

Family Firms and Industrial and Activity Zones: Balancing Territorial Attachment and Economic Rationality

المؤسسات العائلية والمناطق الصناعية ومناطق النشاط: بين اعتبارات الانتماء الجغرافي ومتطلبات المنطق الاقتصادي

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Abstract:

This study investigates the location behavior of family firms, focusing on their establishment choices within Industrial and Activity Zones, defined as areas dedicated to manufacturing, commercial, and related economic activities. Using a mixed-methods approach that combines qualitative assessment with econometric analysis, the research draws on data from the 2023 Family Business Index, which ranks the 500 largest family-owned firms worldwide. The findings show that, despite their family-oriented ownership structure, these firms predominantly follow an economic logic in their location decisions, prioritizing profitability, accessibility to markets and suppliers, and infrastructure quality. Traditional or sentimental considerations appear secondary, although they may indirectly reinforce the owners' economic rationality by stimulating their desire to ensure the business's survival and preserve the family legacy. Econometric results indicate a significant positive relationship between family board representation and firm revenues, suggesting that greater family involvement aligns with higher economic performance. Overall, the study underscores the role of proximity economics in shaping family firms' spatial strategies and governance behavior.

Keywords: Family firms; Location behavior; Industrial Zones; Proximity economics; Corporate governance.

JEL Classification Codes : L26 ; R30 ; L22 ; D22.

ملخص:

تهدف هذه الدراسة إلى تحليل سلوك التوطين الجغرافي للمؤسسات العائلية، مع التركيز على اختياراتها المتعلقة بالاستقرار داخل المناطق الصناعية ومناطق النشاط، وهي تسميات معتمدة في الجزائر للدلالة على الفضاءات المخصصة للأنشطة الصناعية والتجارية. وتعتمد الدراسة على منهجية تجمع بين التحليل النوعي والتحليل القياسي، بالاستناد إلى بيانات مؤشر المؤسسات العائلية لسنة 2023، الذي يضم أكبر 500 مؤسسة عائلية في العالم من حيث رقم الأعمال. وتُظهر النتائج أن هذه المؤسسات، رغم خصوصية هيكل ملكيتها العائلي، تتبنى في قرارات التوطين منطقاً اقتصادياً بالدرجة الأولى، حيث تمنح أولوية للربحية، وسهولة الوصول إلى الأسواق والموردين، وجودة البنية التحتية. في المقابل، تبدو الاعتبارات التقليدية والعاطفية أقل تأثيراً في عملية اتخاذ القرار، وإن كانت قد تسهم بصورة غير مباشرة في تعزيز العقلانية الاقتصادية للمالكين من خلال حرصهم على ضمان استمرارية المؤسسة.

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والحفاظ على الإرث العائلي عبر الأجيال. كما كشفت نتائج التحليل القياسي عن وجود علاقة إيجابية ذات دلالة إحصائية بين نسبة تمثيل أفراد العائلة في مجلس الإدارة وإيرادات المؤسسة، مما يشير إلى أن ارتفاع مستوى المشاركة العائلية في الحوكمة يرتبط بتحسين الأداء الاقتصادي. وبصفة عامة، تؤكد الدراسة أهمية اقتصاديات القرب في توجيه الاستراتيجيات المكانية للمؤسسات العائلية وفي تشكيل سلوكها الإداري والحوكمي.

الكلمات المفتاحية: المؤسسات العائلية؛ سلوك التوطن؛ المناطق الصناعية؛ اقتصاديات القرب؛ حوكمة الشركات.

INTRODUCTION

Industrial Zones and Activity Zones are widely recognized as key instruments of economic development. By providing appropriate infrastructure and facilitating access to productive resources, they create an environment conducive to business competitiveness and growth. Their importance is closely tied to agglomeration economies and proximity economics, extensively discussed in the literature on economic geography and urban economics.

Fundamentally, agglomeration economies and proximity economics provide firms with significant advantages in terms of productivity and profitability (Polèse & Shearmur, 2009). These benefits, often linked to positive externalities, manifest in multiple ways: the circulation and diffusion of knowledge, access to pools of skilled labor, the availability of specialized suppliers, and improved access to markets. They also enhance specialization and the division of labor, thereby reinforcing the importance of location choices as key determinants of productivity and long-term growth.

Within this framework, the behavior of family firms toward Industrial and Activity Zones (specialized spaces) raises specific interest. Family businesses represent one of the oldest and most widespread organizational forms worldwide and remain crucial actors in contemporary economies. Characterized by ownership and governance concentrated within a single family across multiple generations, they play a central role in both national and global economies. Their decision-making logic, often portrayed as a balance between family attachment and economic rationality (Gómez-Mejía et al., 2007), raises important questions about how they evaluate trade-offs when making location choices.

This leads to a central research question: what factors influence the behavior of family firms with regard to Industrial and Activity Zones, and what preferences do they exhibit in terms of location? The guiding hypothesis is that, despite their family-oriented identity, these firms are likely to prioritize the tangible economic advantages provided by such zones, including infrastructure quality, accessibility to markets and suppliers, and the availability of specialized services. This assumption is grounded in the idea that family firms are not only driven by operational efficiency but also by a strong desire to ensure the long-term survival of the business and the preservation of the family legacy. As a result, family decision-makers are expected to favor strategies that enhance firm sustainability and economic performance over purely sentimental or geographical attachment.

This reasoning naturally leads to extends the analysis toward a second, closely related question concerning the relationship between family governance and firm performance. Indeed, since location decisions are primarily made by family members involved in governance, their behavioral preferences regarding spatial choices are expected to directly influence firm

performance. Accordingly, family governance becomes a key explanatory factor of firm performance, as the strategic choices made by family decision-makers (particularly regarding location) constitute an essential determinant of economic success. In this sense, both research questions are deeply interconnected and can be viewed as two dimensions of a single analytical framework linking governance, location behavior, and economic outcomes.

To address these questions, the analysis proceeds in two sequences. First, a qualitative exploration of the Family Business Index 2023 (a global ranking of the 500 largest family firms by revenue compiled by EY and the University of St. Gallen) provides an initial overview of spatial behavior. Second, econometric analyses are applied to the same dataset to identify the main determinants of performance and governance-related outcomes among family firms. This sequential approach captures both the qualitative and quantitative dimensions of family firms' strategic behavior. The results are expected to contribute to a deeper understanding of the strategic logics guiding family firms, and to enrich ongoing debates on the role of proximity economics in corporate governance, spatial organization, and firm performance.

1- Literature Review

Family businesses, defined as organizations where ownership and management are controlled by multiple generations of the same family (Chua et al., 1999), represent one of the most prevalent and enduring organizational forms worldwide and dominate the global economic landscape. According to statistics from the Family Firm Institute (2017), reported by De Massis et al. (2018), family businesses account for two-thirds of all firms worldwide, generate between 70 and 90 percent of annual global GDP, and create 50 to 80 percent of jobs across most countries. Despite their global prevalence and economic weight, their spatial behavior remains understudied, especially regarding the use of industrial and activity zones. This gap is particularly notable given that family firms combine economic rationality with socioemotional attachments in their decision-making processes (Gómez-Mejía et al., 2007).

1-1 The Evolution of Family Firms in Economic Research

Family firms have often been perceived as small-scale entities (Gallo, 1995) operating in traditional sectors. Over time, however, their substantial economic weight has been increasingly recognized. They account for more than two-thirds of firms in Western economies (Poulain-Rehm, 2006) and play a crucial role in wealth creation and employment generation. Their ability to combine long-term vision with managerial stability makes them key actors in dynamic and uncertain environments.

Academic research on family firms emerged in the 1970s and expanded significantly during the 1980s (Arrègle & Mari, 2010). Much of this literature has focused on definitions, succession processes, and the relationship between family and business systems (Chrisman et al., 2003). Yet, spatial behavior and location choices remain relatively underexplored. In Algeria, research on family firms began to emerge more prominently in the 1990s, but their spatial strategies are still insufficiently studied despite their strong presence in the national economy.

Several contributions have emphasized the determinants of family firm success, and particularly the distinctive tension between economic rationality and socio-emotional

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attachments, a concept often captured by the preservation of “socioemotional wealth (SEW)” (Berrone et al., 2012). This tension can exert a dual influence: while it may at times constrain decision-making by prioritizing emotional considerations over strict efficiency (Hirigoyen, 2008), it can also play a highly positive role by fostering long-term commitment and resilience. In fact, socio-emotional attachments encourage family members to support the firm during difficult periods, sustaining their involvement when external investors would be more likely to withdraw. As highlighted by Basly (2007), this willingness, rooted in emotional ties and the desire to preserve the family legacy, makes family shareholders more inclined to ensure the firm’s survival across generations. This enduring commitment represents a distinctive strength of family businesses compared to other organizational forms.

Building on this perspective, Boukerma & Mortet (2022) emphasize the pivotal role of the founder in family business dynamics. As the initial architect of the firm’s strategic trajectory, the founder not only ensures the firm’s growth and continuity across generations but also shapes its long-term orientation, notably through the critical decision of the first location during its establishment.

The founder’s distinctive characteristics (experience, vision, and capacity to transmit values) are decisive for the firm’s long-term success or failure. However, when ownership and management are passed from one generation to the next, the succession process often introduces diverging objectives and strategic orientations (Hirigoyen, 2008). This transitional phase can be particularly delicate, as differences in priorities between generations may reshape the firm’s development path, including its spatial choices.

In the same vein, Merzouk & Abedou (2015) argue that the success of entrepreneurial family businesses in Algeria relies on a combination of factors such as strategic geographic positioning, rigorous planning, and strong partnership networks. Complementing this view, Merzouk (2018), based on a survey of 70 Algerian industrial family firms, shows that both managerial experience and intergenerational succession dynamics significantly influence entrepreneurial orientation and spatial strategies. Taken together, these studies highlight the founder’s central role and the critical importance of intergenerational transitions, confirming that location decisions constitute a key lever for sustaining competitiveness and resilience in family firms.

1-2 The Economic Function of Industrial and Activity Zones: Theoretical Foundations

In Algeria, the expressions “Industrial Zones” and “Activity Zones” are commonly used to designate spatial units specifically planned to host manufacturing, commercial, and service activities. These areas function as policy instruments aimed at structuring investment and fostering productive activity. In the international economic literature, however, a variety of terms are employed to capture similar realities such as industrial parks, business parks, industrial estates, special economic zones (SEZs), or industrial districts. Despite such terminological diversity, all refer to institutionalized spatial arrangements designed to stimulate economic development by concentrating firms in a favorable environment equipped with specialized infrastructure and services, fostering agglomeration economies, and facilitating access to markets and resources (Gillio & Ravalet, 2009).

In essence, these zones are policy-driven attempts to create a spatial comparative advantage, transforming a generic location into a privileged hub for productivity and innovation. By clustering complementary firms, they create opportunities for synergy (Brullot et al., 2014) and collaboration while simultaneously reducing transaction and coordination costs. Shared infrastructure (such as transport networks, energy supply, waste management systems, and logistics facilities) lowers fixed costs for individual firms, while proximity to suppliers, customers, and a skilled labor pool enhances competitiveness and innovation potential. Thus, Industrial and Activity Zones appear not merely as land developments but as deliberate policy instruments designed to strengthen the strategic role of location in fostering long-term economic growth (Baranova et al., 2021).

The theoretical bedrock for understanding this spatial logic is found in classical location theory. J.H. Von Thünen's (1826) seminal model of agricultural land use established transport cost minimization as a primary determinant of location, illustrating how economic rent decays with distance from a central market. A. Weber (1909) later formalized this for industrial activity, constructing a model where the optimal plant location is determined by minimizing the total transport costs of raw materials and finished goods. From this perspective, modern industrial and activity zones are the institutional embodiment of these classical principles; they are engineered to directly lower the logistics and proximity constraints identified by von Thünen and Weber.

However, the role of these zones in the 21st century extends far beyond this foundational cost-minimization function. Contemporary economic geography emphasizes their evolved function as platforms for regional competitiveness and integration into global value chains. They are increasingly designed to attract foreign direct investment (FDI), act as incubators for small and medium enterprises (SMEs) and innovative startups, and facilitate the upgrading of domestic firms through exposure to international best practices. A significant development is the rise of eco-industrial parks, which integrate principles of the circular economy by promoting industrial symbiosis, where one firm's waste becomes another's input, thus reconciling economic objectives with sustainable development.

In summary, industrial and activity zones represent both continuity and adaptation: continuity, as they operationalize the classical principles of location theory; and adaptation, as they respond to contemporary imperatives of global competitiveness, innovation, and sustainable development. For family businesses, whose location calculus often balances economic rationality with socio-emotional constraints, the concentrated advantages offered by these zones present a compelling value proposition for analysis in this study.

2- Family Firms' Location Preferences: a qualitative analysis of the determinants of spatial choices

The location choices of family firms result from a complex interplay between economic rationality and socio-emotional considerations. Two complementary notions, territorial marketing and territorial intelligence, provide a useful analytical lens for understanding how these decisions are shaped. Territorial marketing refers to the deliberate strategies deployed by local and regional authorities to attract and retain firms through targeted promotion, incentives, and territorial branding. Territorial intelligence, in contrast, involves the systematic collection

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and analysis of spatial and socioeconomic data to identify territorial strengths, guide planning, and support decision-making (Pecqueur, 2006).

In practice, these concepts operate synergistically. Territorial intelligence identifies a territory's competitive advantages (infrastructure quality, labor market characteristics, regulatory environment) while territorial marketing communicates these assets to potential investors. For family firms, this informational ecosystem is particularly crucial, as their location calculus often balances standard economic factors with unique familial considerations.

Therefore, family-specific logics often condition location choices: the preservation of socioemotional wealth (SEW), founder effects, succession dynamics, and a long-term horizon can either dampen or amplify sensitivity to short-term economic incentives. Consequently, family firms' location calculus often balances economic rationality with socio-emotional constraints.

The decision matrix of family firms can be structured around four main dimensions:

- Economic and Infrastructural Factors: production costs, transport connectivity, market accessibility, and availability of utilities;
- Institutional Environment: regulatory clarity, tax incentives, administrative efficiency, and governance quality;
- Socio-Emotional Considerations: family heritage, community ties, and intergenerational attachment to place;
- Sectoral and Operational Requirements: industry-specific needs, labor skill requirements, and supply chain configurations.

This framework reveals why family firms may exhibit heterogeneous location behaviors, with some prioritizing economic efficiency while others emphasize socio-emotional wealth preservation. Unlike multinational corporations, whose location choices are primarily driven by profit maximization, family firms combine economic rationality with socio-emotional considerations such as territorial attachment, heritage preservation, and long-term vision. Consequently, this section examines these preferences along two dimensions: urban versus rural environments and Industrial and Activity Zones versus non-designated Zones.

2-1 Urban or Rural Preferences

The first strategic trade-off faced by family firms lies in the urban-rural dichotomy. Urban areas provide direct economic benefits: proximity to large consumer markets, advanced infrastructure, diversified business ecosystems, a skilled labor force, and enhanced opportunities for networking and innovation. Yet, these advantages often come at the cost of higher operational expenses, fiercer competition, and stricter regulatory frameworks.

Rural areas, in contrast, offer lower land and operational costs, proximity to natural resources, stronger community embeddedness, and a more stable environment conducive to the preservation of family identity. Such locations reinforce a sense of territorial belonging, which plays a particularly influential role in family firms' decisions. For many, remaining in their place of origin carries symbolic value tied to family history, tradition, or the firm's role in the local community.

Thus, family firms' resolution of this trade-off depends heavily on three mediating factors:

2-1-1 Geographical Attachment and Socio-Emotional Ties

Many family firms maintain profound connections to specific locales rooted in multigenerational presence. This territorial embeddedness manifests through:

- Cultural linkages: Artisanal producers may prioritize locations central to their cultural identity, valuing traditional craftsmanship over pure economic optimization;
- Community commitment: Rural family firms often serve as community pillars, with strong relational capital influencing location inertia;
- Heritage preservation: Maintaining operations in founding locations symbolizes continuity and honors family legacy.

2-1-2 Sectoral Imperatives and Operational Requirements

The nature of economic activity fundamentally constrains location options:

- Agriculture and resource-based firms necessarily locate rurally due to land and environmental requirements;
- Manufacturing firms balance rural cost advantages against urban market access;
- Service and retail businesses typically favor urban centers for customer proximity.

2-1-3 Cost-Benefit Calculations

Despite familial attachments, economic viability remains crucial:

- Operational efficiency: Firms weigh location-specific costs against revenue potential;
- Market positioning: Some premium producers choose higher-cost locations that enhance brand perception;
- Competitive differentiation: Unique geographical attributes can create sustainable advantages.

2-2 Industrial and Activity Zones versus Off-Zone Locations

The second dimension involves the choice between locating within Industrial and Activity Zones, which reflect deliberate policy-driven planning, and operating outside zones, which follow more spontaneous, market-driven dynamics shaped by land availability and historical path dependence (Samson, 2003).

Industrial and Activity Zones reflect a voluntarist policy approach based on spatial planning. It functions as instruments of public policy, designed to structure investment, reduce infrastructure costs, and foster inter-firm synergies. They typically provide specialized facilities, proximity to economic partners (Kirman, 1998), and access to fiscal or regulatory incentives. For family firms, such zones can support growth, innovation, and integration into broader networks, while also mitigating investment risks.

Conversely, non-designated Zones represent more autonomous strategies, rooted in market availability or family-specific preferences for independence. These locations allow firms to maintain stronger territorial embeddedness and control over operations, sometimes perceived as compromised in standardized, policy-driven environments.

This trade-off illustrates a central tension in family firms' locational strategies:

- On one side, the pursuit of competitive advantages, synergies, and opportunities embedded in Industrial and Activity Zones;

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- On the other, the preservation of autonomy, family identity, and territorial rootedness, which often encourages companies to remain in peripheral areas or original locations.

This dichotomy reflects the broader tension between top-down spatial planning and bottom-up market-driven settlement patterns, each presenting distinct advantages aligned with different firm characteristics and strategic orientations.

2-2-1 Planned Economic Zones: The Voluntarist Policy Approach

Planned zones represent deliberate governmental interventions to shape economic geography through concentrated infrastructure investment and regulatory frameworks. For family firms, these zones offer:

- Infrastructure Certainty and Shared Facilities:
 - ✓ Industrial Zones: Provide heavy-duty utilities, specialized waste management, and logistics corridors that would be prohibitively expensive for individual firms to develop;
 - ✓ Activity Zones: Offer modern commercial spaces, high-speed connectivity, and shared business services that reduce initial capital outlays.
- Regulatory Clarity and Administrative Efficiency:
 - ✓ Streamlined permitting processes and single-window clearance systems reduce bureaucratic friction;
 - ✓ Predictable regulatory environments with established zoning rules minimize operational uncertainty;
 - ✓ Special economic incentives (tax holidays, investment subsidies) specifically target zone occupants.
- Strategic Agglomeration Benefits:
 - ✓ Deliberate clustering of complementary businesses creates guaranteed access to suppliers and customers;
 - ✓ Formal knowledge-sharing platforms and business networking facilities foster innovation spillovers;
 - ✓ Enhanced visibility and signaling value from location within recognized economic hubs.

2-2-2 Off-Zone Locations: Organic Market-Driven Settlement

In contrast, non-designated zones represent spontaneous, market-driven patterns of economic settlement that have evolved without centralized planning. These locations appeal to family firms through:

- Operational Autonomy and Flexibility:
 - ✓ Freedom from zone-specific regulations and administrative oversight;
 - ✓ Ability to customize facilities and operations without conforming to standardized requirements;
 - ✓ Greater flexibility in expansion, modification, and adaptive reuse of spaces.
- Cost Structures and Market Proximity:
 - ✓ Often lower land and rental costs outside designated economic zones;
 - ✓ Direct access to specific local markets or residential catchments;
 - ✓ Opportunity to leverage underutilized or unconventional spaces at competitive rates.
- Socio-Emotional and Historical Attachments:

- ✓ Preservation of multigenerational presence in traditional family locations;
- ✓ Stronger integration within established community networks and social capital;
- ✓ Alignment with family identity and heritage independent of planning designations.

2-2-3 The Family Firm Calculus: Planned Efficiency Versus Organic Authenticity

Family firms navigate this dichotomy through a distinctive decision matrix that weighs economic efficiency against socio-emotional considerations:

- Growth-Oriented vs. Stability-Oriented Strategies:
 - ✓ Ambitious family firms pursuing rapid scaling often favor planned zones for their infrastructure and agglomeration advantages;
 - ✓ Tradition-focused family firms prioritizing control (Le Vigoureux & Aurégan, 2012) and continuity frequently prefer organic locations that preserve established operational patterns.
- Generational Transition Effects:
 - ✓ Successor generations often drive transitions to planned zones, seeking modern facilities and professional networks;
 - ✓ Founding generations typically exhibit stronger attachment to organic locations that embody family history and legacy.
- Sectoral and Operational Requirements:
 - ✓ Manufacturing-intensive family firms gravitate toward industrial zones for technical infrastructure;
 - ✓ Customer-facing service businesses may prefer organic urban locations for market accessibility;
 - ✓ Artisanal and tradition-based enterprises often remain in historic locations central to their brand identity.
- Institutional Trust and Governance Considerations:
 - ✓ Family firms with high institutional trust typically engage more with planned zone offerings;
 - ✓ Those with lower institutional confidence often prefer the autonomy of organic settlements.

2-2-4 Policy Implications and Evolving Hybrid Models

This analysis reveals how family firms' location choices reflect broader attitudes toward economic planning versus market organicism. Contemporary trends show emerging hybrid approaches:

- Some planned zones now incorporate "heritage quarters" that accommodate traditional family enterprises;
- Off-zone locations increasingly benefit from infrastructure upgrades that provide zone-like advantages.

The persistent tension between planned and organic locations reflects the broader equilibrium that economies seek between structured development and spontaneous growth. Ultimately, family firms' location preferences emerge at the intersection of economic incentives, institutional frameworks, and family values. Understanding this articulation requires a dual perspective that accounts for both market logics and socio-emotional attachments.

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Beyond functional considerations, family values introduce an additional layer of complexity, as location choices often reflect not only strategic calculation but also identity, continuity, and belonging. In this regard, territorial marketing initiatives can significantly influence perceptions by aligning zone characteristics with family firms' specific needs and aspirations.

3- Methodology and Empirical Analysis

3-1 Data and Sources

The empirical analysis relies on data drawn from the Family Business Index (EY & University of St. Gallen, 2023), which ranks the 500 largest family-owned firms worldwide according to their revenues.² Inclusion in the Index follows strict criteria: firms must be at least in their second generation of family ownership, or, if still in the first generation, must include at least two family members occupying key executive positions. Families must hold a substantial controlling stake, at least 50% of voting rights for privately held companies, and a minimum of 32% for publicly listed ones. Only one company per family is included, prioritizing either the holding company or the entity with the highest revenues when multiple firms qualify.

The Index is constructed from publicly available information, including financial reports, Bloomberg and Orbis databases, and corporate disclosures. Reported revenues must derive from financial statements dated no more than 24 months prior to the Index's publication.

Although not an official list of the world's largest family firms, the Family Business Index remains a robust and methodologically consistent database, offering a reliable empirical foundation for examining the behavior and locational preferences of family enterprises.

Since its inception in 2015, the Index is published every two years since 2015, and includes prominent companies such as the Algerian company SPA CEVITAL, owned by the Rebrab family.³ The 2023 edition reveals that the world's 500 largest family businesses are expanding nearly twice as fast as the global economy, outpacing the growth rates of both developed and emerging economies (1.5 times faster). Collectively, these firms generate approximately USD 8.02 trillion in revenues and employ 24.5 million people worldwide.

Europe hosts nearly half of all listed firms, while North America accounts for 30% and the Asia-Pacific region 16%. The latter has shown steady expansion, with its representation rising from 61 firms in 2015 to 79 firms in 2023.

The sectoral distribution of firms listed in the Index reveals a notable prevalence of the consumer goods industry, which accounts for 37.4% of the sample. This is followed by the advanced manufacturing and mobility sector, which comprises 28.6% of the firms included in the ranking.

In terms of corporate governance and human capital, the data indicates that only 19% of the companies feature a board member under the age of 40, and women occupy 23% of the total board seats. Furthermore, an analysis of operational tenure underscores the significant maturity and longevity of these entities: 76% of the listed firms have been operating for more than fifty (50) years, and nearly 31% have existed for over a century.

² Further details are available on the EY website (www.ey.com).

³ The complete Family Business Index is accessible at www.familybusinessindex.com

Therefore, this database provides detailed information on the structural and governance characteristics of family firms. Taken together, these dimensions allow for a systematic exploration of firm behavior, performance dynamics, and locational patterns within a coherent empirical framework.

3-2 Exploratory Spatial Assessment and Preliminary Observations

In an initial phase, an exploratory econometric analysis was envisaged to examine the determinants of family firms' location choices, based on data drawn from the Family Business Index. The objective was to construct an endogenous variable, LOCATION, coded as 1 if a firm was situated within an industrial zone, an activity zone, or an urban agglomeration, and 0 otherwise. This variable was intended to serve as the dependent variable in a regression framework designed to identify the key determinants influencing the spatial location of family firms.

To ensure representativeness, a random sampling procedure was adopted rather than using the entire list of firms included in the 2023 Family Business Index. Firms were selected across different countries and regions, deliberately varying in size, employment levels, and sectoral specialization, with the aim of forming a balanced and representative analytical sample. The construction of the LOCATION variable was then carried out for this sample, using geolocation tools such as Google Maps and Google Earth to determine the precise coordinates of each firm's headquarters or principal operational site. Spatial indicators, such as proximity to other firms, surrounding land use, and infrastructure density, were used to classify each firm as either being within an industrial, activity, or urban zone (coded 1) or outside such zones (coded 0).

In practice, the main challenge did not consist in distinguishing between urban and rural settings, but rather in determining whether firms were located within formally planned industrial or activity zones. However, given the high density of surrounding infrastructure and economic activity, it became evident that all firms in the sample were located in urban areas. None of the firms could be classified as rural. Consequently, the LOCATION variable took the value 1 for all observations, resulting in a lack of statistical variation in the dependent variable and making econometric estimation unfeasible, as all observations fell within the same spatial category. From an econometric standpoint, this perfect collinearity rendered the estimation of a location-choice model impossible, thereby bringing the quantitative analysis to a halt at this stage.

From an analytical perspective, however, this outcome offers an instructive empirical insight: family firms exhibit a strong tendency to establish themselves in highly urbanized and infrastructure-rich environments. These locations often correspond to competitive industrial clusters or Special Economic Zones (SEZs), as defined by the UNCTAD World Investment Report (United Nations Conference on Trade, 2019). This tendency is particularly evident among firms headquartered in highly urbanized economies, such as South Korea, where the urbanization rate exceeds 80% of the total population.

Although the econometric estimation of location determinants could not be pursued due to the absence of variance, this exercise nonetheless generated valuable insights:

- Sectoral diversity: Family firms operate across a wide range of industries, including energy, financial services, technology, consumer goods, and advanced manufacturing, indicating substantial heterogeneity in their economic profiles.

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- **Geographical dispersion:** Firms are distributed across multiple national contexts, with a notable concentration in highly urbanized economies such as South Korea, India, Italy, and the United States, allowing for comparative insights into spatial and institutional dynamics.
- **Family participation:** Most firms exhibit substantial family involvement in ownership and management, often exceeding 50% of voting rights, reaffirming the enduring influence of family-based control structures.
- **Firm size:** The size of firms varies considerably, ranging from a few dozen to several thousand employees, which may affect both strategic behavior and locational decisions.
- **Longevity:** Many firms demonstrate exceptional resilience, with a substantial share operating for more than half a century, and numerous cases exceeding a century of existence, reflecting long-term adaptability and stability.
- **Performance heterogeneity:** Revenues range from a few million to several billion U.S. dollars, revealing considerable variation in growth trajectories and financial performance.

Taken together, these observations suggest that infrastructural quality, accessibility, and proximity to dense economic networks play a more decisive role in shaping the locational behavior of family firms than socio-emotional or heritage-based considerations. The strong preference for urban and industrial environments, demonstrated by the predominance of firms operating in highly urbanized and industrialized countries underscores a strategic orientation toward economic efficiency, market connectivity, and long-term viability rather than purely familial or sentimental motives.

This pattern aligns with the literature on spatial agglomeration and urban competitiveness, confirming that family firms, despite their distinctive governance structures, behave in ways consistent with rational economic actors seeking to preserve long-term continuity through efficient spatial positioning.

3-3 Regression Analysis of Family Firm Behavior and Economic Performance

Given that the LOCATION variable exhibited no statistical variation (taking the value 1 for all firms in the sample) it was not possible to proceed with the initially intended regression analysis on the determinants of location choice. As all sampled firms were situated in highly urbanized environments, the absence of variance in the dependent variable rendered the econometric estimation infeasible. Consequently, the empirical focus was reoriented toward a complementary empirical question that could capture the behavioral and performance dimensions of family firms.

The revised analysis focused on assessing the relationship between family governance characteristics and economic performance. The underlying objective was to determine whether family firms' behavior is primarily driven by economic rationality, seeking efficiency, competitiveness, and profitability, or by socio-emotional factors linked to family control and legacy preservation. In other words, the analysis aimed to evaluate which underlying logic (economic or familial) tends to prevail in shaping firm performance and governance outcomes. This prevailing logic is also expected to influence firms' spatial and locational behavior, thereby providing indirect insights into the original research question.

To empirically test this relationship, a linear regression model was estimated in which the logarithm of firm revenue (LOG(REVENUE)) served as the dependent variable, representing economic performance. Two independent variables were included:

- **RATIO_OF_FAMILY_IN_BOARD**: measuring the proportion of family members serving on the board of directors, used as a proxy for the degree of family influence in governance;
- **LOG(EMPLOYEES)**; capturing firm size, included to control for scale effects and the potential impact of size heterogeneity among firms.

The logarithmic transformation of both **REVENUE** and **EMPLOYEES** was applied to harmonize the range of variation among the variables. As the governance ratio is expressed as a proportion bounded between 0 and 1, the log transformation brings the other two variables onto comparable scales, facilitating coefficient interpretation and improving model stability.

The model was estimated using the Ordinary Least Squares (OLS) method on 500 observations from the Family Business Index. Accordingly, the econometric specification is expressed as follows:

$$\text{Log}(\text{REVENUE})_i = \beta_1 \text{RATIO_OF_FAMILY_IN_BOARD}_i + \beta_2 \text{Log}(\text{EMPLOYEES})_i + \varepsilon_i$$

where **LOG(REVENUE)** represents firm performance (proxied by revenue), **RATIO_OF_FAMILY_IN_BOARD** captures the intensity of family control, and **LOG(EMPLOYEES)** captures firm size, thereby controlling for scale effects. The inclusion of these variables allows for an empirical assessment of the extent to which the concentration of family control affects firm outcomes, while the size variable ensures that the model accounts for structural heterogeneity among firms.

This model provides a framework to test whether family ownership and governance reinforce or hinder economic performance. A positive and significant coefficient for **RATIO_OF_FAMILY_IN_BOARD** would indicate that family involvement strengthens firm performance, thereby enhancing long-term orientation. Conversely, a negative or insignificant relationship could suggest that excessive family dominance restricts managerial efficiency and introduces inefficiencies.

In this context, the regression results are expected to shed light on the underlying drivers of family firms' behavior revealing, even indirectly, whether the dominant logic shaping their location and strategic choices is rooted in economic optimization or in socio-emotional wealth preservation, and whether a potential tension exists between these two rationalities. Consequently, this empirical reorientation serves not as a departure from the initial objective but as a behavioral investigation that maintains coherence with the overarching research problem. Moreover, it provides a robustness check for the preliminary findings derived from the spatial analysis, thereby reinforcing the consistency and interpretive depth of the overall empirical framework.

The estimation of the multiple regression was performed with EViews 13, and the results are presented in the table below.

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Table 1: Regression Results: Family Governance and Firm Performance

Dependent Variable: LOG(REVENUE)

Method: Least Squares

Sample: 1 500

Included observations: 500

Variable	Coefficient	Std. Error	t-Statistic	Prob.
RATIO_OF_FAMILY_IN_BOARD	0.333074	0.126177	2.639737	0.0086
LOG(EMPLOYEES)	0.632968	0.014848	42.62898	0.0000
R-squared	0.113253	Mean dependent var		2.232133
Adjusted R-squared	0.111417	S.D. dependent var		0.856307
S.E. of regression	0.807195	Akaike info criterion		2.413612
Sum squared resid	314.7051	Schwarz criterion		2.430866
Log likelihood	-583.3008	Hannan-Quinn criter.		2.420391
Durbin-Watson stat	1.409313			

Source: Author's calculations using EViews 13

3-4 Interpretation and Discussion of Empirical Results

The equation estimated by multiple linear regression can be expressed as follows:

$$\text{Log}(\text{REVENUE})_i = 0.33 \text{RATIO}_{\text{OF FAMILY IN BOARD}_i} + 0.63 \text{Log}(\text{EMPLOYEES})_i + \varepsilon_i$$

with an R-squared of 0.113, indicating that approximately 11% of the variation in firm revenues is explained by the two independent variables. Although this level of explanatory power is modest, it is consistent with cross-sectional firm-level data, where performance is influenced by numerous factors. The overall model is statistically significant, confirming that family governance and firm size jointly exert a meaningful influence on firm performance.

The estimated coefficient of 0.3331 for RATIO_OF_FAMILY_IN_BOARD is positive and statistically significant at the 1% level ($p = 0.0086$). Economically, this implies that an increase in the proportion of family members on the board of directors is associated with a rise in firm revenue, holding firm size constant. This result highlights that greater family involvement in governance structures tends to reinforce organizational cohesion, trust, and commitment to long-term objectives. From a behavioral perspective, it supports the hypothesis that family members' socio-emotional investment (rooted in the desire to sustain the family legacy) can align with economic rationality and enhance firm performance.

The coefficient of 0.6329 for LOG(EMPLOYEES) is also positive and highly significant ($p < 0.001$), suggesting a strong elasticity of revenues with respect to firm size. A 1% increase in the number of employees is associated with an approximate 0.63% increase in revenue.

When considered jointly, the positive and significant coefficients of both variables suggest that as firms expand in size, the presence of strong family governance continues to exert a favorable influence on performance. This implies that the managerial logic typical of family-controlled firms, characterized by close oversight, remains effective even as organizational complexity increases. In other words, as the number of employees grows, family management practices appear to scale efficiently, ensuring that resources and human capital are controlled and coordinated in an optimal manner. The result thus highlights a form of managerial

resilience, where the family governance model does not lose effectiveness with firm growth but instead adapts to it, reinforcing both economic performance and organizational stability.

Moreover, this pattern suggests the absence of tension between economic rationality and familial rationality. On the contrary, their coexistence appears to generate a complementary dynamic: family cohesion reinforces strategic resilience, while economic logic sustains growth and competitiveness. This finding corroborates earlier theoretical propositions that family members (unlike external shareholders or short-term investors) tend to remain engaged during adverse periods, prioritizing long-term survival and continuity over immediate returns.

Building on this interpretation, the results provide robust evidence that economic rationality predominates in the strategic behavior of family firms, and help to explain the strong preference of family firms for urban, industrial, and activity zones, as observed in the exploratory phase of this study. The positive association between the intensity of family governance and firm performance indicates that family-controlled boards privilege economic continuity and operational efficiency rather than sentiment-driven decision-making. This aligns with insights from corporate governance and industrial location theories, both of which emphasize that control stability can enhance long-term performance (Allouche & Amann, 2000) when it supports economically optimal spatial and organizational positioning.

Furthermore, the uniform presence of these firms within urban and industrial environments highlights their collective reliance on agglomeration advantages, such as access to infrastructure, skilled labor, and dense business networks. This spatial pattern reinforces the notion that family firms, despite their distinctive governance structures and socio-emotional attachments, are fully embedded in the competitive dynamics of modern economic geography.

In summary, the empirical evidence suggests that family firms' strategic and locational behaviors are primarily driven by objectives of efficiency and continuity. Family governance does not hinder economic rationality; rather, it strengthens it by anchoring firms within durable managerial and spatial configurations that foster stability, innovation, and adaptability in dynamic urban-industrial ecosystems.

Conclusion

Family firms, positioned at the intersection of public spatial planning and private entrepreneurial initiative, thus epitomize the multidimensional nature of territorial dynamics. As (Samson, 2003) aptly notes, the territory is the meeting point of history and geography in the economic field, a locus of resources, competencies, and externalities, carried by a shared history that underpins actors' proximity." Family businesses embody this conception: their spatial choices translate the interplay between inherited attachments and forward-looking strategies, contributing not only to their own continuity but also to sustainable territorial development.

This study set out to examine the location behavior of family firms with respect to Industrial and Activity Zones, exploring whether their locational choices are primarily shaped by economic rationality or by socio-emotional and heritage-based motivations. Drawing upon data from the Family Business Index 2023 and employing both qualitative and econometric analyses, the investigation sought to clarify how family governance structures influence strategic decisions concerning spatial positioning and performance.

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The exploratory spatial analysis revealed that all sampled firms were situated in highly urbanized, infrastructure-rich environments, often comparable to formal Industrial or Activity Zones. This concentration underscores a clear preference for locations offering accessibility, market connectivity, and economies of agglomeration, factors that prevail over sentimental or tradition-driven considerations. Paradoxically, however, it is precisely these sentimental and heritage-oriented dimensions that appear to compel family firms toward such economically rational choices. The desire to preserve the family legacy and ensure intergenerational continuity often translates into a resolute, even relentless, pursuit of efficiency and competitiveness. In this sense, the emotional attachment to the enterprise becomes a powerful driver of pragmatic and survival-oriented behavior, reinforcing rather than opposing economic logic.

The econometric analysis further reinforced these conclusions. The estimated regression model showed a statistically significant and positive relationship between the proportion of family members on the board (RATIO_OF_FAMILY_IN_BOARD) and firm performance, measured by the logarithm of revenues. Similarly, firm size (LOG(EMPLOYEES)) displayed a strong and highly significant positive effect on performance. Together, these coefficients suggest that family governance and firm scale jointly contribute to enhanced economic outcomes. As firms expand, the persistence of an effective family managerial logic appears to support efficient resource coordination and strategic cohesion, rather than hindering operational performance.

When considered collectively, these results indicate that economic and familial rationalities are not mutually exclusive; rather, they interact in a complementary and mutually reinforcing manner. Family cohesion and long-term commitment provide stability and resilience, while economic logic ensures adaptability and growth. This synergy explains why family-controlled firms remain robust even in adverse economic conditions family owners tend to sustain involvement and preserve the firm's continuity when external shareholders might withdraw.

At a broader level, the concentration of family firms in urban-industrial contexts highlights their integration into the dynamic modern economic geography. Their preference for agglomerated, infrastructure-rich environments reflect a pragmatic orientation toward efficiency, innovation, and network embeddedness. In this sense, family firms are not guided by isolationist or purely sentimental motives, but by a logic of spatial optimization fully compatible with their long-term vision and governance structure.

However, this spatial behavior does not imply the absence of territorial attachment. On the contrary, the attachment to a place (often inherited through generations) remains a defining feature of family enterprises. Yet this attachment is not static or restrictive; it operates as a strategic resource insofar as it serves the continuity and competitiveness of the firm. When remaining in a given territory enhances access to markets, reputation, or skilled labor, this rootedness becomes an asset reinforcing long-term performance. Conversely, when market pressures, competition, land constraints, or expansion opportunities demand relocation, the same sense of familial stewardship encourages decisive and economically rational action. The will to preserve and transmit the family legacy thus acts as a powerful driver of adaptation,

pushing firms, when necessary, to relocate or expand into Industrial and Activity Zones in order to take full advantage of the benefits they offer and to secure future growth and sustainability.

In summary, the study provides empirical evidence that the strategic and locational behavior of family firms is predominantly driven by efficiency and continuity objectives. Family governance, far from being a constraint, reinforces economic rationality by embedding decision-making in stable yet adaptive organizational structures. These findings contribute to the understanding of how family businesses navigate spatial and economic imperatives, revealing that their attachment to place coexists with a strong orientation toward competitiveness and sustainable growth.

By bridging insights from family business governance and economic geography, this research highlights that proximity, infrastructure quality, and access to dense economic networks remain decisive factors in shaping the spatial preferences of family firms. Ultimately, their location choices and performance outcomes converge toward a pragmatic equilibrium where familial values support, rather than oppose, the pursuit of economic efficiency. This synthesis of familial values and economic rationality not only ensures the survival of the family enterprise but also strengthens its role as a resilient and competitive actor within the global economy.

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