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Local institutions and the productivity of family and non-family firms: Evidence from the Italian manufacturing industry

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ABSTRACT

Empirical studies comparing productivity between family and non-family firms have produced contradictory results, which traditional managerial theories have struggled to explain. To address this research gap, we employ a context-theorizing approach to explore whether the quality of local institutions and place connections influence the productivity of family firms vis-à-vis their non-family counterparts. We develop a theoretical model that integrates corruption-trust theory and place attachment theory to examine the impact of the local context on both family and non-family firms. Our findings, based on a sample of Italian manufacturing firms, reveal that family firms are more productive than non-family counterparts in low-quality institutional contexts. However, this advantage diminishes as the quality of local institutions improves. Contrary to expectations, place attachment is negatively associated with productivity on average. This negative association is concentrated among non-family firms, whereas family firms appear largely unaffected. For family firms, the impact of place attachment is contingent on institutional quality. In low-quality institutional environments, place attachment further reduces the productivity of family firms, suggesting a lock-in effect. In contrast, in high-quality institutional contexts, place attachment becomes a source of productivity advantage for family firms.

1. Introduction

Are family firms more productive than non-family firms? Existing empirical evidence comparing the productivity of family versus non-family firms shows mixed and contradictory results. While some studies highlight stewardship advantages that enhance productivity (Martikainen et al., 2009), others emphasize agency issues that cause inefficiencies (Barth et al., 2005), leading to inconclusive empirical results (Creemers et al., 2022). Following Amato, Basco, and Lattanzi (2022), we argue that these discrepancies arise because existing theories overlook the role of context-specific contingencies. This challenges the validity of traditional theories, which are typically developed within organizational boundaries and often neglect contextual influences (Johns, 2001, 2006). In other words, the debate on the productivity of family firms has been largely "contextless."

While family business scholars have begun incorporating context in their research, regional studies highlight that the local operating context plays a crucial role in shaping firms productivity (Aiello et al., 2014). Context influences productivity through two main channels. First, the quality of local institutions – encompassing the effectiveness, transparency, and enforcement of formal rules governing economic and social interactions within a given territory – serves as an external driver of firm productivity (Ganau & Rodríguez-Pose, 2019). Second, managerial rootedness in local communities, commonly conceptualized as place attachment (Ren et al., 2021), shapes how firms interact with their institutional environment. However, regional studies have yet to explore how family firms respond to different local institutional environments and managerial rootedness at local level compared to their non-family counterparts. By treating firms as homogeneous economic actors, regional studies fail to account for how firms' characteristics influence adaption strategies, resource allocation, and competitive advantages, potentially leading to different levels of productivity (Agostino et al., 2020).

Family business scholars have often overlooked the role of context in their research, just as regional research scholars have underestimated the importance of the family dimension. Our study, aligning with the ongoing debate (Basco et al., 2021; Stough et al., 2015), bridges these two gaps. We investigate whether a firm's operating context – the

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quality of local institutions and place attachment – affects the productivity of family firms differently to non-family counterparts. Drawing on corruption-trust theory (Rothstein, 2013) and place attachment theory (Hidalgo & Hernandez, 2001), this study examines how the quality of local institutional and managerial rootedness moderates the productivity of family firms compared to non-family firms. We hypothesize that in low-quality institutional contexts, family firms benefit from particularized trust (Uslaner, 2002), which serves as a substitute for formal institutions, facilitating economic relationships. This effect is reinforced by place attachment (Ren et al., 2021), where a double layer of trust – within the firm and with the local community – reduces uncertainty and facilitates resource coordination (Soleimanof et al., 2018).

To test our hypotheses, we employed a multilevel approach to account for the nested structure of the data – with firms nested within locations – using a sample of Italian manufacturing firms. Italy serves as an ideal research setting for three key reasons. First, family firms represent the backbone of the Italian entrepreneurial fabric (Cucculelli & Storai, 2015). Second, Italy exhibits significant institutional disparity across regions (Felice, 2018), rooted in historical patterns that have contributed to enduring territorial imbalances and regional development patterns (Federici et al., 2022). Third, Italy has witnessed a consistent decline in productivity since the mid-1990s, particularly in comparison to the other eurozone countries (Calligaris et al., 2016). Our findings reveal that, on average, family firms outperform non-family firms, and that the quality of local institutions is positively associated with productivity. However, the productivity advantages of family firms are contingent upon the quality of local institutions. Family firms exhibit higher productivity levels in low-quality institutional contexts, yet this advantage diminishes as the quality of local institutions improves. Furthermore, we find that place attachment negatively influences the productivity of both family and non-family firms in low-quality institutional contexts, with the effect particularly pronounced for family firms, consistent with a lock-in effect arising from excessive reliance on place connections. However, as the quality of local institutions improves, the negative impact of place attachment diminishes and eventually turns positive.

Our study contributes to the family business productivity debate (Amato et al., 2023) by highlighting the role of context, particularly how local institutions affect the productivity of family firms versus non-family firms (Adjei et al., 2025; Soleimanof et al., 2018). By adopting a context-theorizing approach (Krueger et al., 2021), consistent with Johns (2006), this study challenges traditional firm-level theories such as stewardship theory and agency theory. In doing so, it reconciles conflicting productivity findings (e.g., Creemers et al., 2022; Neckebrouck et al., 2018), by highlighting the need to account for contextual influences. Additionally, we extend regional studies by examining the uneven impact of local institutions on firm productivity (Agostino et al., 2020; Ganau & Rodríguez-Pose, 2019), which depends on firm type (i.e., family versus non-family). In so doing, our study underscores the need for regional research to move beyond the one-size-fits-all perspective by explicitly considering family firms in the investigation of institutional quality-productivity relationships. Furthermore, this paper highlights the fact that the firms' heterogeneous responses to institutional quality are also shaped by place attachment, thereby recognizing its ambivalent role in determining the productivity of family firms. Specifically, we provide empirical evidence of intra-organizational lock-in (Boschma, 2005) among family firms operating in low-quality institutional contexts. Strong local entrenchment within close networks hinders family firms' ability to seize opportunities, acquire knowledge, and access resources, ultimately reducing productivity.

2. Theory and hypotheses development

2.1. A review of family firms and productivity

Studies on the relationship between family firms and firm productivity has produced mixed empirical results. Some argue that family firms exhibit higher productivity than non-family firms due to stronger commitment, long-term orientation, and efficient resource allocation (Martikainen et al., 2009; McConaughy et al., 1998). Others suggest that family involvement hinders productivity through nepotism, constrained managerial talent, and inefficient decision-making (Amato, et al., 2021; Creemers et al., 2022; Neckebrouck et al., 2018).

These divergent findings stem from two contrasting theoretical perspectives, stewardship theory and agency theory (Le Breton-Miller & Miller, 2009), both of which are governance-based frameworks (Chrisman et al., 2024) that seek to explain the internal dynamics of family firms and their consequences for performance, in this case, productivity.

According to stewardship theory (Davis et al., 1997), which is grounded in the belief that individuals are driven by non-economic goals and organization-centered outcomes (Davis, 2024), family members perceive the firm as an extension of their identity and demonstrate a strong commitment to its success and continuity (Cucculelli et al., 2014). Their long-term focus fosters a stable and trust-based work environment, which enhances communication and employee engagement (Miller et al., 2008). Family firms often promote a culture of shared values, where both family and non-family employees feel included and motivated to contribute (Karra et al., 2006; Llach et al., 2023). When employees believe their efforts are valued and that management prioritizes their well-being, they are more likely to show commitment, leading to enhanced productivity (Christensen-Salem et al., 2021; Neckebrouck et al., 2018).

In contrast, agency theory (Jensen & Meckling, 1976), which is grounded in the assumption that individuals are self-serving (Corbetta & Salvato, 2004), emphasizes the risks associated with family control, suggesting that family members may prioritize personal interests – such as securing employment for relatives – over overall performance (Le Breton-Miller et al., 2011). This preferential treatment can undermine meritocracy, limit career prospects for non-family employees and reduce the overall talent pool (Barth et al., 2005; Chrisman et al., 2017). Frustration from perceived favoritism can weaken employee motivation and foster disengagement (Hu et al., 2018). In addition, asymmetric information may hinder performance evaluation, allowing for opportunistic behaviors that negatively impact productivity (Chua et al., 2009; Neckebrouck et al., 2018).

Given these opposing arguments, the effect of family involvement on firm productivity remains ambiguous, leading to the following competing hypotheses:

Hypothesis 1a. *Family firms are more productive than their non-family counterparts*.

Hypothesis 1b. *Family firms are less productive than their non-family counterparts*.

While much of the literature on family firm productivity has focused on the internal dynamics, the role of the context remains largely unexplored. Firms operate within broader institutional contexts that shape their ability to acquire and utilize resources efficiently (Fazio & Piacentino, 2010). These contextual factors can either amplify or limit the effect of family involvement, influencing productivity (Amato, et al., 2021). Understanding how family firms interact and respond to environmental constraints and opportunities is important for a more comprehensive assessment of their productivity.

2.2. The contingent effect of the local institutional context

Context refers to the "circumstances, conditions, situations, and environments that are external to the respective phenomenon and enable or constrain it" (Welter, 2011, p. 167). In business research, focusing on "where" a firm operates is crucial, as spatially bounded opportunities and constraints affect business operations (Johns, 2006). Context can explain unexpected findings, as it shapes the relationships between variables and influences the probability that theoretical predictions hold (Johns, 2001).

Among the various contextual factors, institutional quality plays a key role. Defined as "the rules of the game in a society" (North, 1990, p. 477), institutions establish structures, norms, and practices that regulate interactions, ensuring stability and societal functioning (Rodríguez-Pose, 2020). "Good" local institutions foster fairness, transparency, and the protection of property rights, thereby creating a reliable and predictable environment for business activities (Rodríguez-Pose, 2013). Notably, strong local institutions enhance firms' ability to acquire, allocate, and utilize resources efficiently (Sobel, 2008).

A well-functioning local institutional environment can boost productivity through three key mechanisms. First, by reducing transaction costs: clear legal and regulatory frameworks reduce the costs of monitoring and enforcing agreements, facilitate compliance, and provide efficient dispute resolution mechanisms (Baccini, 2014; Levchenko, 2007). They also mitigate information asymmetry by enforcing transparency and timely disclosure (Nguyen et al., 2018). Second, good local institutions foster trust among economic actors by allowing firms to engage in transactions without excessive contractual safeguards (Agostino et al., 2020; Nguyen et al., 2018), enhancing knowledge spillovers and collaboration (Rodríguez-Pose & Zhang, 2020). Trust-driven interactions incentivize innovation and technology adoption, helping firms converge towards higher productivity levels (Chevalier et al., 2012). Third, good local institutions enhance market competition. A well-enforced regulatory framework ensures a level playing field, preventing monopolistic practices and encouraging merit-based competition (Ganau & Rodríguez-Pose, 2019). This competitive pressure drives firms to improve efficiency, so that only the most productive ones to can thrive (Agostino et al., 2020).

Empirical evidence, therefore, suggests a positive association between institutional quality and firm productivity (Agostino et al., 2020; Ganau & Rodríguez-Pose, 2019; Lasagni et al., 2015). Key institutional drivers include the quality and enforcement of the legal framework (Agostino et al., 2020) and the effectiveness of local government (Ganau & Rodríguez-Pose, 2019). Building on this theoretical reasoning and empirical evidence, we propose the following hypothesis:

Hypothesis 2. *The quality of local institutions is positively related to firm productivity*.

2.3. Family and non-family firm productivity gap: The moderating effect of local institutions

Institutional quality shapes social interactions and influences expectations of fairness, affecting individuals' willingness to engage in cooperative behaviors (Rothstein & Uslaner, 2005). According to corruption-trust theory (Rothstein, 2013), people develop expectations about societal trustworthiness and moral conduct based on their observations of public officials' behavior (Charron & Rothstein, 2014). Specifically, two kinds of trust may emerge. Generalized trust, which extends to society at large and develops in government institutions that are impartial and uncorrupted (Freitag & Bühlmann, 2009) and particularized trust, which is limited to close personal networks (Uslaner, 2002).

In low-quality institutional contexts, weak law enforcement and ineffective public policies make close-knit relationships particularly important (Rodríguez-Pose, 2013). In such environments, family firms may gain a productivity advantage over their non-family counterparts through several mechanisms. First, weak formal institutions encourage family firms to strengthen intra-family bonds and cultivate close ties with a narrow circle of stakeholders (Gomez-Mejia et al., 2024; Herrero, 2018). This reliance on particularized trust enhances internal cohesion, helping family firms navigate uncertainty (Uslaner, 2002). Strong personal relationships based on trust and mutual interest create a sense of shared responsibility, aligning family members' goals and efforts (Mahto et al., 2020). This alignment encourages cooperation (Nahapiet & Ghoshal, 1998) and strengthens the family's commitment to the firm's success (Le Breton-Miller et al., 2011).

Second, stability and long-term orientation enable family firms to operate more effectively in uncertain environments (Canale et al., 2024). Their tendency to prioritize stability over short-term gains (Lumpkin et al., 2010) helps them anticipate and respond to environmental uncertainties proactively (Soleimanof et al., 2018). At the same time, the generally cautious and risk-averse approach of family firms can be advantageous in unpredictable institutional settings (Seyed Kalali, 2022). Third, flexibility and adaptability further strengthen the productivity advantage of family firms in weak institutional environments. A lower degree of centralization and formalization in decision-making allows family firms to adjust quickly to regulatory shifts (Hatum & Pettigrew, 2006), helping them mitigate institutional deficiencies and grasp emerging opportunities (Salvato & Melin, 2008). These advantages extend beyond the family itself. Strong trust-based relationships with non-family employees foster loyalty, commitment, and cooperation (Miller et al., 2008; Wolff et al., 2024), aligning their interests with those of the firm (Llach et al., 2023). Trust promotes open communication and reduces conflicts, while greater job security and flexibility (Sraer & Thesmar, 2007) can lower recruitment risks and enhance labor productivity (Christensen-Salem et al., 2021).

However, as institutional quality improves, reliance on personal ties and informal governance becomes less crucial. Stronger local institutions provide formal safeguards that reduce uncertainty and facilitate interactions (Rothstein, 2013), thereby diminishing the relative advantage of family firms in such settings. Thus, we propose the following hypothesis:

Hypothesis 3. *Family firms exhibit higher productivity than non-family firms in low-quality institutional contexts. As the quality of local institutions improves, the productivity gap narrows*.

2.4. The role of place attachment

Economic activity unfolds within socially constructed, culturally marked, and institutionally regulated spatial contexts (Capello, 2019). Through long-term interactions within a specific context, individuals develop a deep connection to place, shaping their identity and sense of belonging to a community rooted in a shared history, memories, and practices (Manzo, 2005; Raymond et al., 2010). Physical proximity fosters the continuity of social relationships within and for the place (Banini, 2017), making place attachment a localized phenomenon (Hinojosa et al., 2016). Factors such as length of residence, social ties, and local history reinforce a sense of continuity, strengthening place attachment (Lewicka, 2008). Furthermore, people-place connections intensify when individuals work within or rely on a local resources (Cheshire et al., 2013), emphasizing the economic dimension of place attachment stemming from home and workplace co-location (Ren et al., 2021).

From an organizational perspective, place attachment plays an economically crucial role, particularly for individuals in managerial positions. Operating on the premise that firms are not isolated entities but are intricately connected to the place where they are located (Oinas, 1997), managers' place bonds can enhance the interplay between the firm and the immediate surroundings (Smith, 2016). This effect is even more pronounced when the manager's hometown coincides with the firm's headquarters (Ren et al., 2021), as the overlap between home and workplace strengthens the firm's local integration (Hess, 2004). In such

cases, where personal and professional spheres merge, firms become deeply interwoven with the local environment (Muñoz & Kimmitt, 2019).

Firms may benefit from a local manager, as familiarity with place-specific norms, values, and business practices fosters implicit understanding and alignment with local stakeholders (Balland et al., 2015). This cultural familiarity enhances interaction with business partners, improving operational efficiency (Boschma, 2005). The feeling of belonging to the place and similarity with local actors may result in embedded ties encompassing the following characteristics: trust, which reduces the risk of opportunistic behaviors (Boschma, 2005); the mutual transfer of fine-grained and tacit information, which increases effective inter-firm coordination (Uzzi, 1999); joint problem-solving arrangements, facilitating flexible and efficient dispute resolution (Uzzi, 1997).

A local manager may also facilitate access to spatially bounded resources such as localized knowledge and information, business opportunities, and networks available through informal ties and personal connections (Kalantaridis & Bika, 2006). Shared values and trust-based relationships further enable firms to capitalize on these local advantages, fostering productivity gains (Córcoles-Muñoz et al., 2020). Finally, the fact of belonging to the same place can help managers leverage community support (Steiner & Atterton, 2015), as well as enhance their self-efficacy, proactivity, and risk-taking due to the familiarity with the immediate surroundings (Ren et al., 2021). Thus, based on the above reasons, we propose the following hypothesis:

Hypothesis 4. *Place attachment is positively related to firm productivity*.

2.5. Family firms and the contingent effect of place attachment

The impact of a local manager on business productivity may depend on the type of firm. In family firms, a local manager is uniquely positioned to understand and uphold cultural elements, fostering alignment between the family, the organization, and the local milieu (Soleimanof et al., 2018). This cultural alignment makes family firms more attuned to the local community, facilitating contacts, improving bargaining capacity, and attracting favorable conditions for the firm (Pallares-Barbera et al., 2004).

A local manager strengthens social bonding within family firms, where personal and professional relationships are deeply intertwined (Salvato & Melin, 2008). By leveraging existing local connections, a local manager enhances the firm's embeddedness within localized networks, facilitating access to valuable information and business opportunities (Hess, 2004). Deeper local integration allows family firms to better identify and utilize valuable resources within their immediate surroundings (Kalantaridis & Bika, 2006).

The socio-spatial dimension of location further reinforces the firm's long-term presence and identity. Family firms are deeply embedded in their local environment, not only in economic terms but also through the preservation and enhancement of non-economic utilities (Naldi et al., 2013). Prioritizing long-term orientation and legacy in decision-making strengthens their competitive advantages over non-family firms (Moreno-Menéndez & Casillas, 2021). Beyond strengthening the firm's functional and symbolic ties to its surroundings (Amato & Patuelli, 2023), a local manager can play a role in implementing strategies that prioritize stability, continuity, and engagement with the local community, where both the family and the firm reside (Berrone et al., 2010). Consequently, family firms may benefit uniquely from local community support (Amato & Patuelli, 2023).

Finally, the family firms' strategic flexibility – enabled by informality, collaborative dialog, and convergence towards the business goals among family members – allows family firms to adapt quickly to changing conditions (Zahra et al., 2008). A local manager who is deeply ingrained in the local dynamics (e.g., industrial, technological, market, normative) is better positioned to identify emerging trends and opportunities, enhancing the firm's agility and responsiveness (Casillas et al., 2011). Moreover, shared values, language, and knowledge between the family and the local manager streamline communication, enabling faster decision-making and resource orchestration (Chirico et al., 2011). Based on the above theoretical arguments, therefore, we propose the following hypothesis:

Hypothesis 5. *The positive influence of place attachment on firm productivity is stronger for family firms than for their non-family counterparts*.

2.6. Family firms, local institutions, and place attachment

While both institutional quality and place attachment positively affect productivity, their effects may be particularly complementary in family firms operating in low-quality institutional environments. In such cases, place attachment compensates for institutional deficiencies by fostering trust-based relationships, reducing uncertainty, and strengthening local ties, all of which amplify productivity advantages for family firms (Canale et al., 2024). Specifically, a double layer of particularized trust is likely to emerge. The first layer of trust develops between family members and non-family employees (Damiani et al., 2018; Wolff et al., 2024). In weak institutional contexts, employees increasingly rely on trust-based and reciprocal relationships to feel secure and reduce uncertainty. By aligning the goals and aspirations of non-family employees with those of the family (Llach et al., 2023), a local manager – who represents the family outwardly – can further foster a "culture of commitment to the business around which the family can build an enduring relationship with its employees" (Neckebrouck et al., 2018, p. 555). This supportive work environment, reinforced by implicit labor contracts (Bassanini et al., 2013), the perception that the organization cares (Creemers et al., 2022), and psychological ownership (Neckebrouck et al., 2018), enhances non-family employees' loyalty, dedication, and work efforts (Damiani et al., 2018; Wolff et al., 2024), which help the firm navigate uncertainty (Canale et al., 2024).

The second layer of particularized trust connects the family firm to the local community and is further reinforced by a local manager (Amato & Patuelli, 2023). A local manager's place identity merges with the family's (Baù et al., 2019), imbuing relationships with individuals involved in the economic exchanges with group identification, closeness, and a sense of personal obligation (Lähdesmäki et al., 2019), fostering the firm's links with the local environment (Smith, 2016). While geographical proximity enables face-to-face interactions (Kesidou & Romijn, 2008), trust-based and reciprocal relationships ease the exchange of localized knowledge and information, and the identification of business opportunities that may otherwise be difficult to access (Boschma, 2005). Both family members and the local manager can mobilize their own close contacts to this end (Salvato & Melin, 2008). The feeling of togetherness and similarity shared by both family members and the local manager with local actors (e.g., suppliers) reduces uncertainty, coordination problems, and, ultimately, transaction costs, easing business operations (Uzzi, 1999). Additionally, given the inefficiencies in labor markets within weak institutional contexts (Rodríguez-Pose, 2013), family members and the local manager may be in the position to rely on informal recruitment through personal networks, mitigating information asymmetry (Dariel et al., 2021). Informal hiring also lowers labor search and matching costs (Andini et al., 2013) while securing the best locally available talent (Adams et al., 2000).

Based on the above arguments, place attachment provides a strategic advantage in low-quality institutional settings, amplifying the benefits of family firms. Thus, we posit the following hypothesis:

Hypothesis 6. *Place attachment is a source of productivity advantages in low-quality institutional contexts, but the benefits are even greater for family firms*.

3. Methods

3.1. Data

To run the empirical analysis, we drew data from several sources. Financial statement data and information on the firm's ownership and governance were collected from AIDA-Bureau Van Dijk.[1] Data on the number of patents filed by the firm were collected from Orbis Intellectual Properties (OIP) database. Information on firms' location in inner areas and industrial districts were retrieved from Istat.[2]

As a measure of institutional quality, we employed the Institutional Quality Index (IQI[3]) proposed by Nifo and Vecchione (2014). The IQI incorporates five major characteristics that qualify the local institutional system, namely: voice and accountability, government effectiveness, regulatory quality, rule of law, and control of corruption.[4]

For the analysis, we collected data on Italian manufacturing[5] firms. The Italian manufacturing system, characterized by the significant presence of family firms (Cucculelli & Storai, 2015), stands out as one of the main drivers of the country's economy. Manufacturing, often rooted in traditions and expertise, still plays a substantial role in local economies and contributes to Italy's competitiveness on the global stage (OECD, 2023). In comparative terms, the Italian manufacturing sector ranked seventh in the world for value added and second for export competitiveness in 2019.[6] Still, the peculiar distribution of Italian businesses gathered in industrial districts provides a good opportunity to explore firms' connections to the community and the place (Becattini, 2004).

After cleaning our data of anomalies and outliers[7] and excluding missing observations in our key variables, we ended up with an estimation sample of 90,808 firms.

3.2. Dependent and main explanatory variables

Our dependent variable is labor productivity (*Productivity*) which has been widely used to investigate the effects of location on firm performance (Raspe & van Oort, 2011; Van Oort et al., 2012). Consistently with previous empirical works, productivity was computed as firm value added per employee (Damiani et al., 2018; Neckebrouck et al., 2018; Sraer & Thesmar, 2007).

To identify family firms, we codified a variable to capture the involvement of related individuals in the ownership and governance – board of directors (BoD) and/or Top Management Team (TMT) – of the firm. Firm-level governance-composition data and information on the company's global ultimate owner (GUO) are retrieved from the AIDA (Bureau Van Dijk) database. The ultimate owner of the company is the entity holding the highest direct or total percentage of ownership, which is at least 50.01%. We codified a dummy variable named *Family firm* that takes value 1 if both of the following conditions are met: (a) the firm declares "one or more named individuals or families" as the global ultimate owner[8] (Cucculelli & Peruzzi, 2020; Cucculelli & Storai, 2015), and (b) at least two members of the firm's governance, whether they sit in the BoD and/or TMT, share the same surname, 0 otherwise. Firms with missing GUO data are classified as family firms if 20% or more of individuals in the governance share the same surname (Neckebrouck et al., 2018). Then we tested the robustness of our results by increasing the threshold to 33.3% and 50.1% (at least one third and more than one half of governance members respectively).[9]

Our definition of family firms is based on the principles of the so-called demographic approach (Basco, 2013), according to which the family's involvement in the firm, as discerned from observable demographic characteristics, is a sufficient condition for assessing its potential influence on performance (Mazzi, 2011). The approach relies on the assumption that the involvement of family members in the firm is a proxy of family business behavior, resources, and capabilities that are not easily observable.[10] Hence, the presence of the family in the ownership and governance of the firm should be enough to infer that the family exerts an influence on the firm.

To test the moderating effect of the local institutional context, we employed the Nifo and Vecchione (2014) Institutional Quality Index (IQI) and exploited the IQI variability across Italian NUTS3 regions (provinces).[11] To lessen potential endogeneity issues, we employed IQI values in 2018 (further details are provided in paragraph 3.4).

Finally, we codified a dummy variable (*Place attachment*) capturing the managers' place connections to the local operating context. The binary regressor takes the value 1 if at least one component of the top management team was born in the same municipality where the firm has the headquarters, 0 otherwise. The measure of managers' hometown and firm's headquarter co-location is based on the approach by Ren et al. (2021).

3.3. Control variables

Based on prior research, we controlled for several potential drivers of labor productivity. In line with previous studies, firms size is measured as the natural logarithm of the number of employees in the set of controls (*Employees*) (e.g., Chrisman et al., 2017; Classen et al., 2014; Neckebrouck et al., 2018). The age of the firm is expected to affect business operations and performance as it implies experience and drives strategic and organizational behaviors (Acemoglu et al., 2007; Cucculelli et al., 2014; Sørensen & Stuart, 2000). Hence, we included a regressor counting the number of years since the firm's foundation (*Age*). We controlled for the intensity of physical capital (*Physical capital intensity*) measured as the logarithm of physical assets per employee (Cucculelli et al., 2014; Damiani et al., 2018). We used the equity-to-debt[12] ratio (*Leverage*) to account for firms' financial structure and the ratio between liquid assets and current liabilities

[1] The database provides information on the population of Italian private companies that are required to disclose their financial information. For further information see https://www.bvdinfo.com/en-gb/.

[2] The Italian National Institute of Statistics.

[3] Further information on the Institutional Quality Index can be retrieved at https://sites.google.com/site/institutionalqualityindex/home?authuser=0.

[4] Refer to the Supplementary Material for additional details and a description of the institutional dimensions covered by the index.

[5] Firms' activities are labeled according to the NACE Rev. 2 classification, the European standard classification of productive economic activities. All observations in our sample fall under NACE Rev. 2 Section C, which encompasses manufacturing activities. The NACE Rev. 2 C Section groups 2-digit codes ranging from 10 to 33. For further information, please see https://ec.europa.eu/eurostat/documents/3859598/5902521/KS-RA-07-015-EN.PDF.

[6] From a note published by Confindustria, the main association representing manufacturing and service companies in Italy. Please, refer to https://www.confindustria.it/home/centro-studi/temi-di-ricerca/tendenze-delle-imprese-e-dei-sistemi-industriali/dettaglio/Italian-Industry-and-Productivity.

[7] For details on the data cleaning procedure, please see the Supplementary Material.

[8] Bureau Van Dijk classifies a company's global ultimate owner into several categories or types. A categorical variable is provided to indicate whether the ultimate owner of the company is a bank, financial company, industrial company, a public authority or government, one or more named individuals or families among the several possibilities.

[9] Please, refer to Section 4.3 for additional details.

[10] The upper echelon (Hambrick & Mason, 1984) and the family embeddedness (Aldrich & Cliff, 2003) perspectives provide a theoretical foundation for the approach, suggesting that family members in top management roles can shape business strategies following the set of norms and values the family identifies with (Basco, 2013). This imbues the business with a family orientation that affects organizational outcomes.

[11] The Institutional Quality Index is provided both at NUTS2 (regional) and NUTS3 (provincial) levels, however, we chose to exploit the finest spatial scale available (NUTS3 regions) in our main econometric analysis.

[12] With debt we mean the sum of current and long-term liabilities.

Table 1
Variable description.

Variable	Description
Dependent variable	
Productivity	Natural logarithm of value added per employee.
Independent variables	
Family firm	Dummy variable that takes the value 1 if the global ultimate owner (GUO) is classified as "one or more named individuals or families" and at least two members of the firm's governance (board of directors and/or top management team) share the same family name, otherwise it takes the value 0. When GUO-type data are missing the binary variable takes value 1 if 20% or more of governance members share the same last name.
IQI	The Institutional Quality Index, proposed by Nifo and Vecchione (2014), measures the quality of local institutions at NUTS3 level.
Place attachment	Dummy variable coded 1 if at least one component of the top management team was born in the same municipality where the firm has the headquarters, and 0 otherwise.
Employees	Natural logarithm of the number of employees.
Physical capital intensity	Natural logarithm of physical capital per employee.
Age	Number of years from firm's foundation
Leverage	Equity-to-debt (i.e., current plus long-term liabilities) ratio.
Group	Dummy variable coded 1 if firm i is part of a business group, 0 otherwise.
Inner area	Dummy variable coded 1 if firm i is located in an "inner area" (following Istat classification), 0 otherwise.
Liquidity ratio	Liquid assets on current liabilities.
Industrial district	Dummy variable coded 1 if firm i belongs to an industrial district (following Istat classification, 2011), 0 otherwise.
Patent	Dummy variable taking value 1 if the firm has filed at least one patent in 2018, 0 otherwise.
South	Dummy variable taking value 1 if firm i is located in the South of Italy, 0 otherwise. Encoded according to the NUTS1 nomenclature of Italian territorial units (1 if the firm is headquartered in the "South Italy" NUTS1 region).

(*Liquidity ratio*) to control for the firm's liquidity status (Amore et al., 2017). Prior empirical studies also brought to light the nexus between innovation and productivity (Parisi et al., 2006). Following the outcome approach,[13] we controlled for firms' propensity to generate innovation outputs. We then codified a binary variable named *Patent* set equal to 1 if the firm filed at least one patent in 2018 (Cabrer-Borras & Serrano-Domingo, 2007),[14] 0 otherwise. Group membership is taken into account by encoding a binary variable (*Group*) equal to 1 whether the firm belongs to a business group, 0 otherwise. Productivity is presumably affected by the inter-firm resource exchanges enabled by ownership ties (Blomström & Sjöholm, 1999). Location in a territorial agglomeration and the degree of geographical remoteness are accounted for through the inclusion of two binary variables. The *Industrial district* dummy controls whether the firm is part of an industrial district while the *Inner Areas* binary variable takes value 1 if the firm is located in an inner area, 0 otherwise.[15] Location in dense clusters may provide the firm with the benefits of localization economies and spatial spillovers, while being based in remote areas may impede access to key resources (Parr, 2002). To account for sectoral heterogeneity, we included a set of industry dummies based on NACE codes at the 2-digit level. Finally, we added the *South* dummy taking value 1 whenever a firm is located in the South of Italy, 0 otherwise.[16] The variable is meant to capture sources of non-observable heterogeneity across the Northern-Central and Southern macro-regions of the Italian peninsula (Aiello et al., 2014).

Descriptions of the variables are summarized in Table 1.

3.4. Econometric approach

Given the hierarchical structure of our data, with units (firms) that are nested in groups (provinces or NUTS3 regions), we relied on multilevel or hierarchical modeling. In a multilevel setting, variables at different levels are not simply add-ons to the same single-level equation but modeled simultaneously (Snijders & Bosker, 2011). There are several advantages with multilevel models (Hofmann, 1997; Van Oort et al., 2012). Multilevel models offer a natural way to assess contextuality. In a multilevel approach, the investigation of agglomerations on performance assumes that firms operating in the same locality are likely to be more similar – due to cluster-specific factors – than those operating elsewhere (Aiello et al., 2014).[17] By explicitly modeling both individual and group level residuals, this approach addresses the partial interdependence of firms belonging to the same cluster (e.g., region, industry). Then, multilevel analysis incorporates unobserved heterogeneity in the model by including random intercepts and allowing relationships to vary across locations through the inclusion of random

[13] As R&D-related metrics may fail to capture firms' innovation endeavors especially when it comes to small and medium-sized ones, the output approach was embraced as a potential solution to provide a comprehensive picture and improve the assessment of the impact of innovation on productivity (Hall et al., 2009).

[14] We chose 2018 to be consistent with our estimation strategy. Please, refer to paragraph 3.4 for further information.

[15] Inner areas are identified as remote areas poorly connected to the major urban centers and thus characterized by depopulation and decline. For further information on the Italian locations qualified as inner areas please see https://www.istat.it/it/archivio/273176.

[16] To encode the binary control we relied on the statistical nomenclature of territorial units at NUTS1 level. Specifically, the dummy takes value 1 whether the firm is located in the NUTS1 region labeled "South Italy", 0 otherwise.

[17] Because of this similarity, the assumption of independence of errors would be violated leading to an inflated significance of the two-level coefficients (Raspe & van Oort, 2011). That is because tests are made on the number of level-one observations instead of level-two groups. The multilevel approach overcomes this issue. Hence, by controlling for spatial dependence and correcting the measurement of standard errors, it ensures more efficient estimates (Hofmann, 1997).

coefficients. Indeed, while 'standard' regression models are designed to model the mean, multilevel models focus on modeling variances explicitly (Van Oort et al., 2012). This provides valuable insights into the contribution of both firm-specific and context-specific factors in explaining productivity heterogeneity. Finally, by controlling for spatial dependence, multilevel modeling helps overcome the ecological and atomistic fallacies (Raspe & van Oort, 2011).[18]

The dependent variable Y refers to firm i and depends on a set X of variables measured at the firm level and on a set Z of variables defined at the local level j. The variable Y may be predicted by considering X as explanatory variables:

$$Y_{ij} = \beta_{0j} + \beta_{1j}X_{ij} + \epsilon_{ij} \tag{1}$$

where β_{0j} is the intercept, β_{1j} are the slope coefficients, and ϵ_{ij} is a random error term which is assumed to have a normal distribution with mean zero and variance σ^2_{ϵ}. In this work, we relied on the following specification:

$$\beta_{0j} = \gamma_{00} + \gamma_{01}Z_j + \mu_{0j} \tag{2}$$

and

$$\beta_{1j} = \gamma_{10} \tag{3}$$

where β_{0j} differs across NUTS3 regions and depends on Z_j. The random error term defined at local level μ_{0j}, capturing the variability in the intercept across NUTS3 regions, is assumed to have a normal distribution with an expected value of zero and variance $\sigma^2_{\mu_0}$, and to be independent from ϵ_{ij}. The fixed component γ_{00} is a weighted average of the intercept across all locations (overall mean).

Combining Eq. (1) with Eqs. (2) and (3), we obtain the following two-level mixed model:

$$Y_{ij} = \gamma_{00} + \gamma_{10}X_{ij} + \gamma_{01}Z_j + (\mu_{0j} + \epsilon_{ij}) \tag{4}$$

Segment $\gamma_{00}+\gamma_{10}X_{ij}+\gamma_{01}Z_j$ in Eq. (4) is the fixed (or deterministic) part of the model, while the random (or stochastic) part of the model is in brackets.

In settings where firms are nested within regions, the assumption of independence of all observations is expected to be violated. Firms operating in the same region, indeed, tend to exhibit correlated residuals. The amount of dependence can be expressed as the intra-class correlation (ICC) (Van Oort et al., 2012). It can be estimated by specifying an "empty model", that is, a model without covariates:

$$Y_{ij} = \gamma_{00} + \mu_{0j} + \epsilon_{ij} \tag{5}$$

which allows for decomposing the variance of Y into two independent components: the variance σ^2_{ϵ} of lowest level errors (ϵ_{ij}), the so-called within-group variance, and the variance $\sigma^2_{\mu_0}$ of the highest level errors (μ_{0j}), the so-called between-group variance. The intra-class correlation gives the proportion of total variance explained by the grouping structure:

$$ICC = \frac{\sigma^2_{\mu_0}}{\sigma^2_{\mu_0} + \sigma^2_{\epsilon}} \tag{6}$$

In line with Eq. (4), we estimated the following cross-sectional model[19]:

$$Y_{ij(2019)} = \gamma_{00} + \beta_1 FF_{ij} + \beta_2 PA_{ij} + \beta_3 IQI_{j(2018)} + \sum_{p=1}^{P} \lambda_p C_{pij(2018)} + \sum_{f=1}^{F} \delta_f W_{fij(2018)} + \sum_{q=1}^{Q} \eta_q S_{qi} + \xi South + \mu_{0j} + \epsilon_{ij} \tag{7}$$

where Y_{ij} is the productivity (in logarithms) measured in 2019 of the *i-th* firm operating at location j. β_1, β_2 and β_3 measure the effect of the main explanatory variables *Family firm* (FF), *Place attachment* (PA) and the *Institutional Quality Index* (IQI) on productivity. We denote with C_{ij} the two-way and three-way interaction terms added to study how the interaction between firms' individual characteristics and contextual features affects the response variable. Each model specification comprises the set W of firm-level controls. We denoted with S the set of industry dummies, while *South* is the dummy taking value 1 if firm i is located in the South of Italy and 0 otherwise.

Concern may arise over the estimation of Eq. (7). The relationship between firm productivity and the quality of local institutions is likely to be affected by endogeneity, with simultaneity being the underlying cause of IQI endogeneity (Hill et al., 2021). The quality of the institutional context where firms operate contributes to defining the set of rules and structures that shape their economic activity, thus influencing productivity. However, regions endowed with a fertile socio-economic system populated by productive enterprises may well be in a better position to support the development of well-functioning institutions (Acemoglu et al., 2001; Ganau & Rodríguez-Pose, 2019). This could potentially trigger a feedback effect (Hall & Jones, 1999). To lessen such concerns, we employed the lagged version of the IQI under the assumption that current productivity does not influence past values of the explanatory variable (Hill et al., 2021). Thus, in the cross-sectional specification from Eq. (7), the IQI is measured at 2018 values, and all time-varying explanatory variables are expressed at 2018 values for consistency.[20]

As a robustness check, we implemented an instrumental variable framework as an alternative solution to identify the effect of IQI on the response variable (Hill et al., 2021). Specifically, we exploited a historical variable, namely political participation in Italian NUTS2 regions in 1871 (Felice, 2012), as an instrument for the quality of local institutions.[21] The metric captures the level of participation in political elections at the regional level and accounts for the degree of political engagement based on electoral polls. Assuming that current institutional settings have emerged as a result of historical influences according to a path dependency scheme (North, 1990), we justify the employment of a historical variable to capture the exogenous variation

[18] Ecological fallacy is a formal fallacy occurring when an inference is made about an individual based on aggregate data for a group. Since in the data aggregation details of individual-level information may be missed or concealed, the result obtained at an aggregate level may not be confirmed after replicating the analysis on an individual basis. In contrast, atomistic fallacy represents the bias of drawing inferences regarding variability across groups based on individual-level data (Raspe & van Oort, 2011).

[19] The choice to estimate a cross-sectional model is due to the need to keep consistency with the main explanatory dummy variables *Family firm* and *Place attachment*. Data on firms' governance composition and managers' identity used to build the two binary variables (please, refer to paragraph 3.2 for further details) date back to 2019. The database of reference (provided by Bureau van Dijk) delivers information on the firm's current governance composition at the time when the data are collected, but lacks comprehensive historical data on the governance composition from previous years. Performing estimations on a longitudinal dataset would have required assuming that governance composition had remained unchanged over time. We argue that this assumption is too strong. Hence, we opted for a cross-sectional study embracing 2018 and 2019 observations. Specifically, firm-level controls are taken at 2018 values while the response variable is expressed at 2019 values. This allowed us to work on recent observations while maintaining consistency with our main dummy variables *Family firm* and *Place attachment* while ruling out any potential effect of the upcoming COVID-19 shock.

[20] We still recommend a careful interpretation of the coefficients.

[21] To maintain consistency between the endogenous and instrumental metrics, we employed the Institutional Quality Index (Nifo & Vecchione, 2014) at a coarser spatial resolution (NUTS2 level). For our main analysis, we aimed to utilize the IQI metric at the most detailed geographical scale available (NUTS3 regions) to exploit intra-regional sources of variation, hence the decision to include the IV model as one of the robustness checks.

Table 2
Descriptive statistics.

	Obs.	Mean	Std. Dev.	Min.	Med.	Max.
Main model						
Productivity[1,3,W]	90,808	10.775	0.610	8.649	10.795	12.366
IQI[2,4]	90,808	0.702	0.195	0	0.787	1
Family firm	90,808	0.244	0.429	0	0	1
Place attachment	90,808	0.232	0.422	0	0	1
Employees[1,4]	90,808	2.341	1.232	0	2.303	10.396
Physical capital intensity[1,4]	90,808	9.801	1.677	−2.565	9.917	17.504
Age	90,808	22.432	16.179	2	19	155
Leverage[4,W]	90,808	0.940	1.632	0.010	0.410	26.863
Patent[4]	90,808	0.021	0.145	0	0	1
Group	90,808	0.621	0.485	0	1	1
Inner area	90,808	0.161	0.367	0	0	1
Liquidity ratio[4]	90,808	1.458	1.185	0	1.110	9.980
Industrial district	90,808	0.400	0.490	0	0	1
South	90,808	0.140	0.347	0	0	1
Instrumental variable model						
Pol. Participation 1871	86,994	0.978	0.317	0.370	1.020	1.830
IQI^{NUTS2}	86,994	0.694	0.185	0.205	0.775	0.856

Descriptive statistics are computed on the estimation sample used for the baseline regression (Table 4).
[1] Variables expressed in natural logarithm. Financial variables are originally expressed in thousands of Euros. The variable *Employees* is obtained by taking the logarithm of the number of employed workers.
[2] Institutional Quality Index. It is defined in the interval [0,1] by construction.
[3] Expressed at 2019 values.
[4] Expressed at 2018 values. The dummy Patent is coded 1 whether the firm has filed at least one patent in 2018.
[W] Winsorized at the 1st and 99th percentiles.
Industry dummies are omitted.

in current institutions across regions. Previous literature delving into the effect of institutions on economic outcomes relied extensively on such historical instruments as an identification strategy (e.g. Acemoglu et al., 2001, 2002). To validate our approach, we formally tested for the relevance of the excluded instrument and assumed that, given its historical nature, political participation after Italian unification is not correlated with the unobservable determinants of firms' current productivity (i.e., exogeneity assumption). The exclusion restriction assumption is that, conditional on the controls included in the specification, the historical variable does not affect current firm productivity except through the development of local institutions. As the historical metric does not account for businesses' connections to politicians or any direct effect of political participation on the entrepreneurial ecosystem that could have influenced local business performance through alternative channels, we believe the assumption is plausible.

IV results are discussed in subparagraph 4.3 *Robustness checks*. Further information on the instrumental variable approach is provided in Section 3 of the Supplementary Material.

4. Results

4.1. Descriptive and univariate statistics

Table 2 displays the descriptive statistics obtained on the estimation sample. Around 24% of the firms in the sample are classified as family firms. At the same time, nearly 23% of the manufacturing companies in our sample employ senior managers born in the same place as the firm's headquarters. The mean score of IQI across the Italian provinces (NUTS3 regions) where the firms are located is 0.702. Fig. 1 displays the geographical distribution of the IQI, measured in 2018, across NUTS3 regions. The plot shows a clear institutional divide between Northern and Southern regions, with higher-quality institutions concentrated in the North.

Table 3 shows pairwise correlation coefficients and variance inflation factors (VIFs) for all variables. As the VIFs take low values and fall below the conservative threshold of 5 or even 2.5, we can rule out the presence of multicollinearity (Johnston et al., 2018).

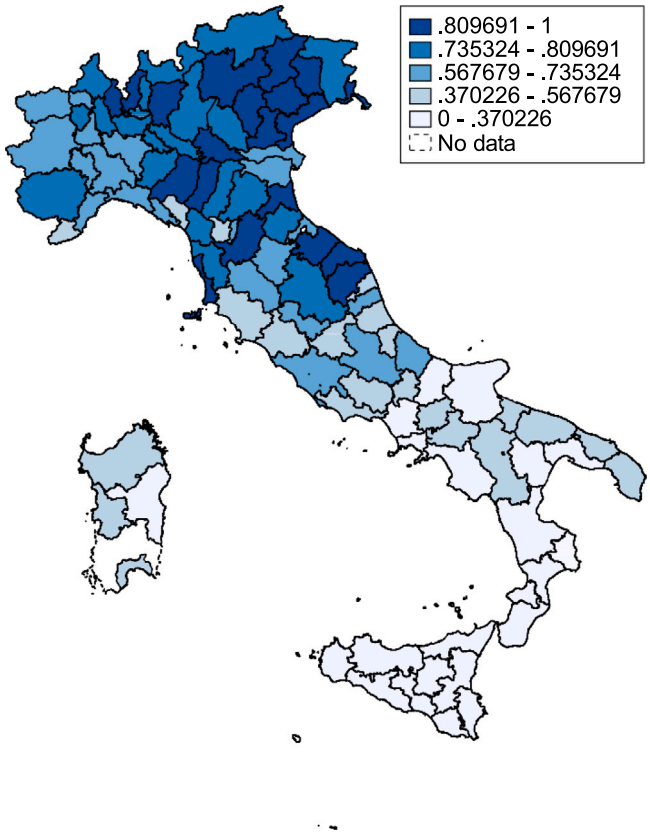


Fig. 1. Quality of local institutions across Italian provinces measured in 2018.

4.2. Multilevel results

To test our hypotheses, we adopted a multilevel approach as described in Section 3.4. All the multilevel specifications implemented in this study have firms as level 1 and Italian NUTS3 regions (provinces) as level 2. Results are displayed in Table 4.

Table 3
Correlation matrix.

	VIF	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
(1) Productivity[1]	–	1													
(2) IQI[2]	2.15	0.246*	1												
(3) Family firm	1.17	0.106*	0.162*	1											
(4) Place attachment	1.04	−0.063*	−0.172*	−0.071*	1										
(5) Employees[1]	1.22	0.297*	0.148*	0.092*	−0.023*	1									
(6) Physical capital intensity[1]	1.21	0.371*	0.068*	0.134*	−0.019*	0.151*	1								
(7) Age	1.33	0.261*	0.174*	0.207*	−0.002	0.334*	0.314*	1							
(8) Leverage	2.05	0.162*	0.056*	0.073*	0.008*	0.023*	0.144*	0.194*	1						
(9) Patent	1.06	0.127*	0.054*	−0.004	0.007*	0.231*	0.053*	0.079*	0.027*	1					
(10) Group	1.13	0.050*	0.040*	−0.287*	0.028*	0.092*	−0.010*	−0.081*	−0.021*	0.066*	1				
(11) Inner area	1.02	−0.059*	−0.102*	−0.010*	−0.007*	−0.020*	0.050*	−0.043*	−0.013*	−0.019*	−0.029*	1			
(12) Liquidity ratio	2.02	0.144*	0.047*	0.057*	−0.001	−0.037*	−0.082*	0.108*	0.684*	−0.011*	−0.039*	−0.027*	1		
(13) Industrial district	1.16	0.066*	0.352*	0.083*	−0.078*	0.053*	0.045*	0.017*	0.016*	0.005	−0.011*	0.018*	−0.002	1	
(14) South	1.90	−0.197*	−0.685*	−0.138*	0.126*	−0.102*	−0.041*	−0.160*	−0.040*	−0.041*	−0.027*	0.108*	−0.041*	−0.199*	1

Pairwise correlations on the estimation sample (90,808 obs.) used for the baseline regression (Table 4).
Mean VIF 1.42.
[1] Variables expressed in natural logarithm.
[2] Institutional Quality Index.
*$p < 0.05$.

We started by fitting an empty model to test whether there is significant intercept variance, that is, if the mixed model is to be preferred to the simple linear model (Amara & Thabet, 2019). Estimates are obtained via maximum likelihood (MLE, column 1) and restricted (or residual) maximum likelihood (REML, column 2) to perform the test using both maximum likelihood methods. Table 4 reports the second stage intercept term γ_{00}, which is statistically significant in both specifications and displays the variance of the lowest (σ^2_ϵ) and highest ($\sigma^2_{\mu 0}$) error term. The likelihood-ratio (LR) test compares the multilevel and the linear model, suggesting that in both cases (columns 1 and 2), the mixed or multilevel model is a better fit than the simple linear model.[22] The intra-class correlation (ICC) points out that around 11% of the variability in firm productivity is due to variations across NUTS3 regions.

After validating our approach, we enriched the econometric specification by adding the set of explanatory variables at the firm and NUTS3 level described in paragraphs 3.2 and 3.3. All models from columns 3 to 7 in Table 4 are estimated via restricted maximum likelihood (REML).[23] The LR test always confirms that the multilevel model is a good fit for our data.

Estimates in column 3 suggest that family involvement in the ownership and governance of the firm has a positive and significant effect on productivity, confirming hypothesis 1a. Family firm productivity is, on average, 0.9% higher[24] than that of non-family firms.[25] Consistent with previous studies (Ganau & Rodríguez-Pose, 2019; Lasagni et al., 2015), our results confirm that the quality of local institutions is positively related to productivity. Hypothesis 2 is therefore supported. However, contrary to assumptions in hypothesis 4, place attachment is negatively associated with productivity. In fact, firms run by local managers are 1.7% less productive than non-attached firms. Larger and older firms, as well as firms belonging to a business group, are found to be more productive. As expected, patenting firms also exhibit higher labor productivity.. Manufacturing firms located in inner areas or the southern part of the Italian peninsula show lower productivity instead, witnessing the persistence of the industrial divide between the Northern and Southern regions.

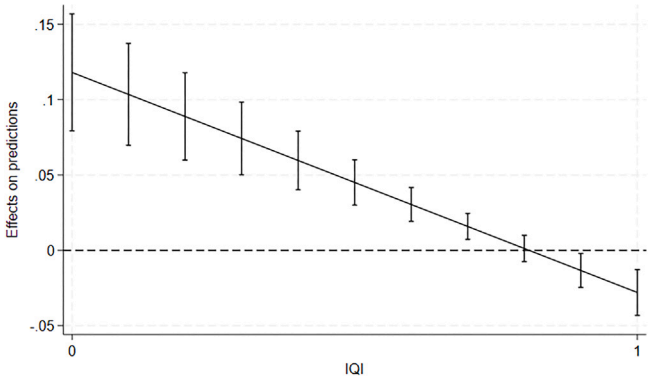
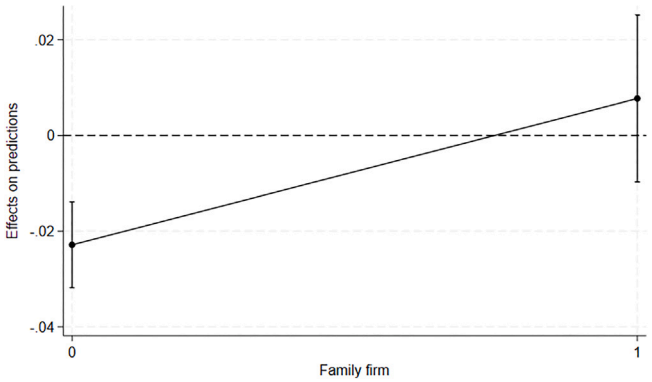


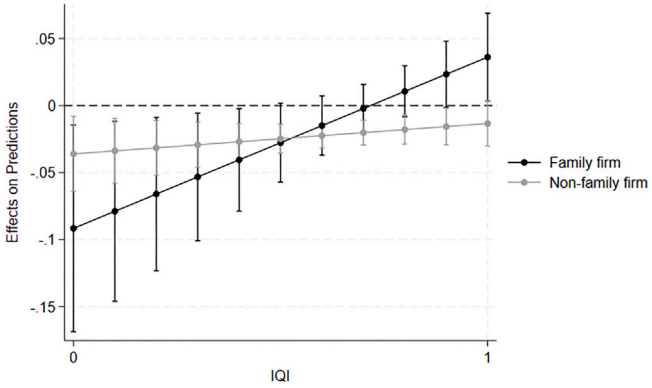
Fig. 2. Average marginal effect of the family's involvement in ownership and governance positions at IQI values (95% confidence intervals).

To better understand how the gap in productivity between family and non-family firms evolves depending on contextual contingencies, we studied the cross-level interaction between the family status of the firm and the provincial index of institutional quality. We found that the interaction term between the *Family firm* and *IQI* variables has a negative coefficient that is statistically significant at the 1% level (column 4). To provide a meaningful interpretation of the cross-level effect, we plotted the average marginal effect (AME) of family firms on labor productivity at IQI values. Fig. 2 reveals that the lower the quality of local institutions the greater the increase in labor productivity associated with family firms. Then, as we move to areas characterized by improved institutional quality (i.e., increasing value of IQI),[26] we find a decline in the marginal effect of being a family firm. Our findings support hypothesis 3 by showing that family firms display higher productivity in low-quality institutional contexts; however, this advantage disappears as institutional quality increases.

[22] The test statistic takes value 8120.042 for model specification in column 1, and 8124.619 for model specification in column 2, and in both cases the p-value falls below the threshold of 0.01.
[23] We opted for REML as, in multilevel modeling, variance components obtained through maximum likelihood estimation could be negatively biased while REML estimates are not (Amara & Thabet, 2019).
[24] To interpret coefficient b of a dummy variable in a semilogarithmic equation, we employed the formula $\{\exp(b) - 1\} \cdot 100$ (Halvorsen et al., 1980).
[25] The coefficient estimates for the *Family firm* dummy must be interpreted carefully. Our econometric specification includes a set of firm-level controls following established practices in the empirical management literature to mitigate the influence of potential confounders on the relationship of interest. However, we advise a careful interpretation of the multilevel estimates as they indicate whether and under what conditions family firms perform better or worse than their counterparts, without establishing a causal effect.
[26] As we estimated a cross-sectional model, an improvement in IQI is measured across space (not over time).



(a) Average marginal effect of the *Place attachment* variable for family and non-family firms.



(b) Average marginal effect of the *Place attachment* variable at IQI values for family and non-family firms.

Fig. 3. Average marginal effect of managers' attachment to a place on firm productivity (95% confidence intervals).

Results in column 5 provide evidence of the interaction between being a family firm and having at least one local manager. While place attachment is negatively related to labor productivity on average (column 3), this negative relationship holds only for non-family firms once the effects are disentangled. This pattern is observed in Fig. 3, subplot (a), which shows that non-family firms exhibit lower productivity when employing local managers, whereas family firms are not significantly affected by place attachment. Taken together, these findings do not support hypothesis 5, which posits that family firms generally gain more from place attachment than non-family firms. Although family firms do not appear to suffer from place attachment, neither do they appear to benefit from it.

The econometric specification in column 7, including the triple interaction between the *Family firm*, *IQI* and *Place attachment* variables, allows for testing whether having local managers in charge of the business can turn out to be beneficial for family firms' productivity depending on the quality of the local institutional context. For a straightforward interpretation of the result, Fig. 3(b) shows how the average marginal effect of place attachment varies as a function of IQI for family and non-family firms. Contrary to expectations, we find that in low-quality institutional contexts (i.e., the lower end of the IQI distribution) place attachment is associated with lower productivity for both family and non-family firms. While, on average, family firms do not appear to be affected by the negative implications of place connections (column 5), they do suffer from the pitfalls of being place-attached when the quality of local institutions is close to its lowest levels (column 7). Hence, findings do not support hypothesis 6. However, we find that the detrimental effect of having local managers declines for family firms as institutional quality improves. As family firms operate in stronger institutional environments, managers' local connections increasingly translate into productivity advantages. We observe, indeed, that the average marginal effect of place attachment on productivity becomes positive and statistically significant[27] as IQI's maximum is approached (Fig. 3(b)). When surrounded by sound and effective institutions, family firms take advantage of close connections with the local community, yet this pattern does not hold for non-family firms. As a result, place-attached family firms still outperform place-attached non-family firms in high-quality institutional environments.[28]

4.3. Robustness checks

To test the robustness of our results, we performed additional analyses. First, to address potential endogeneity of the IQI regressor, we adopt an instrumental variable (IV) approach that employs a historical instrumental variable as a source of exogenous variation in the quality of current institutions, viz., political participation in Italian NUTS2 regions in 1871 (Felice, 2012). Results are displayed in Table 5. The alternative identification approach confirms that the quality of local institutions has a positive impact on firm productivity and acts as a moderator by closing the gap between family and non-family firms (column 2). In the instrumental variable specifications, we still observe a negative association between place attachment and productivity, particularly for non-family firms, which exhibit lower productivity on average (columns 1 and 3). The check confirms that place-attached family firms face a productivity decline at the lower end of the IQI distribution (column 5). The drawback associated with place connections in family firms declines across institutional settings as IQI improves.[29] We formally tested the relevance of the excluded instruments by performing F-tests of joint significance in the first-stage regressions. F-statistics are displayed in Table 5. The hypothesis of weak instruments is always rejected at the 1 percent significance level.

Second, we exploited alternative solutions to measure firm productivity and output. Following previous studies investigating the gap in productivity between family and non-family firms, three alternative dependent variables are used: sales per employee (Chrisman et al., 2017; Hu et al., 2018), value added (Barbera & Moores, 2013), and total factor productivity (TFP) uisng the LevinsohnPetrin (2003) approach (Cucculelli et al., 2014; Levinsohn & Petrin, 2003). All measures are expressed in logarithms. Our main results are robust to the employment of the alternative productivity and output metrics. Results and further details are displayed in the Supplementary Material.

Third, we tested the robustness of our results using an even more conservative definition of family firms designed to prevent misclassifications when GUO-type information is unavailable. Specifically, we run the model on two alternative dummies, which are defined as follows. The first alternative binary variable takes a value of one if the firm declares "one or more named individuals or families" as the global ultimate owner, if at least two members of the firm's governance share the same surname, and, in cases where GUO-type information is missing, if at least one-third (33.3%) of the governance members share the same surname. The second alternative variable is defined in the same way as the first but increases the threshold to 50.1% (more than

[27] The average marginal effect of place attachment for family firms turns positive and statistically significant at the 10% level from the 90th percentile of the IQI distribution (it becomes significant at the 5% level between the 95th percentile and the maximum of the metric).

[28] The gap in productivity between place-attached family firms and place-attached non-family firms remains significant at the 10% level at least until the 95th percentile of the IQI distribution. Please see also figure S1, subplot (c) in the Supplementary Material for a graphical representation.

[29] Results from the first stage and reduced form regression for specification in column (1), Table 5 are available in the Supplementary Material, table S9, along with average marginal effect plots (Figures S3 and S4).

Table 4
Multilevel estimates.

	(1) Productivity (ln) MLE	(2) Productivity (ln) REML	(3) Productivity (ln) REML	(4) Productivity (ln) REML	(5) Productivity (ln) REML	(6) Productivity (ln) REML	(7) Productivity (ln) REML
IQI			0.425*** (0.038)	0.446*** (0.039)	0.425*** (0.038)	0.409*** (0.039)	0.436*** (0.039)
Family firm			0.009** (0.004)	0.118*** (0.020)	0.003 (0.005)	0.009** (0.004)	0.132*** (0.024)
Place attachment			−0.017*** (0.004)	−0.017*** (0.004)	−0.023*** (0.005)	−0.046*** (0.013)	−0.036** (0.014)
Employees (ln)			0.094*** (0.002)	0.094*** (0.002)	0.094*** (0.002)	0.094*** (0.002)	0.094*** (0.002)
Physical capital intensity (ln)			0.123*** (0.001)	0.123*** (0.001)	0.123*** (0.001)	0.123*** (0.001)	0.123*** (0.001)
Age			0.001*** (0.000)	0.001*** (0.000)	0.001*** (0.000)	0.001*** (0.000)	0.001*** (0.000)
Leverage			−0.017*** (0.001)	−0.017*** (0.001)	−0.017*** (0.001)	−0.017*** (0.001)	−0.017*** (0.001)
Patent			0.139*** (0.012)	0.140*** (0.012)	0.140*** (0.012)	0.139*** (0.012)	0.139*** (0.012)
Group			0.030*** (0.004)	0.030*** (0.004)	0.030*** (0.004)	0.030*** (0.004)	0.030*** (0.004)
Inner area			−0.030*** (0.005)	−0.030*** (0.005)	−0.030*** (0.005)	−0.030*** (0.005)	−0.030*** (0.005)
Liquidity ratio			0.097*** (0.002)	0.097*** (0.002)	0.097*** (0.002)	0.097*** (0.002)	0.097*** (0.002)
Industrial district			0.003 (0.005)	0.003 (0.005)	0.003 (0.005)	0.003 (0.005)	0.003 (0.005)
South			−0.061*** (0.021)	−0.059*** (0.021)	−0.061*** (0.021)	−0.061*** (0.021)	−0.059*** (0.021)
Family firm × IQI				−0.146*** (0.026)			−0.169*** (0.031)
Family firm × Place attachment					0.031*** (0.010)		−0.056 (0.042)
Place attachment × IQI						0.045** (0.019)	0.023 (0.021)
Family firm × Place attachment × IQI							0.105* (0.056)
Constant	10.668*** (0.020)	10.668*** (0.020)	8.732*** (0.030)	8.718*** (0.030)	8.734*** (0.030)	8.743*** (0.031)	8.726*** (0.031)
Random effects							
Variance							
NUTS3 Regions	0.041	0.041	0.005	0.005	0.005	0.005	0.005
Firms	0.338	0.338	0.253	0.253	0.253	0.253	0.253
Observations	90,808	90,808	90,808	90,808	90,808	90,808	90,808
Industry dummies	No	No	Yes	Yes	Yes	Yes	Yes
(log likelihood) log restricted-likelihood	(−79837.025)	−79840.021	−66782.220	−66768.954	−66781.161	−66782.556	−66771.459
LR test vs. linear model	8120.042	8124.619	1148.255	1149.638	1149.275	1153.076	1153.117
ICC	0.107	0.108	0.020	0.020	0.020	0.020	0.020

Standard errors in parentheses.
Model estimates in column (1) are obtained via maximum likelihood (MLE). Estimates in columns from (2) to (7) are obtained via restricted maximum likelihood (REML).
* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

half of the governance) when identifying family firms in the absence of GUO information. When applying either the first or second alternative dummy, the findings are consistent with our main results. Results are available in the Supplementary Material.

Fourth, the negative association between the employment of local managers (place attachment) and labor productivity raises concerns that constraints in the selection of executives may account for this result. Those in charge of appointing executives may be influenced by personal preferences, perceptions, experience, or cognitive biases, which can lead them to favor local candidates without adequately assessing their professional skills (Ahrens, 2020). Such tendencies can distort the interpretation of labor market signals by over- or under-valuing certain candidates, based on the belief that managers exhibiting specific traits are better suited to run the business (Ahrens et al., 2015). Consequently, preference-driven decisions may result in the appointment of second-best candidates, with negative implications for the firm's overall performance (Bloom & Van Reenen, 2007). If a candidate's place of birth were among the characteristics evaluated through personal preferences, the detrimental effect of place connections would not stem solely from the drawbacks of a firm's excessive reliance on the local network, but also from suboptimal appointing decisions typical of constrained selection processes. Although the quality of local institutions (one of the main regressors and moderating variables) already captures potential inefficiencies in local labor markets, we included additional controls to account for firm-specific preference-driven decision rules in executive selection that may correlate with the employment of local managers. To this end, we introduced variables describing the firm's governance structure to account for systematic preferences for candidates with specific personal characteristics and to evaluate firms' openness to assessing and selecting talents (i.e., individuals with high professional standing). Specifically, we included the following controls[30]:

- Employment of foreign managers (*Foreign*): dummy variable equal to 1 if at least one member of the governance was born outside Italy. This serves as a proxy of the firm's openness to international cultural influences and experience (Ren et al., 2023);
- Share of governance members serving as directors or executives in at least one other manufacturing firm (*Multiple-firm Managers*). Whether managers hold additional seats in other firms is considered an indicator of their professional standing, as highly valued professionals are more in demand (Fama & Jensen, 1983; Shivdasani, 1993). Multiple appointments enhance managers' perceived quality by strengthening their reputational capital (so-called reputational effect) (Ferris et al., 2003). Therefore, employing or retaining managers who also serve on other managerial boards can signal greater attention to the selection and retention of individuals with higher professional standing. As an alternative, we controlled for the number of firms sharing at least one governance member with firm *i*. The alternative specification yielded similar results, reported in the Supplementary Material;
- Share of the firm's governance represented by female managers (*Female gov.*). Gender preferences (reflected in an unbalanced managerial team) are typical sources of constraints in the selection of executives with implications for firm performance (Ahrens et al., 2015). Strong gender preferences may indicate the presence of decision-makers inclined to follow their own perceptions or prejudices, potentially leading to distortions also in the selection of managers based on their place of origin;
- Governance members' average age at appointment (*Average age*). Age serves as a proxy for managers' general experience, and the average age of governance members at the time of their appointment may indicate whether the firm tends to appoint more or less experienced candidates;
- Governance members' average tenure (number of years since appointment) (*Average tenure*). Used as a proxy for managers' firm-specific experience (Ren et al., 2021, 2023).

Our main results prove robust to the inclusion of these additional control variables. Firms employing local managers are less productive than their counterparts. The drawbacks of place connections do not, on average, affect family firms, apart from when the quality of local institutions falls around the lowest percentiles of the distribution. By contrast, in high-quality institutional contexts, family firms can capitalize on place bonds.[31] Results are displayed in Table 6. Therefore, even after controlling for potential imbalances in the composition of the firm's governance, which may reflect constraints in the selection

[30] All variables are computed using data from the AIDA, Bureau Van Dijk, database.

Table 5
Robustness check. Instrumental variable estimates.

	Productivity (ln)				
	(1)	(2)	(3)	(4)	(5)
IQI^{NUTS2}	0.349***	0.385***	0.346***	0.307***	0.361***
	(0.098)	(0.101)	(0.098)	(0.097)	(0.099)
Family firm	0.015***	0.196***	0.010*	0.016***	0.268***
	(0.005)	(0.067)	(0.005)	(0.005)	(0.083)
Place attachment	−0.029***	−0.029***	−0.035***	−0.114**	−0.077
	(0.006)	(0.006)	(0.007)	(0.052)	(0.048)
Family firm × IQI^{NUTS2}		−0.244***			−0.341***
		(0.089)			(0.108)
Family firm × Place attachment			0.028***		−0.226**
			(0.009)		(0.089)
Place attachment × IQI^{NUTS2}				0.129*	0.070
				(0.076)	(0.075)
Family firm × Place attachment × IQI^{NUTS2}					0.326***
					(0.119)
Constant	8.793***	8.769***	8.796***	8.823***	8.788***
	(0.082)	(0.082)	(0.082)	(0.085)	(0.084)
Observations	86 994	86 994	86 994	86 994	86 994
Root MSE	0.508	0.508	0.508	0.508	0.508
Industry dummies	Yes	Yes	Yes	Yes	Yes
Firm-level controls	Yes	Yes	Yes	Yes	Yes
Geographic dummies (South - Inner areas - Industrial dist.)	Yes	Yes	Yes	Yes	Yes
First stage F-Stat					
IQI^{NUTS2}	37.855	32.657	37.865	25.127	16.852
Family firm × IQI^{NUTS2}		23.575			12.26
Place attachment × IQI^{NUTS2}				8.050	11.48
Family firm × Place attachment × IQI^{NUTS2}					11.78

Standard errors clustered by NUTS3 regions in parentheses. 2SLS estimates.
IV estimates obtained on 86,994 units due to missing values in the instrumental variable (political participation in 1871).
* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

process of managers or a short-sighted assessment of their professional standing, the negative association between place connections and labor productivity persists (with the sole exception of family firms operating in high-quality institutional contexts, consistently with our main results). This suggests that mechanisms other than favoritism towards local candidates are in place. The following section discusses how excessive reliance on local socio-economic bonds can impair productivity by trapping firms in a state of inertia and rigidity.

5. Conclusions

5.1. Discussion

Productivity in family firms remains a debated topic, with empirical evidence producing mixed results (Barth et al., 2005; Martikainen et al., 2009). To explain these divergent findings, much of the existing research has drawn on agency theory and stewardship theory, often applying them ex post to justify whether family involvement in ownership and management enhances or hinders productivity (Creemers et al., 2022; Le Breton-Miller et al., 2011). These theories rest on contrasting assumptions about human nature and its consequences for governance and performance (Chrisman et al., 2024), enabling scholars to interpret both positive and negative productivity outcomes within their frameworks. However, existing research has primarily focused on internal firm dynamics, often overlooking the broader contextual factors in which firms operate (Krueger et al., 2021). This oversight persists despite empirical evidence from regional studies highlighting the crucial role of location in shaping firm productivity by providing spatially-bounded resources, opportunities, and constraints (Syverson, 2011).

This article aims to context-theorize family firms' productivity by exploring the moderating role of local institutions and place connections on the productivity of a sample of Italian manufacturing firms. Our results confirm that family firms are positively associated with productivity, consistent with prior research (e.g., Barbera & Moores, 2013; Martikainen et al., 2009). Additionally, we find that the quality of local institutions enhances firm productivity, reinforcing the findings of Agostino et al. (2020) and Ganau and Rodríguez-Pose (2019). However, while family firms may generally exhibit higher productivity than non-family firms, this advantage is not uniform across different institutional contexts. Our findings reveal that institutional quality negatively moderates the productivity advantage of family firms. Specifically, family firms outperform their non-family counterparts in low-quality institutional contexts, where trust-based relationships help mitigate external uncertainty and associated transaction costs (Rothstein, 2013). In such contexts, family ties, trust, and reciprocity compensate for weak formal institutions, enabling family firms to thrive (Canale et al., 2024; Miller et al., 2009). However, as the quality of local institutions improves, the productivity advantage of family firms diminish, because in well-functioning institutional environments, generalized trust reduces reliance on family networks (Rothstein, 2013).

The institutional shift raises the question of how place-based ties continue to matter once formal institutions strengthen (Ricotta & Basco, 2021). Assessing managerial rootedness in local communities, as a measure of place attachment, offers a nuanced perspective of place connections in determining firm productivity. Our findings reveal an average negative effect of place attachment on firm productivity. Beyond excessive favoritism towards local candidates and myopic assessment of labor market signals, these results point to the risks of being overly focused on the local community. Strong ties to the local environment

[31] To support the interpretation, the average marginal effect of place attachment for family and non-family firms is displayed in figure S2 in the Supplementary Material. Panel (b) highlights how the marginal effect changes at different values of the IQI index.

Table 6
Robustness check. Governance composition controls.

	Productivity (ln)				
	(1)	(2)	(3)	(4)	(5)
IQI	0.405***	0.423***	0.405***	0.389***	0.411***
	(0.038)	(0.038)	(0.038)	(0.039)	(0.039)
Family firm	0.023***	0.111***	0.019***	0.024***	0.126***
	(0.004)	(0.020)	(0.005)	(0.004)	(0.024)
Place attachment	−0.012***	−0.012***	−0.017***	−0.043***	−0.034**
	(0.004)	(0.004)	(0.005)	(0.013)	(0.014)
Family firm × IQI		−0.118***			−0.140***
		(0.026)			(0.031)
Family firm × Place attachment			0.025**		−0.054
			(0.010)		(0.042)
Place attachment × IQI				0.047**	0.028
				(0.019)	(0.021)
Family firm × Place attachment × IQI					0.098*
					(0.056)
Multiple-firm Managers	0.142***	0.142***	0.142***	0.143***	0.142***
	(0.006)	(0.006)	(0.006)	(0.006)	(0.006)
Female gov.	−0.056***	−0.056***	−0.056***	−0.056***	−0.056***
	(0.005)	(0.005)	(0.005)	(0.005)	(0.005)
Average age	0.001***	0.001***	0.001***	0.001***	0.001***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Average tenure	−0.001*	−0.000*	−0.000*	−0.000*	−0.000*
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Foreign	0.077***	0.077***	0.077***	0.077***	0.077***
	(0.006)	(0.006)	(0.006)	(0.006)	(0.006)
Constant	8.714***	8.703***	8.716***	8.726***	8.711***
	(0.031)	(0.031)	(0.031)	(0.031)	(0.032)
Random effects					
Variance					
NUTS3 Regions	0.005	0.005	0.005	0.005	0.005
Firms	0.251	0.251	0.251	0.251	0.251
Observations	89 793	89 793	89 793	89 793	89 793
Industry dummies	Yes	Yes	Yes	Yes	Yes
Firm-level controls[1]	Yes	Yes	Yes	Yes	Yes
log restricted-likelihood	−65568.785	−65561.079	−65569.200	−65568.802	−65564.167
LR test vs. linear model	1088.602	1090.201	1089.561	1093.949	1094.393
ICC	0.020	0.020	0.020	0.020	0.020

Standard errors in parentheses.
[1] Firm-level controls refer to those included in the baseline regression in Table 4.
* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

can lead to a lock-in effect, corroborating the assumption of Boschma (2005) about the risk of excessive proximity, where entrenched routines, excessive reliance on local networks, and conservatism hinder adaptation, access to up-to-date information, and alternative courses of action (Balland et al., 2015). However, when we distinguish between family and non-family firms, we find that non-family firms suffer more from place attachment, while family firms remain largely unaffected. The cultural alignment between the family, the firm, and the local community (Pallares-Barbera et al., 2004) enables family firms to navigate the challenges of strong local ties, reducing the risk of stagnation (Boschma, 2005). Their strategic flexibility, supported by open dialog and adaptability, may counteract the negative effects of excessive local entrenchment (Zahra et al., 2008). Overall, this result challenges the conventional belief that family firms inherently leverage place connections more effectively (Baù et al., 2019). Our interpretation relies on the assumption that family firms do not systematically differ from non-family firms in their exposure to cognitive bias, personal preferences or subjective perceptions when assessing the professional profile of local managers. Under this assumption, the absence of a negative effect of place attachment for family firms – unlike non-family firms, which experience the drawbacks of employing local managers – can be attributed to the family's ability to counteract the disadvantages of excessive local embeddedness rather than to a different approach in the evaluation of locally born candidates that would make one type of firm more prone than the other to suboptimal appointment decisions.

As place attachment is expected to affect family firms contingent on the institutional context – by helping manage external uncertainty and compensate for institutional deficiencies – we tested the three-way interaction between family firms, institutional quality, and place attachment. Unexpectedly, the results reveal that family firms suffer a more pronounced negative impact from close place connections in weak institutional settings. In Italy's manufacturing sector – characterized by territorially embedded family businesses and long-standing relational practices – dense networks of particularized trust may foster a sort of inward-looking embeddedness. In such environments, the double layer of trust – within the family-employee nexus and between the firm and the local community – can reinforce social closure, limiting adaptability, narrowing the scope of interaction, and hindering access to new opportunities (Uzzi, 1997). What has historically provided stability and legitimacy may, under weak institutional conditions, lock firms into path-dependent trajectories. Similarly, non-family firms led by local managers also struggle with insularity and lack of external orientation, especially in weak institutional environments.

However, as the quality of local institutions improves, the negative effect of place attachment on the productivity of family firms disappears. Instead, place attachment becomes a productivity-enhancing factor when the quality of local institutions is close to its highest level. Our results indicate that family firms are better positioned to leverage local roots and extract greater value from high-quality institutional settings. Consistent with previous studies on family firms in more supportive environments (Amato, Ricotta, & Basco, 2022), family firms have a unique capacity to capitalize on close connections with the local community to access tangible and intangible resources. In interpreting this finding, we assume that the quality of the local institutions does not, in theory, influence firms' preferences for local candidates in a way that produces systematic differences between family and non-family firms in their evaluations, thereby implying that one type of firm is consistently more prone to suboptimal appointment decisions. Preferential attitudes towards certain candidates are shaped more by the personal perceptions and preferences of those responsible for executive appointments (Ahrens, 2020) than by formal contextual conditions. This further supports the argument that the stronger effect of managers' place bonds on family firm productivity stems from their superior ability to extract value from these ties, rather than from any systematic differences in how they perceive the professional standing of local candidates compared with non-family firms. Moreover, as in high-quality institutional contexts both family and non-family firms are exposed to the same institutional conditions, they should not be affected in different ways by potential frictions in the local labor market.

5.2. Contributions

This study makes several theoretical and practical contributions. Firstly, it addresses the ongoing debate on firm productivity (Creemers et al., 2022), which struggles to reconcile conflicting empirical evidence when comparing family and non-family firms. By explicitly contextualizing this research area (Krueger et al., 2021) and introducing local institutional quality as a contingency variable (Canale et al., 2024), we clarify productivity differences between family and non-family firms. Our findings support the context-theorizing approach in family business research, showing that productivity advantages are contingent on the institutional setting. Specifically, family firms exhibit higher productivity than non-family firms in low-quality institutional contexts by leveraging a collective culture among close ties and kinship, compensating for the lack of formal institutions. Reliance on trust-based and reciprocal relationships within the family, non-family employees, and the local community allows family firms to navigate uncertain environments effectively (Gomez-Mejia et al., 2024; Miller et al., 2009; Murithi et al., 2020). However, as the quality of local institutions improves, the productivity advantages of family firms diminish, exacerbated by the problems inherent in family firms, rendering them less productive. In this regard, our study illustrates how a context-based approach allows us to reconcile the conflicting arguments of existing research, in line with Johns (2006), who emphasizes the importance of context in testing the predictability of a particular theory.

Second, this study contributes to regional studies, particularly research on institutional quality at the firm level (Ganau & Rodríguez-Pose, 2019). While firms operate within the same environment, they may respond differently to local conditions based on their specific attributes (Hervas-Oliver et al., 2018). Against this backdrop, institutional quality emerges as a crucial spatial factor influencing firm productivity (Agostino et al., 2020). Our study extends this line of research by demonstrating that the impact of local institutional quality on productivity is heterogeneous, depending on firm type. Specifically, the quality of local institutions appears less critical for family firms, as they are better positioned to achieve productivity advantages in low-quality institutional settings. This finding challenges the conventional one-size-fits-all in regional studies and calls for explicitly integrating family firms into the analysis of local institutions and firm productivity. By recognizing family firms as a source of heterogeneity, this study bridges family business and regional studies, providing a more nuanced understanding of firm productivity across different institutional environments.

Third, our analysis highlights the ambivalent role of place attachment as a contextual mechanism that binds firms to locations: in low-quality institutional environments, place attachment constrains productivity by reinforcing lock-in effects (Boschma, 2005). Overreliance on trust-based relationships can trap family firms within existing local networks, obscuring awareness of alternative courses of action, learning capacity, and regeneration through the exploration of new knowledge, business opportunities, and resources. On the other hand, place attachment can enable family firms to leverage the advantages of high-quality institutions. Our results reveal that family firms are better positioned to capitalize on their local roots, extracting greater value from institutional settings characterized by effective regulatory structures and well-functioning social and economic governance. In this way, our study shows that contextualizing place-based mechanisms is essential to understanding when local ties become an asset or a liability for family firms. By revealing that the performance implications of place attachment are uneven across institutional contexts, our findings help explain why prior research (e.g., Amato et al., 2025) has often failed to identify a consistent performance advantage of place attachment in family firms.

Regarding the managerial implications, this paper highlights the need for institutionally adaptive strategies to enable family firms to enhance productivity while navigating diverse institutional environments. In weak institutional settings, nurturing trust-based relationships can provide a productivity advantage. However, overly strong local ties may lead to a lock-in effect, reducing flexibility, and limiting access to external opportunities. To counteract this, family firms should integrate strategic flexibility by investing in cross-regional or extra-local collaborations, thereby reducing overreliance on localized resources. This is especially important in contexts where institutional weaknesses are coupled with socio-spatial ties–conditions often found in Southern Italy and in various emerging transition economies. In such settings, managers – particularly within family firms – must carefully balance local entrenchment with strategic openness to national and international knowledge networks. Conversely, in high-quality institutional settings, where place attachment becomes a source of productivity gains, locally rooted family firms are encouraged to strengthen their institutional engagement – for instance, through policy advocacy, participation in industrial associations, and collaboration with regulatory bodies – to fully leverage the benefits of a well-functioning institutional setting.

From a policy perspective, our study highlights the need for institutional reforms to bolster firm productivity and "enable localities and regions to embark on a sustainable and high-end road to economic development" (Rodríguez-Pose, 2013, p. 1037). However, findings suggest that such reforms primarily benefit non-family firms, which rely more on formal institutions. Thus, the effectiveness of institutional interventions may depend on local entrepreneurial demographics, particularly the prevalence of family firms in a given region.

5.3. Future research avenues

Certain limitations remain that could pave the way for further research.

First, we defined family firms using the demographic approach. Future research could explore alternative definitions under the essence approach to examine how family involvement affects productivity across institutional settings. Collecting primary data to develop a multiple-item measure accounting for soft factors – such as the family's vision and intentions – could provide deeper insights into how these elements shape decision-making (Basco, 2013). Furthermore, a continuous

measure capturing the extent of the family's ownership or the extent of family involvement in top executive positions could help test for a nonlinear relationship between family involvement and firm productivity (Sciascia & Mazzola, 2008).

Second, as this study focuses on Italian manufacturing firms (Pike et al., 2016), future research could examine the impact of regional institutions on the productivity of family and non-family firms in different European countries (Ganau & Rodríguez-Pose, 2019). The proposed empirical approach based on a multilevel model is well-suited for studying firms as entities embedded within regional systems (Van Oort et al., 2012). By integrating multiple levels of aggregation, the model decomposes productivity variance offering insights into the extent to which location-specific and firm-specific factors explain such variability (Aiello & Ricotta, 2016). This empirical framework offers scalability across regions and countries enabling broader applications to capture sources of firm performance variability both within and across national borders. Similarly, expanding the analysis to different industries (e.g., services) would provide further insights into how the institutional context affects firm productivity.

Third, as our research focuses on productivity, future studies could investigate alternative performance measures, such as growth (Boubakri et al., 2015), innovation (Rodríguez-Pose & Zhang, 2020), and survival (Baumöhl et al., 2019), among others.

Fourth, another promising avenue for future research is the interaction between family firms and informal institutions, which include place-specific individual habits, group routines, social values and norms that play a crucial role in determining the economic development of territories (Rodríguez-Pose, 2020). Family firms, as longstanding and locally-embedded economic actors, may be in a position not only to exploit such institutions but also contribute to their sedimentation (Amato, Backman, & Peltonen, 2021). Understanding how local informal institutions influence diversity in family firms (Basco, 2024) could offer valuable insights, particularly in relation to business practices, ethical standards, planning for succession and governance structure, organizational culture, and local community interactions (Lenz, 2021).

Fifth, another promising area of study is the role of political connections in weak institutional environments (Meng et al., 2024). Political ties may compensate for inefficient institutions by facilitating resource acquisition and easing entrepreneurial activity. Future research could investigate how family firms leverage political influence to secure favorable conditions (Bassetti et al., 2015), potentially shaping local and national agendas (Soleimanof et al., 2018).

Sixth, on the methodological side, as this research is based on cross-sectional data, establishing a causal relationship remains a challenge. A longitudinal setting could address this by tracking firm ownership and management over time. Exogenous changes in local institutional quality (e.g., regulatory reforms) could serve as a natural experiment to determine whether family firms are more resilient to sudden institutional shifts than their non-family counterparts. Moreover, a panel setting would allow researchers to control for firm-specific time-invariant heterogeneity to rule out the interference of additional unobservable firm attitudes that are extremely tricky to capture, whether through secondary or primary data sources.

Finally, our interpretation of why firms employing local managers are less productive – except for family firms, particularly in low-quality institutional environments – rests on the assumption that personal perceptions, preferences, or cognitive bias do not constrain the selection process in ways that lead to suboptimal decisions. Controlling for the firm's governance structure should, in theory, capture whether firms are more prone to systematically favoring candidates with particular personal characteristics, thereby reducing the risk that our results are driven by an inaccurate assessment of local candidates. Aside from that, the set of proxies included in the robustness check could be incomplete and may not fully capture whether decision rules are constrained. The idea of collecting primary data on a subsample of family and non-family firms for developing future studies would also be instrumental in capturing whether psychological or other constraints affect managerial selection, the composition of labor supply, and the firm's openness to talent. Additionally, the use of longitudinal data could help address this limitation by enabling control for firm-specific time-invariant unobservable factors that affect decision-making processes, thus explaining differentials in performance. Regarding the assumption that family firms do not systematically differ from non-family firms in their susceptibility to cognitive bias, personal views, or myopic considerations when assessing the professional standing of local managers, additional tests could be run to rule out this possibility. Further developments of this research line along the trajectories outlined can corroborate our interpretation.

CRediT authorship contribution statement

Valentina Pieroni: Writing – review & editing, Writing – original draft, Supervision, Software, Methodology, Investigation, Formal analysis, Data curation, Conceptualization. **Stefano Amato:** Writing – review & editing, Writing – original draft, Supervision, Software, Methodology, Investigation, Formal analysis, Data curation, Conceptualization. **Rodrigo Basco:** Writing – original draft, Review, Editing, Validation, Supervision, Methodology, Conceptualization. **Nicola Lattanzi:** Writing – original draft, Supervision.

Declaration of competing interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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Appendix A. Supplementary data

Supplementary material related to this article can be found online at https://doi.org/10.1016/j.jfbs.2026.100718.

Data availability

Data will be made available on request.

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