchange Affiliation

Family-controlled organizations are common both in general and among listed companies (Anderson & Reeb, 2004; Villalonga & Amit, 2006). Operating on the stock exchange market involves a series of formal constraints and requirements (e.g., deeper scrutiny of business operations and accounting books from third-party, independent agencies, but also from multiple stakeholders [from stock market authority to financial investors]) that directly or indirectly influence a firm’s governance and management. This business context affects the relationship between SEW preservation and performance.

Listed firms are subject to regulatory and market scrutiny, and are expected to have a transparent governance system. Indeed, transparency concerning firm operations and governance is the main mechanism that supposedly guarantees the effective functioning of the stock market (Fama & French, 1993; Morck, Shleifer, & Vishny, 1988; Villalonga & Amit, 2006). When information is correctly and transparently reported, financial investors can make informed investment decisions about which firm shares to buy, and what price to pay for them. Governance structure will influence a firm’s objectives, the way strategic decisions are taken within the firm, and, more generally, the power of individual shareholders to have a say in the firm’s decisions and business operations (La Porta, Lopez De Silanes, & Shleifer, 1999; Thomsen & Pedersen, 2000; Villalonga & Amit, 2006; Zingales, 1998). Most, if not all, of the formal rules regulating stock markets are designed to enforce the transparency principle.

SEW preservation, manifested by having a family CEO, is a liability for listed family firms. Family CEOs are generally not well received by the market because this practice is perceived as running against its institutional logics of objectivity and transparency (e.g., Smith & Amoako-Adu, 1999; Villalonga & Amit, 2006). Research shows that the stock market tends to react negatively to the appointment of family CEOs (Smith & Amoako-Adu, 1999), probably because the market anticipates that the family, through the family CEO,
might use its controlling position in the firm to behave opportunistically and extract corporate resources for private (SEW) benefits at the expense of minority, external shareholders (Villalonga & Amit, 2006). This family CEO “discount factor” influences the firm’s financial performance not only in terms of the firm’s market value but also in terms of its operational performance in a number of ways. First, family firms with family CEOs pursuing SEW need to pay a premium to the risk lenders of capital – both human and financial – would bear. On the one hand, pursuing SEW might induce the firm to move from optimal economic trajectory and take decisions that may accommodate family stakeholders’ claims (Schulze, Lubatkin, Dino, & Buchholtz, 2001). This might increase accounting costs. Also, because of this, family will have more difficulty in raising financial capital on the market, unless they pay a “premium” for this risk (Schulze, Lubatkin, & Dino, 2003a). Again, this will increase costs, impacting negatively on operational performance.

Second, family firms with family CEOs would have the need to signal to the market that they have a professional management and are not run in the sole interest of the family or according to the family’s needs (Villalonga & Amit, 2010). Hence, they have a need to recruit top high-profile management. Yet, those managers will bear a career risk, potentially limiting their outside options, and constraining themselves in terms of promotion opportunities. It will be very hard for those managers to get into top positions if family members occupy them (Lubatkin, Schulze, Ling, & Dino, 2005). Therefore, because of this hold-up problem, they will require a higher compensation to switch to and work for family-run firms, harming operational performance (McConaughy, 2000). This is less of a problem for family firms located in industrial districts. These firms do not have to signal to the external market about their managerial structure.

In short, we expect that, for listed family firms, appointing a family CEO is a liability that will eventually harm performance. Therefore:
**Hypothesis 2:** Compared to non-family CEOs, family CEOs are more likely to impair the financial performance of publicly listed family firms.

**DATA AND METHODS**

Our data set consists of yearly observations on family firms with revenues greater than 50 million euros, a cut-off point that limits potential problems with data consistency associated with small family firms. We identified such firms and collected data on their ownership structure through the public official filings at the Italian Chamber of Commerce, a reliable source of information for listed as well as for privately held firms in Italy. Financial figures and firm characteristics come from public sources, such as AIDA (Italian Digital Database of Companies – the Italian branch of Bureau Van Dijk databases). Finally, we match this database with data from ISTAT (the Italian National Institute of Statistics) on the Italian industrial districts. From the population of 2,522 unique family firms, we have compiled information for the period from 2000 to 2008 on 1,008 firms, for a total of 8,064 firm-year observations. Family firms have been generally defined as firms where the family holds enough shares (both directly and through financial holdings) to appoint the board of directors, and thus the CEO. This figure varies across countries. Generally, studies have adopted a cut-off threshold of 10% for publicly listed firms (La Porta et al., 1999). Yet, in private firms, the family may hold shares even beyond 30 to 50% in countries like Italy (e.g., Minichilli, Corbetta, & MacMillan, 2010), where family-controlled firms are the backbone of the whole country’s economy. Following previous studies conducted in our research context (Minichilli et al., 2010), we consider a firm under family control when the same family owns more than

---

1 It is quite common for family firms to have separate independent firms where only one is involved in real, operating business activities, while the others act more like holding companies. The analysis here is at the business operating company level; however, we track the link of each such company to its controlling (family) company or companies in order to have a complete representation of the controlling share and identity of its shareholders.

2 We use a one-year lag for the dependent variable, which reduces our panel, de facto, to eight years of firm-year observations.
50% of the shares for privately held firms, or more than 25% for listed companies since these are, respectively, the minimum threshold to effectively control a private/public firm, hence hold decisional power over the firm.

Variables

We use Return on Sales (ROS) to measure firm performance. This is, along with ROA (Return on Assets), one of the common measures used in studies on the impact of CEOs on firm performance (e.g., Finkelstein & D’Aveni, 1994). We use ROS instead of ROA because the latter depends highly on the size (and relevance) of a firm’s assets, which makes it an appropriate measure of performance for manufacturing firms, but less suitable for firms operating in less asset-intensive sectors. For instance, it would be hard, and perhaps even incorrect, to compare the ROA performance of firms in the insurance service industry with the ROA of firms in the biotech sector. Moreover, compared to ROS, ROA is more exposed to the effects of potential accounting book manipulation by management (e.g., Summers & Sweeney, 1998). We therefore use ROS$^3$ as a baseline measure and introduce a one-year lag to assess how the independent variables and controls in month $t$ affect ROS in month $t+1$.

Our main independent variable, $CEOfam$, is a dichotomous variable taking value 1 when the CEO is a member of the controlling family and 0 when s/he is outside the family. $District$ and $Listed$ are also dichotomous variables, indicating, respectively, whether the firm is part of an industrial district and whether it is listed on the stock exchange market. We then interact these two variables with $CEOfam$ to obtain our key variables for testing hypothesis 1 and 2. In our sample, about 34% of firms belong to an industrial district, the majority of which are private. Only about 5% of the companies in the industrial district sample are publicly listed (in line with the tendency in the Italian market for family firms – e.g., Lazerson & Lorenzoni, 1999), and of the listed companies, the majority (about 80%) are not part of

---

$^3$ For listed firms, market value would probably be a more meaningful performance metric. However, since our analysis hinges on both publicly traded and private firms, we had to choose a common performance proxy.
industrial districts. We observe an even mix of CEO type for firms belonging to an industrial district, with roughly 52% non-family CEOs and 48% family CEOs. Instead, for listed companies, about 62% have at their helm a non-family CEO, and 38% a family CEO.

We control for a number of factors that affect performance, including whether the family CEO is also the founder of the company, Founder, firm size, measured as # Employees, debt exposure and leverage (Long-term debt), Liquidity ratio, Firm age, and the industry where the firm operates. Additionally, we control for (visible) CEO characteristics that may reflect experience and/or power to influence decision-making and hence eventually performance: CEO tenure, measured as the number of years the CEO has been at the helm of the organization, and CEO age. Previous research on the effects of CEO origin (family vs. non-family) (Jiang & Peng, 2011) and CEO succession on performance has consistently identified the role of these firm-level and CEO-level variables in affecting firm performance (for a review, see Karaevli, 2007). Correlation statistics are shown in Table 3.

--------------------------------------------
Insert Table 3 about here
--------------------------------------------

Statistical Method and Analysis

We test our hypotheses using a time series fixed-effects model of the following form:

\[ ROS_{i,t+1} = \phi_i + \beta X_{i,t} + \xi_{i,t} \]

where \( \phi_i \) represents the coefficient of firm-year fixed effects, \( X_{i,t} \) the vector of the independent variables and controls, and \( \xi_{i,t} \) the specific residuals. Firm fixed effects capture unobserved heterogeneity across firms that is constant over time, and that could affect firm performance (Greene, 2000). Here, we account for unobserved factors (e.g., change in capabilities, organizational structure, and the like) at the firm level that could jointly determine firm performance and the choice of CEO from the family or outside. With this purpose, we introduce and use only fixed effects that identify each firm-year couple. Though such fixed-effect specifications put demanding restrictions on our data, we decided to
follow this conservative approach to control (to the extent possible) for potential omitted variable biases. We also try to reduce potential problems of multicollinearity by mean-centring the main components of the interaction terms before multiplication.

RESULTS

The results from the test of the hypothesized relationships are presented in Table 4. Model 1 contains only the control variables. In models 2 and 3, we add each interaction separately, while in 4 we report results of the full model specification. Model 5 provides adjusted errors that are robust to autocorrelation of arbitrary form. Interestingly, the District and Listed variables have no significant effect per se on performance; yet they are significant when interacted with CEOfam. Also, the firm-specific control variables are all significantly and positively related to performance, confirming their relevance and the importance of controlling for such factors. However, neither Founder nor CEO age or CEO tenure significantly affects firm performance.

Hypothesis 1 states that family CEOs positively influence performance in family firms localized in industrial districts. As model 2 shows, the interaction term between family CEO and industrial district, CEOfam_district (1.13; p-value < 0.001), has a strong positive effect on firm performance. This effect holds also in the full model (4), and is robust to autocorrelation of arbitrary form (model 5), providing strong support for hypothesis 1. We also find strong support for hypothesis 2, which maintains that family CEOs will harm the performance of firms that are listed on the stock exchange. Indeed, the coefficient of the interaction term CEOfam_listed is negative and significant in both the individual (model 3: -
2.55; p-value < 0.001) and full model specifications (model 4: -2.41; p-value < 0.001), as well as robust to autocorrelation of arbitrary form (model 5).

We conducted robustness checks in order to assess the sensitivity of our results to different model specifications and alternative measures. First, we replicated the analysis using the year average ROS per industry instead of industry dummies. These aggregate data are available only for the period 2002-2008, thus our number of firm-year observations reduces to 6,410. The results are still consistent with those of Table 4. Second, since family and non-family CEOs may bring different values to the firm depending on the business and/or firm-specific context, we might expect that the firm’s choice of one type or the other could be affected by the context, and hence its performance implications might be endogenous. We tried to control for this potential issue through treatment effect regressions for CEOfam. In particular, we used a two-step Heckman procedure (Greene, 2000), where in the first stage the probability of having a family versus non-family CEO was estimated conditionally on the contingencies (i.e., District and Listed), and in the second stage the impact of the interactions of this variable with the two explanatory conditions was estimated via standard regression analysis (including similar control variables as in the main models). The results of this estimation procedure are very much in line with those obtained in Table 4. Additionally, we control for the impact of ownership control on firm performance, measured as percentage of family ownership and Herfindhal concentration index computed over the first largest seven shareholders. Again, the main results for our hypotheses hold strong when accounting for these additional control variables. Finally, we computed the level of performance volatility for firms belonging to one business context or the other as a way to capture the underlying risk associated with the operating environment. That is, we use as measure of risk the standard deviation of ROS computed over the listed firms, and over those in an industrial district. After

---

4 We do not report table results here for page limitations. They are available form the authors upon request.
controlling for these effects, we still find strong evidence for the hypothesized relationships. We also used alternative measures of performance, namely ROA (return on assets) and ROI (return on investment). We found qualitatively similar, though somewhat weaker, results. We also replicated the analysis controlling for whether the firm had gone through a CEO succession and found the same results.

**DISCUSSION AND CONCLUSIONS**

Why is it that having a family member at the helm of the organization can have both positive and negative consequences for financial performance? How can we make sense of conflicting views as to whether, more generally, the desire to preserve socioemotional wealth is an asset or a liability? These are fundamental questions for the theory of family firms.

In this paper we show that tackling these questions requires a contingency approach that identifies the environmental conditions under which SEW-based choices enhance or hinder performance. We find that putting a family member at the helm of the organization improves the financial performance of family firms located in industrial districts, but harms that of family firms listed on the stock market. These findings underline heterogeneity among family firms in terms of SEW and its impact on performance, and the importance of fit between SEW-related objectives and the formal and informal constraints of the firm’s environment.

Little empirical research has elucidated the performance consequences of pursuing nonfinancial utilities (Berrone et al., 2012; Gomez-Mejia et al., 2011a). Instead, research has primarily focused on the strategic choices ensuing from family principals’ objective of preserving SEW – such as diversification (Gomez-Mejia, Makri, & Larraza-Kintana, 2010), environmental policies (Berrone et al., 2010), innovation investments (Gomez-Mejia et al., 2011b) and stakeholder management (Cennamo et al., 2012). Our study begins to fill this void.
Whether or not family firms should appoint a family CEO has long puzzled scholars. Our approach extends previous work that has debated the performance consequences of CEO status (family vs. non-family) in family firms (Gedajlovic, Lubatkin, & Schulze, 2004; Lin & Hu, 2007; McConaughy, 2000). Traditionally, the debate has clustered around three positions, suggesting that having a family CEO is “good”, “bad”, or “irrelevant” for performance (Peng & Jiang, 2010). Our findings complement this body of knowledge by showing that family CEOs might be an asset for managing interactions with some external stakeholders, such as other actors in their local community, and a liability with other stakeholders, such as stock market investors (Cennamo et al., 2012). Yet, most prior work has focused on group comparison between family and non-family firms, implicitly taking for granted the homogeneity of the role of SEW within each group. As we show, this is not the case! First, our study offers empirical evidence in support of the variance existing within the family firms’ group in terms of SEW and its impact on performance. Second, by documenting how SEW can play out differently in terms of firm (financial) performance consequences depending on the type of business context the firm operates in, we provide an account of asymmetric SEW instrumental benefits.

According to the framework developed in Cennamo et al. (2012), not only are family firms heterogeneous; family principals of the family firm may also vary in terms of their preferences and SEW objectives, according to whether they frame their decisions on the basis of instrumental or normative reasons. They further advance that “instrumental reasons might not be necessarily considered in straightforward economic terms. In the particular context of family firms, family principals can obtain other instrumental benefits such as control over the firm’s operations, legitimacy, image enhancement, or secure jobs” (Cennamo et al., 2012:1165). Thus, in the light of that framework, our study’s finding that instrumental SEW (control and influence over a family firm’s assets via the family CEO) has a negative impact
on firm financial performance should be interpreted with caution, since family principals in publicly listed companies may nonetheless derive other instrumental benefits that might well “justify” some loss in financial performance. We know, for instance, that perpetuating the family dynasty and securing transgenerational control through providing jobs for present and future family members is among the primary objectives (and benefits) of family principals (Zellweger et al., 2012). The scrutiny and pressure of the stock market represent a threat and obstacle to the realization of such objectives since financial analysts might pressure the firm CEO (through their evaluations) to prioritize only strategies and decisions that have direct financial impact. Having a family CEO at the helm of the organization may thus guarantee that SEW instrumental objectives other than financial performance will not be unattended.

The study also informs the more general research on the contingent factors affecting the relationship between the choice of CEO and performance (Beatty & Zajac, 1987; Datta & Rajagopalan, 1998; Miller, 1993). Our study gives support to Karaevli’s (2007) claim that contradictory results can be untangled if greater attention is devoted to the characteristics of the environments in which the firm operates. While most of this literature has considered the moderating role of the task environment, e.g., environmental munificence and turbulence (Tushman & Rosenkopf, 1996), we suggest that the characteristics of the institutional environment should be considered in order to better understand the relationship between choice of CEO and firm performance.

More importantly, this study can bring insight into the “bright” and “dark” sides of socioemotional wealth (Kellermanns, Eddleston, & Zellweger, 2012). While the literature on family firms “is full of normative assessments of the positive and negative aspects of family ownership” (Gomez-Mejia et al., 2011b: 699), our study goes beyond these alleged direct effects that are expected to work under all circumstances, and suggests that the “bright” and “dark” sides of socioemotional wealth, as assessed in terms of their performance impact, are
tied to different business contexts. The strategic behaviours associated with SEW preservation can facilitate a firm’s socialization into and adherence to the requirements of a context in which informal rules prevail, such as industrial districts. Quite the reverse is true for family firms operating in business contexts in which formal rules prevail, such as publicly listed firms. Here, the environment requires family firms to act transparently, imposing higher costs on family firms pursuing SEW preservation. Compared to non-family CEOs, family CEOs are more likely to lack the critical knowledge/competences and attributed authority and reputation they need to manage both the transparency requirements and the complexity – including multiple principal interests and the difficulty of raising funds.

At a more general level, our results support the call for more research on the heterogeneity among family firms (Melin & Nordqvist, 2007). Nonetheless, many interesting research avenues remain uncharted. First, future research may wish to explore other environmental contingencies – for example, the potential moderating effects of environmental dimensions that are relevant for innovation, such as environmental dynamism (Miller & Friesen, 1982). One might expect that the levels of renewal and change required to succeed in highly dynamic markets might not be achieved when the family firm is led by a family CEO and is embedded in a local network where all the other partners work to preserve existing structures and relationships.

Second, future research may wish to develop a measure that captures more precisely contextual activities devoted to the preservation of SEW, and directly relate those to performance effects. There is a need to explore the choices of family firms. Why do family firms located in industrial districts appoint non-family CEOs if this choice has a negative implication for their financial performance, and moreover will not help preserving SEW? Another important area to explore is the dynamics within the top management team.

---

5 Thanks to an anonymous reviewer for this suggestion
(TMT) – e.g., the extent to which the TMT is dominated by family and non-family members – and how these circumstances would impact on the relationship between SEW preservation and performance. There is also a need to improve the measurement of SEW. Although our proxy for SEW preservation is a valid approximation of SEW, especially when using archival panel data, future research could extend our work by developing and using psychometric instruments that can better grasp the SEW construct (Berrone et al., 2012). More in-depth, field research could also be useful to unravel the cognitive and social processes underlying SEW preservation in family firms.

Finally, the study could be replicated in other country settings. The empirical evidence we provide in favour of our hypotheses may not apply generally to other countries where industrial districts, for instance, are not as salient as in Italy. Nonetheless, we would like to stress that what matters is the theoretical concept advanced here rather than the specific application of the analysis. Future studies to explore additional contexts and contingencies will eventually build a more comprehensive and nuanced model of the performance implications of SEW-preserving strategies. This study represents a first step in that direction and has raised other interesting questions worthy of being explored. We leave such analysis for future work.

REFERENCES


---

**Table 1. Objectives Underlying the Preservation of SEW and Expected Behaviour of Family CEOs Pursuing Them**

<table>
<thead>
<tr>
<th>Objectives underlying the</th>
<th>Expected strategic behaviours</th>
</tr>
</thead>
</table>

---


<table>
<thead>
<tr>
<th><strong>preservation of SEW</strong></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Control:</strong> Keeping control and influence over the firm’s operations and ownership</td>
<td>Appointing relatives to key managerial, or otherwise strategic, positions (Chung &amp; Chan, 2012) Being reluctant to incorporate executives from outside (Schulze et al., 2003a), especially if they hold knowledge and expertise outside the experience of the family owners (Gomez-Meija et al., 2011a,b) Being reluctant to diversify (Berrone et al., 2010; Le Breton-Miller &amp; Miller, 2006) Assembling a board that supports the family’s decisions and preferences (Mustakallio, Autio, &amp; Zahra, 2002) Using control devices such as supervoting shares for the family (Bae, Kang, &amp; Kim, 2001) Postponing CEO succession as much as possible, and being reluctant to plan for succession (Miller, Le Breton-Miller, &amp; Lester, 2011; Sharma, Chrisman, &amp; Chua, 1997)</td>
</tr>
<tr>
<td><strong>Dynasty:</strong> Perpetuating the family dynasty, ensuring that the business is handed down to future generations</td>
<td>Appointing a relative to succeed, even if that person is less qualified (Cruz et al., 2012) Favouring, and at times even spoiling, employed family members from the younger generations (Lubatkin, Lane, &amp; Schulze, 2001; Lubatkin et al., 2005) Choosing long-term relationships over short-term transactions (Miller &amp; Le Breton-Miller, 2003a) Displaying longer-term planning horizons, committing to projects that will contribute to company performance only years hence (James, 1999; Le Breton-Miller &amp; Miller, 2006) Favouring long-term investments at the expense of short-term financial objectives (Gomez-Mejia et al. 2007) Setting a higher acceptable sale price for the business than do other equity holders (Zellweger &amp; Dehlen, 2011)</td>
</tr>
<tr>
<td><strong>Reputation:</strong> Sustaining family image and reputation, building social capital</td>
<td>Responsible employment practices (Zellweger et al., forthcoming), including o Paying employees (with the possible exception of top executives) better than non-family firms o Granting employees generous benefits, especially long-term ones such as pensions and health insurance (Le Breton-Miller &amp; Miller, 2006) o Engaging in fewer lay-offs (Miller &amp; Le Breton-Miller, 2003a) Developing and maintaining trusting relationships with suppliers, customers and support organizations (e.g., banks and community financial institutions) (Zellweger et al., forthcoming) Striving to be a trustworthy partner (Miller &amp; Le Breton-Miller, 2003a) Pursuing environmental actions (Berrone et al., 2010) Conforming to social norms (Fombrun &amp; Shanley, 1990) Supporting the local community, and building and maintaining goodwill in the community (Cennamo et al., 2012)</td>
</tr>
</tbody>
</table>
### Table 2. Fit between the Requirements of the Environment and Family CEO

<table>
<thead>
<tr>
<th>Environment</th>
<th>Conditions/key requirements</th>
<th>Preservation of SEW</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Control</td>
<td>Dynasty</td>
<td>Reputation</td>
<td></td>
</tr>
<tr>
<td><strong>Industrial districts</strong></td>
<td>Informal rules of conduct to coordinate activities</td>
<td>(+)</td>
<td>(+)</td>
<td>(+)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Trustworthy, long-term relationships</td>
<td>(+)</td>
<td>(+)/(-)</td>
<td>(+)</td>
<td></td>
</tr>
<tr>
<td><strong>Stock market</strong></td>
<td>Complexity (e.g., managing multiple principal interests and stakeholders’ demands)</td>
<td>(-)</td>
<td>(-)</td>
<td>(+)/(-)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Transparency</td>
<td>(-)</td>
<td>(-)</td>
<td>(+)/(-)</td>
<td></td>
</tr>
</tbody>
</table>

**Family CEO is an Asset**
- Better at committing the firm to the informal rules of the district
- Better at socializing the firm into the informal rules of the district
- More reluctant to infringe codes of conduct and violate moral codes

**Family CEO is a Liability**
- Higher need and demands for transparency
- Greater complexity from multiple, contrasting objectives
- Greater difficulty in raising funds from financial investors
- Lower level of trust in TMT, lower attributed authority and reputation
- Greater difficulty in balancing stakeholders’ demands and implementing firm strategies
- Higher governance costs

Note: Sign indicates a fit (+) or misfit (-) between the environmental condition and the expected behaviours of family CEOs associated with each objective.
### Table 3. Correlation Statistics

<table>
<thead>
<tr>
<th></th>
<th>Mean</th>
<th>St.Dev.</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
<th>11</th>
<th>12</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. $\text{ROS}(t+1)$</td>
<td>4.4</td>
<td>6</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. $\text{CEO}_\text{fam}$</td>
<td>0.8</td>
<td>0.4</td>
<td>0.04</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. $\text{CEO}<em>\text{fam}</em>{\text{district}}^{**}$</td>
<td>0.02</td>
<td>0.2</td>
<td>0.03</td>
<td>-0.23</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. $\text{CEO}<em>\text{fam}</em>{\text{listed}}^{**}$</td>
<td>-0.01</td>
<td>0.1</td>
<td>-0.06</td>
<td>0.16</td>
<td>-0.13</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. $\text{District}$</td>
<td>0.3</td>
<td>0.5</td>
<td>0.02</td>
<td>0.12</td>
<td>0.12</td>
<td>0.06</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. $\text{Listed}$</td>
<td>0.04</td>
<td>0.2</td>
<td>0.08</td>
<td>-0.15</td>
<td>0.11</td>
<td>-0.51</td>
<td>-0.05</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. $\text{Founder}$</td>
<td>0.3</td>
<td>0.5</td>
<td>0</td>
<td>0.33</td>
<td>-0.04</td>
<td>0.04</td>
<td>0.1</td>
<td>-0.09</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8. $# \text{Employees}$</td>
<td>514</td>
<td>1475</td>
<td>0.09</td>
<td>-0.13</td>
<td>0.09</td>
<td>-0.18</td>
<td>-0.05</td>
<td>0.38</td>
<td>-0.1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9. $\text{Long-term debt}$</td>
<td>0.15</td>
<td>0.16</td>
<td>0.15</td>
<td>0.01</td>
<td>0.01</td>
<td>-0.07</td>
<td>-0.01</td>
<td>0.17</td>
<td>-0.03</td>
<td>0.16</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10. $\text{Liquidity ratio}$</td>
<td>0.96</td>
<td>0.64</td>
<td>0.26</td>
<td>-0.01</td>
<td>0.02</td>
<td>-0.05</td>
<td>-0.01</td>
<td>0.13</td>
<td>-0.03</td>
<td>0.02</td>
<td>0.1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11. $\text{Firm age}$</td>
<td>23.72</td>
<td>16.69</td>
<td>0.09</td>
<td>-0.03</td>
<td>0.04</td>
<td>-0.02</td>
<td>-0.01</td>
<td>0.14</td>
<td>-0.32</td>
<td>0.19</td>
<td>0.06</td>
<td>0.09</td>
<td></td>
<td></td>
</tr>
<tr>
<td>12. $\text{CEO age}$</td>
<td>55.75</td>
<td>12.48</td>
<td>0.06</td>
<td>0.03</td>
<td>-0.01</td>
<td>0.01</td>
<td>0.05</td>
<td>-0.02</td>
<td>0.14</td>
<td>0.03</td>
<td>0.06</td>
<td>0.09</td>
<td>0.2</td>
<td></td>
</tr>
<tr>
<td>13. $\text{CEO tenure}$</td>
<td>10</td>
<td>7.58</td>
<td>0.05</td>
<td>0.24</td>
<td>-0.04</td>
<td>0.05</td>
<td>0.11</td>
<td>-0.08</td>
<td>0.26</td>
<td>-0.05</td>
<td>0</td>
<td>0.04</td>
<td>0.3</td>
<td>0.4</td>
</tr>
</tbody>
</table>

Note: Absolute correlations greater than or equal to .03 are significant at p < .01.

**Mean-centred variable
Table 4. Fixed-effects Estimation of Effect of Family vs. Non-family CEO on Firm Performance

<table>
<thead>
<tr>
<th>Variable</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>CEOfam_district</td>
<td>1.13**</td>
<td>1.03**</td>
<td>1.03*</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(0.38)</td>
<td>(0.38)</td>
<td>(0.43)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CEOfam_listed</td>
<td></td>
<td>-2.55**</td>
<td>-2.41**</td>
<td>-2.41**</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>(0.68)</td>
<td>(0.68)</td>
<td>(0.78)</td>
<td></td>
</tr>
<tr>
<td>CEOfam</td>
<td>0.72**</td>
<td>0.84**</td>
<td>0.78**</td>
<td>0.88**</td>
<td>0.88**</td>
</tr>
<tr>
<td></td>
<td>(0.17)</td>
<td>(0.18)</td>
<td>(0.17)</td>
<td>(0.18)</td>
<td>(0.2)</td>
</tr>
<tr>
<td>District</td>
<td>-0.02</td>
<td>-0.09</td>
<td>-0.01</td>
<td>-0.07</td>
<td>-0.07</td>
</tr>
<tr>
<td></td>
<td>(0.14)</td>
<td>(0.14)</td>
<td>(0.14)</td>
<td>(0.14)</td>
<td>(0.16)</td>
</tr>
<tr>
<td>Listed</td>
<td>0.32</td>
<td>0.26</td>
<td>-0.42</td>
<td>-0.44</td>
<td>-0.44</td>
</tr>
<tr>
<td></td>
<td>(0.37)</td>
<td>(0.37)</td>
<td>(0.42)</td>
<td>(0.42)</td>
<td>(0.48)</td>
</tr>
<tr>
<td>Founder</td>
<td>0.13</td>
<td>0.11</td>
<td>0.13</td>
<td>0.11</td>
<td>0.11</td>
</tr>
<tr>
<td></td>
<td>(0.16)</td>
<td>(0.16)</td>
<td>(0.16)</td>
<td>(0.16)</td>
<td>(0.19)</td>
</tr>
<tr>
<td># Employees*</td>
<td>0.02**</td>
<td>0.02**</td>
<td>0.02**</td>
<td>0.02**</td>
<td>0.02**</td>
</tr>
<tr>
<td></td>
<td>(0.00)</td>
<td>(0.00)</td>
<td>(0.00)</td>
<td>(0.00)</td>
<td>(0.00)</td>
</tr>
<tr>
<td>Long-term debt</td>
<td>2.73**</td>
<td>2.73**</td>
<td>2.74**</td>
<td>2.74**</td>
<td>2.74**</td>
</tr>
<tr>
<td></td>
<td>(0.41)</td>
<td>(0.41)</td>
<td>(0.41)</td>
<td>(0.41)</td>
<td>(0.46)</td>
</tr>
<tr>
<td>Liquidity ratio</td>
<td>2.13**</td>
<td>2.13**</td>
<td>2.13**</td>
<td>2.13**</td>
<td>2.13**</td>
</tr>
<tr>
<td></td>
<td>(0.1)</td>
<td>(0.1)</td>
<td>(0.1)</td>
<td>(0.1)</td>
<td>(0.11)</td>
</tr>
<tr>
<td>Firm age</td>
<td>0.01*</td>
<td>0.01*</td>
<td>0.01*</td>
<td>0.01*</td>
<td>0.01*</td>
</tr>
<tr>
<td></td>
<td>(0.00)</td>
<td>(0.00)</td>
<td>(0.00)</td>
<td>(0.00)</td>
<td>(0.01)</td>
</tr>
<tr>
<td>CEO age</td>
<td>0.01</td>
<td>0.01</td>
<td>0.01</td>
<td>0.01</td>
<td>0.01</td>
</tr>
<tr>
<td></td>
<td>(0.01)</td>
<td>(0.01)</td>
<td>(0.01)</td>
<td>(0.01)</td>
<td>(0.01)</td>
</tr>
<tr>
<td>CEO firm tenure</td>
<td>0.01</td>
<td>0.01</td>
<td>0.01</td>
<td>0.01</td>
<td>0.01</td>
</tr>
<tr>
<td></td>
<td>(0.01)</td>
<td>(0.01)</td>
<td>(0.01)</td>
<td>(0.01)</td>
<td>(0.01)</td>
</tr>
<tr>
<td>Industry dummies</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Firm-year fixed effects</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>N obs</td>
<td>8064</td>
<td>8064</td>
<td>8064</td>
<td>8064</td>
<td>8064</td>
</tr>
<tr>
<td>R²</td>
<td>0.11</td>
<td>0.13</td>
<td>0.13</td>
<td>0.14</td>
<td>0.14</td>
</tr>
<tr>
<td>F-stats</td>
<td>34</td>
<td>33</td>
<td>33</td>
<td>32</td>
<td>24</td>
</tr>
</tbody>
</table>

Note: ** significant at 1%; * significant at 5%; + significant at 10%. ** Number of firms = 1008. Standard errors in parentheses. Model (5) reports results with errors robust to arbitrary autocorrelation. Coefficients of # Employees have been multiplied by a factor of 100 for presentation purposes.