

# Factors influencing digital adoption in the family business: A conceptual framework

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## Abstract

The increasing prevalence of digital technologies has transformed business operations, offering both opportunities and challenges. Family businesses, as key contributors to the global economy, face unique challenges in digital adoption due to their distinctive structural and cultural characteristics. Despite their significance, limited research has explored how these enterprises navigate digital transformation. This study conducted a systematic literature review and bibliometric analysis of 23 peer-reviewed articles retrieved from Scopus. It identifies the critical factors influencing digital adoption in family businesses. It also proposes a conceptual framework comprising four key propositions, including entrepreneurial orientation as a driver of digital adoption, dynamic capabilities as enablers of successful digital transformation, family business culture as a central influence on digital adoption, and trust as a determinant of effective digital integration. The findings highlight the potential of digitalization to enhance operational efficiency, competitiveness, and community engagement in family businesses. This study contributes to the literature on digital adoption in family businesses and offers practical insights for enterprises embarking on digital transformation.

Keywords: Digitalization, Digital adoption, Family business, Bibliometric analysis

## Abstrak

Peningkatan penggunaan teknologi digital membawa perubahan signifikan dalam operasional bisnis, menghadirkan berbagai peluang sekaligus tantangan baru. Sebagai salah satu pilar utama perekonomian global, bisnis keluarga menghadapi hambatan khusus dalam proses adopsi digital akibat karakteristik struktural dan budaya yang melekat. Namun demikian, kajian yang menelaah bagaimana bisnis keluarga mengelola dan menanggapi proses transformasi digital masih relatif terbatas. Melalui tinjauan pustaka sistematis dan analisis bibliometrik terhadap 23 artikel terindeks Scopus, studi ini mengidentifikasi sejumlah faktor kunci yang memengaruhi adopsi digital pada bisnis keluarga. Selain itu, penelitian ini merumuskan sebuah kerangka konseptual yang mencakup empat proposisi utama, yaitu orientasi kewirausahaan sebagai pendorong utama adopsi digital, kapabilitas dinamis sebagai faktor pemungkin keberhasilan transformasi digital, budaya bisnis keluarga sebagai determinan sentral dalam proses adopsi digital, dan kepercayaan sebagai fondasi penting dalam integrasi teknologi. Temuan penelitian ini menegaskan bahwa digitalisasi berpotensi meningkatkan efisiensi operasional, daya saing, serta keterlibatan komunitas dalam bisnis keluarga. Dengan demikian, studi ini memperkaya literatur terkait adopsi digital dan manajemen inovasi pada konteks bisnis keluarga, sekaligus memberikan implikasi praktis bagi perusahaan yang sedang memulai atau memperkuat perjalanan transformasi digitalnya.

Kata kunci: Digitalisasi, Adopsi digital, Bisnis keluarga, Analisis bibliometrik

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How to cite: Tirdasari, N. L. (2026). Factors influencing digital adoption in the family business: A conceptual framework. *Journal of Management and Digital Business*, 6(2), 687–700. <https://doi.org/10.53088/jmdb.v6i2.2567>

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## 1. Introduction

Family businesses constitute a substantial portion of the global corporate landscape, account for 80% - 98% of all businesses worldwide (Ramadani et al., 2024). These enterprises are not only critical drivers of economic development but also serve as vital sources of employment, with family businesses accounting for 50% - 75% of the global workforce (Poza & Daugherty, 2018; Purba & Tan, 2018). In many countries, family businesses contribute significantly to national income, accounting for approximately 70% - 75% of the total economic output (Ashraf et al., 2023). Given their pervasive role, family businesses are crucial to economic resilience and long-term growth at the local and global levels.

As digital technologies evolve rapidly, family businesses face unprecedented opportunities and challenges. The integration of digital tools and strategies is no longer a luxury but a necessity for businesses that wish to remain competitive and relevant in the modern marketplace. To ensure long-term success and continuity, these businesses must embrace digital technology as a strategic imperative (Tirdasari & Dhewanto, 2020). However, family businesses face unique obstacles during digital transition. The traditional nature of these enterprises, often characterized by close-knit structures, long-standing values, and an emphasis on preserving family legacy, can create resistance to change in these companies. Additionally, the lack of digital expertise and organizational inertia often prevents these businesses from embracing technology as a core strategic driver of their operations. Despite these barriers, the potential for digital adoption to enhance operational efficiency, foster innovation, and drive long-term sustainability is significant (Burt et al., 2021).

Recent studies have begun to explore aspects of digitalization in family businesses. For example, Costa et al. (2023) showed that digitalization increases innovation in small family businesses, while Basly and Hammouda (2020) proposed a conceptual relationship between family ownership and digital entrepreneurship. Other studies highlighted the role of entrepreneurial orientation (Hernández-Perlines et al., 2021), dynamic capability (Helfat, 2022), and a trust-based organization (de Groote & Bertschi-Michel, 2021) in shaping strategic transformation. However, these factors remain fragmented, most focus on single dimensions, specific industries, and Western contexts, and rarely integrate these perspectives into a unified framework that explains how and why family businesses adopt digital technology. Therefore, a clear theoretical-empirical gap exists. Although theory suggests that entrepreneurial orientation, dynamic capability, culture, and trust jointly outline digitalization, recent empirical studies have not systematically synthesized these factors into an integrated model. Moreover, it offers limited insight into how these drivers interact in the context of digitalization, particularly in family businesses facing succession and socioemotional constraints.

To address this gap, this study conducts a systematic literature review and bibliometric analysis of Scopus-indexed publications to identify and synthesize the critical factors influencing digital adoption in family businesses. Building on established

theories and recent empirical findings, the study proposes a conceptual framework and four propositions explaining how entrepreneurial orientation, dynamic capability, organizational culture, and trust facilitate digitalization in family businesses. By doing so, it contributes to both theory and practice by clarifying the strategic ways that enable family businesses to successfully navigate digital adoption and sustain competitiveness in an increasingly digital economy. Accordingly, this study is guided by the following research question: How does the existing literature conceptualize the drivers of digital adoption in family business?

## 2. Research Method

This study aims to identify and analyze research trends in digital adoption within family businesses using a systematic literature review and a bibliometric analysis. A systematic literature review is a valuable approach for analyzing extensive research conducted over an extended period (Linnenluecke et al., 2020). The data collection process used Scopus, a widely recognized repository of academic publications in the social sciences because of its comprehensive bibliographic resources (Ferdilan et al., 2021).

This study was conducted in three key stages. First, identification; second, screening; and third, inclusion (Page et al., 2021). In the first phase, identification, relevant articles were retrieved from Scopus using pre-defined search queries related to "digital adoption" and "family business." Duplicates and inaccessible articles were excluded from the study. During the second phase, screening, eligibility criteria were applied, focusing on articles in English within the subject area of Business and Management and employing quantitative, qualitative, or mixed methodologies. Finally, the third phase, inclusion, yielded 23 articles that met the criteria and formed the basis for the analysis. In addition to the database search, the authors skimmed the reference lists of the retrieved articles. This step was crucial for identifying additional relevant scholarly works that may have been missed in the initial database search. By examining the reference lists, the authors identified older or overlooked studies, broadening the scope of the literature review. This approach not only enriched the pool of relevant literature but also ensured a more comprehensive and inclusive understanding of the research landscape on digital adoption in family businesses.

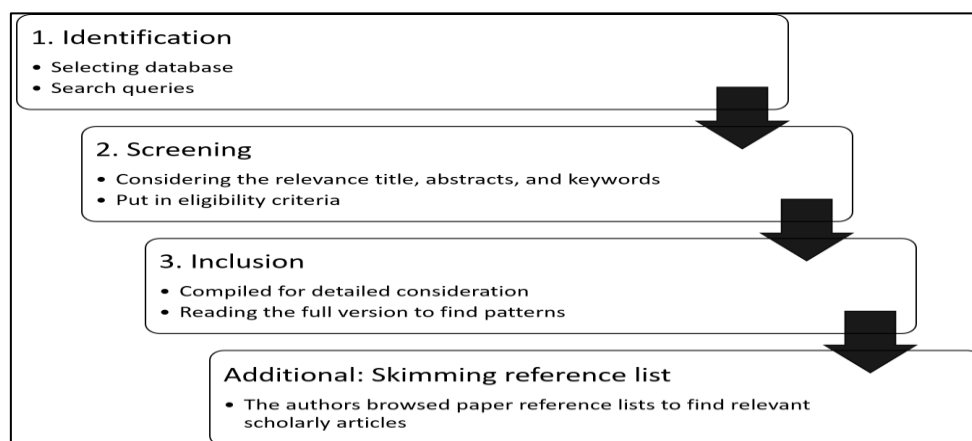


Figure 1. Article Selection Flow Retrieved from Scopus Database

The identification phase began with a database search using a pre-determined strategy. Two search queries were combined using the logical operator "AND" to target articles related to "digital adoption" and "family business." This process yielded 122 articles for review. Articles without full-text access were excluded, and reference lists were reviewed to identify additional relevant publications. The final set of articles from this phase was then screened.

Second, the screening process involves applying eligibility criteria to filter records. The criteria encompassed several factors, including article type, publication year, subject area, and other relevant considerations. Furthermore, this stage involved filtering materials available for full-text access. During this phase, it is imperative for researchers to thoroughly examine the entire text to ascertain the number of reports to be retrieved and identify those that have not been retrieved. This study focuses on published English-language papers. The present study employed three inclusion criteria to facilitate the systematic collection of appropriate data for this review. Initially, the search strategy encompassed journal articles employing study designs ranging from quantitative to qualitative to mixed-methods. Next, only manuscripts published in English were considered in this study, as English is a widely used language among scholars worldwide. Next, it is essential to note that this study exclusively encompasses studies conducted in business and management.

Finally, this study determined the total number of studies included in the review. A total of 23 papers were included in the systematic literature review. All studies that met the specified eligibility criteria were downloaded in full. The data were compiled in a spreadsheet, including specific details such as the article type, title, number of citations, and other relevant information. Additionally, figures and tables were extracted. The data were also stored in a reference management program, specifically Mendeley, to facilitate relevance evaluation. A thematic synthesis approach was employed to explore all retrieved data. This methodology facilitated the identification of patterns and correlations within the dataset. The table below shows the process used to complete the literature search and the outcomes obtained at each stage of the search.

Table 1. Results of Systematic Article Identification and Screening

Stage	Details	Result
1	Keyword searching in the database: digital adoption and family business	122
2	Refine results limited to the language of English; subject area of Business, Management and Accounting; document type of Article; source type of Journal; and all open access	23
3	Detailed considerations	23

This study identified 23 relevant articles for the research objective. A synthesis of these 23 articles is provided in the Table below.

Table 2. Prior Research on Digital Adoption in Family Business

No	Author, Year	Method	Sample Size	Country	Topic
1	Appleton and Holt, 2024	Qualitative	28	United Kingdom	Digitalization in family farms
2	Bürgel and Hiebl, 2024	Quantitative	85	Germany	Conflict management
3	Morales et al., 2024	Quantitative	1142	Argentina	Industry 4.0
4	Bürgel et al., 2023	Quantitative	133	Germany	Digital resilience
5	Nieto et al., 2023	Quantitative	1500	Spain	Open innovation
6	Cravotta and Grottke, 2019	Qualitative	-	Germany	Digitalization and traditional values
7	Soluk and Kammerlander, 2021	Qualitative	127	Germany, Austria, Switzerland	Conflict management
8	Costa et al., 2023	Qualitative	9	South Italy	Digitalization in wineries
9	Union et al., 2022	Qualitative	1	Honduras	Digital response to Covid-19
10	Kusa et al., 2022	Quantitative	117	Poland	Entrepreneurial behaviours
11	Ferraro and Cristiano, 2021	Literature review	-	-	Business valuation
12	Schulze and Bövers, 2022	Qualitative	141	Germany	Digital resilience
13	Nguyen et al., 2024	Quantitative	466	Vietnam	Fintech
14	Ates and Acur, 2022	Qualitative	1	United Kingdom	Conflict management
15	Petru et al., 2020	Quantitative	370	Czech Republic	Marketing tools
16	Pont and Simon, 2024	Qualitative	9	Spain	Supply chain
17	Bouncken and Schmitt, 2022	Qualitative	8	Germany	Challenges
18	Kraus et al., 2020	Qualitative	27	Europe	Digital resilience
19	Upadhyay et al., 2023	Quantitative	631	India	AI
20	Issah and Calabro, 2024	Quantitative	954	Europe	Family goals
21	Poschl and Freiling, 2020	Qualitative	4	Europe	Succession
22	Yildiz et al., 2024	Quantitative	334	Turkey	Employee empowerment
23	Lopez-Nicolas et al., 2024	Qualitative	15	Europe	Business model innovation

### 3. Results and Discussion

#### 3.1. Results

Recent studies have explored digital-related issues in family businesses from different perspectives. For example, Appleton and Holt (2024) and Costa et al. (2023) explored digitalization in family businesses and wineries, highlighting how traditional values interact with technology use. Bürgel et al. (2023) and Schulze and Bövers (2022) focused on digital resilience, showing how family businesses respond strategically to economic disruptions. At the same time, Nguyen and Nguyen (2024) and Upadhyay et

al. (2023) investigated fintech and AI adoption, emphasizing the roles of technological capabilities and entrepreneurial behavior. Other studies, such as Burgel and Hiebl (2024) and Soluk and Kammerlander (2021), addressed conflict management and family dynamics, indicating that socio-emotional and relational factors strongly affect strategic decisions in family businesses.

Despite these contributions, the existing literature remains fragmented. Most studies focus on siloed perspectives of digitalization, such as resilience, conflict, AI, or business model innovation, without integrating them into an articulate framework. Moreover, although entrepreneurial behavior, organizational capabilities, culture, and trust recur across studies, they are rarely examined together as interrelated drivers of digital adoption. In addition, empirical evidence is still heavily concentrated in European contexts, with limited representation from Asia and other emerging economies. This study addresses these gaps by synthesizing prior research into a conceptual framework that links entrepreneurial orientation, dynamic capability, family business culture, and trust as interrelated factors of digital adoption in family business.

Research interest in digital adoption within family businesses continues to rise, as reflected in the yearly publication growth shown in the Figure below.

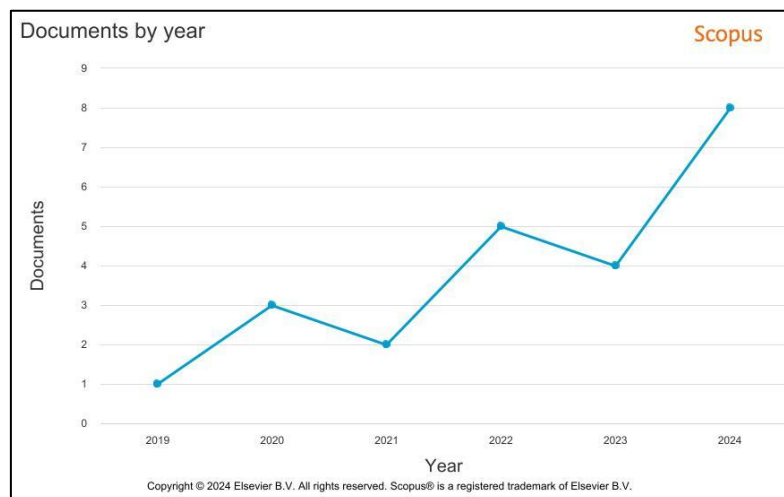


Figure 2. Number of Publications Per Year Between 2019 and 2024

This figure depicts the annual number of publications retrieved from Scopus between 2019 and 2024. The data reveal a general upward trend, indicating a growing academic interest in digital adoption and family businesses. The number of publications increased from one in 2019 to three in 2020 and remained steady in 2021. A notable rise occurred in 2022, with five publications, followed by a slight decline to four in 2023. In 2024, the number surged to eight, the highest during the study period. This sharp increase suggests a heightened recognition of this research area within the academic community. The overall trend highlights the expanding scholarly engagement and underscores the importance of continued exploration in this field.

An analysis of country affiliation reveals a concentration of research productivity in selected regions, as shown in the Figure below.

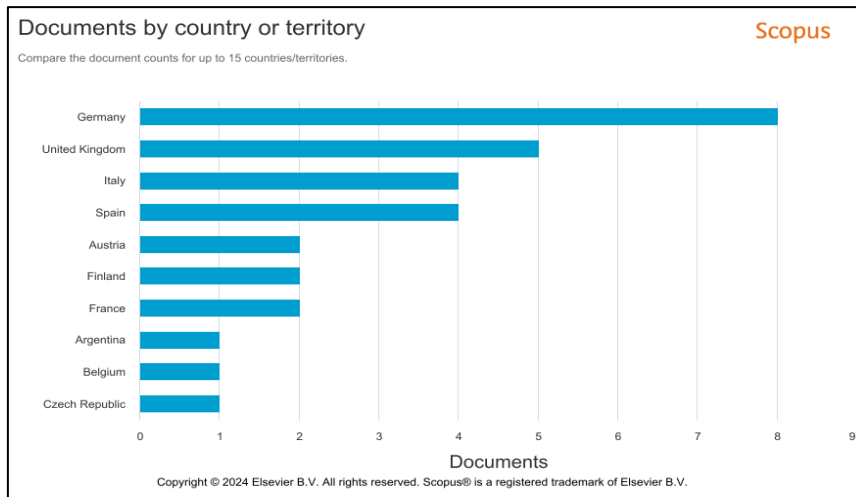


Figure 3. Publications Based on Countries

The figure displays the number of documents published by each country, as recorded in Scopus. The data highlights that Germany was the leading contributor with eight documents, followed by the United Kingdom with six publications. Italy and Spain each accounted for four documents, indicating their active involvement in this research field. Austria, Finland, and France each contributed three documents, whereas Argentina, Belgium, and the Czech Republic each contributed two publications. This comparison highlights the dominance of European countries, with Argentina being the only non-European nation represented. Notably, Indonesia is absent from the list of contributing countries, underscoring its limited presence in this research area in the analyzed dataset. The lack of representation from Indonesia underscores the need to strengthen research initiatives on digital adoption and family businesses.

The majority of studies on digital adoption in family businesses originate in the business and management fields, with limited contributions from other academic domains, as shown in the Figure below.

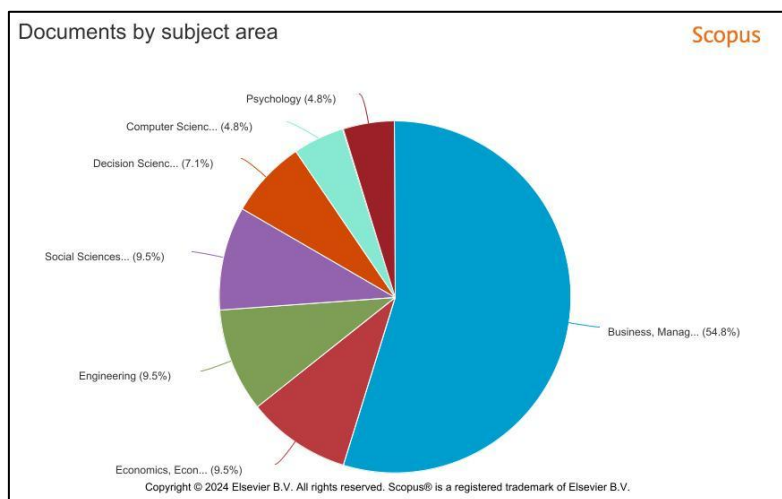


Figure 4. Top Subject Area of Family Business Research

The figure presents the distribution of publications by subject area, focusing on family business research. Over half (54.8%) of the documents fall within Business,

Management, and Accounting, underscoring the central role of family business studies in shaping organizational strategies and management practices. Other disciplines, including Economics, Engineering, and Social Sciences, each contributed 9.5%, highlighting their relevance in exploring economic, technological, and societal dimensions. Smaller contributions from Decision Sciences (7.1%) and fields such as Computer Science and Psychology (4.8% each) point to underexplored areas, including the role of technology adoption and the psychological dynamics of family businesses. These findings suggest opportunities for interdisciplinary research to provide a more comprehensive understanding of family business dynamics and their broader impact.

### **3.2. Discussion**

This section discusses the key findings derived from the bibliometric analysis and systematic review. It also interprets how those findings inform the proposed conceptual framework on digital adoption in family businesses. First, the publications trend indicates an increase in scholarly attention to digital adoption since 2016, with a sharp increase in 2021. It confirms that digitalization has become an issue for companies, including family businesses. The lack of an earlier systematic review of family business digitalization, as identified in our analysis, underscores the novelty and relevance of this study. This gap justifies the need for a structured framework to explain how and why family businesses adopt digital technologies. Second, the geographical findings reveal a strong concentration of research output in Europe and the Americas, while Asia remains underrepresented, despite its economic importance and dominance of family businesses.

The low contribution from Indonesia and several Asian countries indicates significant untapped research and practical potential. It suggests that digital adoption in family businesses is shaped not only by firm-level factors but also by regional institutional and cultural contexts. Therefore, frameworks developed primarily from Western settings may not fully capture the realities of family businesses in emerging economies. Third, the dominance of high-impact Q1 journals in publishing digital adoption articles reflects the strategic and theoretical importance of this topic. However, this analysis also shows that family business-specific digital adoption models remain limited. Most frameworks originate in small and medium-sized enterprises (Costa et al., 2023) or general business contexts. It reinforces the need for a family business-related framework that integrates entrepreneurial orientation, dynamic capability, culture, and trust as interrelated mechanisms driving digital adoption. Digitalization fundamentally transforms organizational operations, shifting from rigid hierarchical structures to dynamic network-based models. This shift reflects the growing importance of collaboration, adaptability, and innovation in modern business (Basly & Hammouda, 2020).

Digitalization does not merely change the technology, it alters organizational culture, management processes, and even the core values that underpin business strategy. Businesses can be broadly categorized into two groups based on their digital

engagement: "digital natives" and "digital adopters." "Digital natives" or "born-digital" organizations are those in which information technology has been integral to their business strategies from the outset. These firms embrace digital tools and systems as foundational to their operations, shaping everything from product development to customer engagement (Leong et al., 2016). In contrast, "digital adopters" are businesses that initially operated with manual or traditional systems and have since integrated digital technologies into their existing structures. These organizations typically face more significant challenges in digital transformation, as the transition involves not only technological upgrades but also substantial changes to organizational culture, structure, and strategic focus (Tumbas et al., 2015).

For family businesses, which are often more risk-averse and value tradition, digital adoption can present additional hurdles. Unlike larger, more resource-rich companies, family businesses may have fewer digital champions and lack the infrastructure required to implement cutting-edge technologies effectively. Family businesses that embrace digital technologies need to foster organizational agility and openness to change, both of which are crucial in driving the marketplace. Leadership is paramount in guiding family businesses through this transformation. Appointing a dedicated digital officer or transformation leader can be pivotal in driving the digital agenda forward and ensuring that digital strategies align with broader business goals. Despite these challenges, family businesses have inherent strengths that facilitate digital adoption. For example, their long-term orientation and strong family values provide a stable foundation for innovation when effectively managed.

Based on these findings, the proposed conceptual framework responds to the structural and behavioral features of family businesses. The figure below shows a preliminary model of the role of digital technology in a family business. It depicts a conceptual framework comprising two distinct and independent factors: entrepreneurial orientation and dynamic capability. Two moderator variables, culture and trust, were included in the framework. Finally, the dependent variable of interest in this study is digital adoption in family businesses.

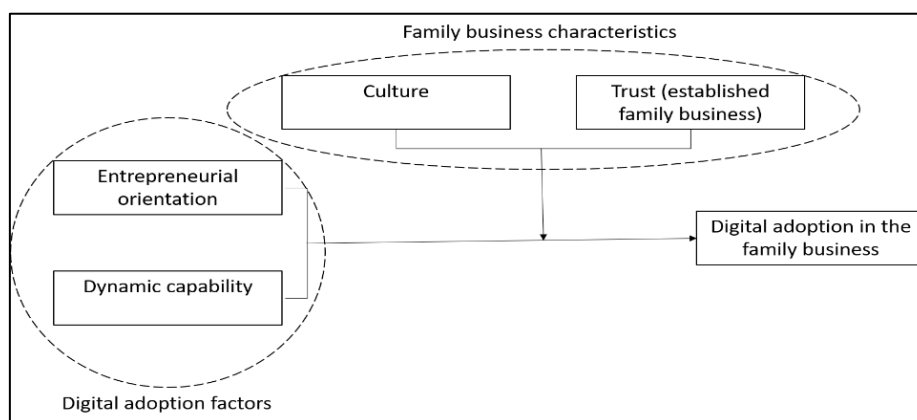


Figure 5. Preliminary Model of Digital Adoption in the Family Business

These reviews give rise to several propositions. The independent variable in this study is entrepreneurial orientation. Prior research has demonstrated that an

entrepreneurial mindset among a firm's top executives positively influences the adoption of digital technologies in family business contexts (Hernández-Perlines et al., 2021). The first proposition posits that entrepreneurial orientation drives digital adoption. Entrepreneurial orientation encompasses a variety of strategic behaviors, decision-making styles, and organizational practices and is considered a critical factor in driving successful digital integration (Troise et al., 2022).

Our review indicates that family businesses that demonstrate proactiveness, innovativeness, and risk-taking are more likely to view digitalization as a strategic growth tool rather than merely an operational necessity. Its importance is particularly pronounced in multigenerational family businesses, where it facilitates cultural transformation and supports the renewal of business practices (Liew & Loo, 2024). Scholars have increasingly emphasized the value of cultivating an entrepreneurial culture within family businesses to foster innovation and enhance organizational performance (Liew & Loo, 2024). The strong involvement of family members in the business shapes distinctive entrepreneurial decision-making processes that often differ from those in non-family businesses (Schepers et al., 2021).

While some studies argue that family ownership fosters long-term orientation and conservative risk behavior, others contend that family businesses can also display a strong entrepreneurial orientation (Rienda et al., 2025). It reveals the need for deeper insight into the underlying factors shaping entrepreneurial and digital actions. Therefore, this study posits that a family business with an entrepreneurial drive is inclined to employ digital technologies as a strategic tool to enhance growth and competitiveness. Family businesses can sustain their competitiveness and thrive in a dynamic business environment by cultivating an entrepreneurial mindset and fostering a culture of innovation and adaptability. It can be achieved by effectively utilizing digital technology. Hence, the following proposition is made:

**Proposition 1: Entrepreneurial orientation drives digital adoption within a family business**

Dynamic capability is the second independent variable proposed in this study. The bibliometric patterns show that adaptability and reconfiguration capacity are central themes in digital adoption research. For family businesses, dynamic capability enables them to sense and seize digital opportunities, transform existing routines, and maintain a long-term orientation. It is an organization's ability to adapt to ever-changing external conditions (Helfat, 2022). Dynamic capabilities are crucial for effectively facilitating digital adoption in family businesses. By developing and nurturing these competencies, family businesses can adapt quickly, foster creativity, and effectively address opportunities and challenges arise from digital technologies. Consequently, they can improve their competitive standing within the industry. The expeditious advancement of digital technology is revolutionizing the economy and radically reshaping the conceptualization of management and leadership. The importance of digitalization lies in its ability to enhance the advantages of digital technology and facilitate the development of its capabilities (Elidjen et al., 2019). The significance of dynamic capabilities lies in their ability to exert influence and facilitate the integration of digital

technology into the company. Extensive research has examined the relationship between dynamic capability and strategic management, revealing a substantial and noteworthy impact. Hence, the following proposition is made:

**Proposition 2: Dynamic capability drives digital adoption within a family business**

The first moderator variable was culture. Our findings indicate that values, traditions, and identity shape how family businesses respond to technological change. A supportive culture that balances legacy with innovation strengthens the impact of entrepreneurial orientation and dynamic capability on digital adoption. It plays a prominent role in Indonesian family businesses. Previous studies have demonstrated that culture exerts the most significant influence (Hosseini et al., 2020). Cultural identity in family businesses is founded on intangible factors such as tradition. Culture within a family business can play a crucial role in shaping the adoption of digital technologies. The family's underlying values may influence digital adoption decisions. Aligning digital initiatives with these values fosters a strong sense of purpose and dedication to the adoption process. Family businesses can embrace digital technologies to achieve sustainable growth and success by cultivating a culture that promotes innovation, learning, and a client-centered approach. This study examines the influence of family business culture on the adoption of digital technologies, builds on prior empirical findings. Hence, the proposition is:

**Proposition 3: Culture in the family business leads the digital adoption**

The second moderator variable was trust. Within a family business, trust reduces resistance to change, supports knowledge sharing, and facilitates collaboration with external partners. Our analysis shows that trust enables family businesses to manage uncertainty and complexity during digitalization. Trust is not only a unifying framework for better understanding the unique nature of the business (Mickiewicz & Rebmann, 2020) but also a pivotal factor in facilitating and enabling the successful integration of digital technology. Trust is an essential component of the dynamic between family businesses and their advisers (de Groote & Bertschi-Michel, 2021). It lays the foundation for collaboration, promotes creativity and a willingness to take risks, enables open communication, and fosters strong relationships with internal and external stakeholders. The family business's ability to navigate the complexity of digital change while remaining faithful to its fundamental values and beliefs is, in essence, made possible by trust. According to Burt et al. (2021), family businesses are more likely to succeed when they have a clear understanding of the extent and potential of the necessary transition. Furthermore, it is worth noting that the success of family businesses is heavily dependent on the establishment and maintenance of trust in the knowledge-creation process (Bouncken et al., 2020). Hence, the proposition is:

**Proposition 4: Trust serves as the determinant for successful digital adoption in the family business**

#### **4. Conclusion**

This study provides a comprehensive review of digital adoption in family businesses and identifies the critical factors shaping their digital transformation. Through a

systematic literature review and bibliometric analysis, the findings demonstrate that digital adoption in family businesses is not driven by technology alone, but by a composition of strategic and organizational factors. The literature conceptualizes entrepreneurial orientation as a driver that motivated family businesses to pursue innovation associated with digitalization. Complementing this, dynamic capability explains how family businesses sense, size, and transform their companies through digitalization. In addition, the literature emphasizes organizational culture as a critical contextual driver. Family businesses that cultivate learning-oriented and adaptive cultures are more likely to support digitalization. Last, trust emerges as a mechanism that facilitates digital adoption by reducing resistance.

This study conceptualizes digital adoption in family businesses driven jointly by entrepreneurial orientation, dynamic capability, organizational culture, and trust, which interact to shape meaningful digital transformation. This study contributes by integrating fragmented dimensions into unified conceptual framework that explains digital adoption in family businesses as a multi-dimensional process. The findings highlight that family businesses should strengthening entrepreneurial leadership, building adaptive capabilities, fostering supportive cultures, and cultivating trust. Future research should empirically test the proposed framework across different industries. Expanding data sources beyond Scopus and incorporating longitudinal study would further enrich the understanding of how family businesses navigate digital adoption over time.

## References

- Appleton, S. W., & Holt, D. (2024). Aligning strategy and digitalisation activity as an incremental or radical innovation in family farms. *International Journal of Entrepreneurial Behavior & Research*, 30(2/3), 498–519. <https://doi.org/10.1108/IJEER-10-2022-0938>
- Ashraf, N., Wadho, W., & Shahid, S. (2023). Faultlines in Family SMEs: The U-Shape Effect of Family Control on Innovativeness and Performance. *M@n@gement*, 26(3), 1–15. <https://doi.org/10.37725/mgmt.2023.8135>
- Basly, S., & Hammouda, A. (2020). Family Businesses and Digital Entrepreneurship Adoption: A Conceptual Model. *Journal of Entrepreneurship*, 29(2), 326–364. <https://doi.org/10.1177/0971355720930573>
- Bouncken, R. B., Hughes, M., Ratzmann, M., Cesinger, B., & Pesch, R. (2020). Family firms, alliance governance and mutual knowledge creation. *British Journal of Management*, 31(4), 769–791. <https://doi.org/10.1111/1467-8551.12408>
- Burgel, T. R., & Hiebl, M. R. W. (2024). Conflict Management Strategies and the Digitalization of Family Firms: The Moderating Role of Generational Ownership Dispersion. *IEEE Transactions on Engineering Management*, 71, 9555–9574. <https://doi.org/10.1109/TEM.2023.3293855>
- Bürgel, T. R., Hiebl, M. R. W., & Pielsticker, D. I. (2023). Digitalization and entrepreneurial firms' resilience to pandemic crises: Evidence from COVID-19 and the German Mittelstand. *Technological Forecasting and Social Change*, 186. <https://doi.org/10.1016/j.techfore.2022.122135>

- Burt, B., Choi, S., & Dixon, J. (2021). *Why Digital Transformation Should Be A Family (Business) Affair*. PwC Australia. <https://www.pwc.com.au/digitalpulse/family-business-survey-digital-transformation.html>
- Costa, A., Presenza, A., & Abbate, T. (2023). Digital Transformation In Family-Owned Winery SMES: An Exploratory Analysis In The South-Italian Context. *European Journal of Innovation Management*, 26(7), 527–551. <https://doi.org/10.1108/EJIM-02-2023-0108>
- de Groote, J. K., & Bertschi-Michel, A. (2021). From Intention To Trust To Behavioral Trust: Trust Building In Family Business Advising. *Family Business Review*, 34(2), 132–153. <https://doi.org/10.1177/0894486520938891>
- Elidjen, Mihardjo, W. W., & Rukmana, R. A. N. (2019). Intervening Role of Innovation Management on Relationship between Digital Leadership and Dynamic Capability Accelerated by Collaboration. *International Journal of Innovation, Creativity and Change*, 6(1), 249–264.
- Ferdilan, R., Dhewanto, W., & Rustiadi, S. (2021). Evaluations Of An Entrepreneurship Development Program: A Systematic Literature Review. *JEMA: Jurnal Ilmiah Bidang Akuntansi Dan Manajemen*, 18(2), 107–136. <https://doi.org/10.31106/jema.v18i2.11461>
- Helfat, C. E. (2022). Strategic Organization, Dynamic Capabilities, And The External Environment. *Strategic Organization*, 20(4), 734–742. <https://doi.org/10.1177/1476127022111537>
- Hernández-Perlines, F., Covin, J. G., & Ribeiro-Soriano, D. E. (2021). Entrepreneurial Orientation, Concern For Socioemotional Wealth Preservation, And Family Firm Performance. *Journal of Business Research*, 126, 197–208. <https://doi.org/10.1016/j.jbusres.2020.12.050>
- Hosseini, S. H., Hajipour, E., Kaffashpoor, A., & Darikandeh, A. (2020). The Mediating Effect Of Organizational Culture In The Relationship Of Leadership Style With Organizational Learning. *Journal of Human Behavior in the Social Environment*, 30(3), 279–288. <https://doi.org/10.1080/10911359.2019.1680473>
- Leong, C., Pan, S. L., & Liu, J. (2016). Digital entrepreneurship of born digital and grown digital firms: comparing the effectuation process of Yihaodian and Suning. *Thirty Seventh International Conference on Information Systems*, 1–11.
- Liew, M. X., & Loo, Y. M. (2024). The family-level of generational involvement: impact on the nexus between entrepreneurial orientation and business performance among small family businesses. *Journal of Family Business Management*, 14(3), 475–494. <https://doi.org/10.1108/JFBM-01-2023-0013>
- Linnenluecke, M. K., Marrone, M., & Singh, A. K. (2020). Conducting Systematic Literature Reviews And Bibliometric Analyses. *Australian Journal of Management*, 45(2), 175–194. <https://doi.org/10.1177/0312896219877678>
- Mickiewicz, T., & Rebmann, A. (2020). Entrepreneurship as Trust. *Foundations and Trends® in Entrepreneurship*, 16(3), 244–309. <https://doi.org/10.1561/03000000088>
- Nguyen, P. N.-D., & Nguyen, H. H. (2024). Examining the Role of Family in Shaping Digital Entrepreneurial Intentions in Emerging Markets. *SAGE Open*, 14(1). <https://doi.org/10.1177/21582440241239493>

- Page, M. J., McKenzie, J. E., Bossuyt, P. M., Boutron, I., Hoffmann, T. C., Mulrow, C. D., Shamseer, L., Tetzlaff, J. M., Akl, E. A., Brennan, S. E., Chou, R., Glanville, J., Grimshaw, J. M., Hróbjartsson, A., Lalu, M. M., Li, T., Loder, E. W., Mayo-Wilson, E., McDonald, S., ... Moher, D. (2021). The PRISMA 2020 Statement: An Updated Guideline For Reporting Systematic Reviews. *BMJ*, 372(71). <https://doi.org/10.1136/bmj.n71>
- Poza, E. J., & Daugherty, M. S. (2018). *Family Business* (5th ed.). Cengage.
- Purba, J. T., & Tan, J. D. (2018). Owners' integrity, customers' relation, and focused attitude as strategies of family business sustainability and growth: an empirical study. *Journal of Economics, Business, & Accountancy Ventura*, 21(2), 187–198. <https://doi.org/10.14414/jebav.v21i2.1433>
- Ramadani, V., Chang, E. P. C., Palalić, R., & Memili, E. (2024). Nature Of Family Business. In *Entrepreneurial Family Businesses* (2nd ed., pp. 3–34). Springer. <https://doi.org/10.1007/978-3-031-59261-4>
- Rienda, L., Andreu, R., & Yang, Y. (2025). Entrepreneurs' Proactive Personality, Network Involvement, And International Entrepreneurial Intention In Family SMEs. *Review of Managerial Science*, 20, 1–28. <https://doi.org/10.1007/s11846-025-00899-6>
- Schepers, J., Vandekerckhof, P., & Dillen, Y. (2021). The Impact of the COVID-19 Crisis on Growth-Oriented SMEs: Building Entrepreneurial Resilience. *Sustainability*, 13(16), 9296. <https://doi.org/10.3390/su13169296>
- Schulze, M., & Bövers, J. (2022). Family Business Resilience: The Importance of Owner-Manager's Relational Resilience in Crisis Response Strategies. *European Journal of Family Business*, 12(2), 100–123. <https://doi.org/10.24310/ejfbefjb.v12i2.14657>
- Suluk, J., & Kammerlander, N. (2021). Digital transformation in family-owned Mittelstand firms: A dynamic capabilities perspective. *European Journal of Information Systems*, 30(6), 676–711. <https://doi.org/10.1080/0960085X.2020.1857666>
- Tirdasari, N. L., & Dhewanto, W. (2020). When is the Right Time for Succession? Multiple Cases Of Family Businesses in Indonesia. *Journal of Family Business Management*, 10(4), 349–359. <https://doi.org/10.1108/JFBM-10-2019-0064>
- Troise, C., Ben-Hafaïedh, C., Tani, M., & Yablonsky, S. A. (2022). New Technologies And Entrepreneurship: Exploring Entrepreneurial Behavior In The Digital Transformation Era. *International Journal of Entrepreneurial Behavior & Research*, 28(5), 1129–1137. <https://doi.org/10.1108/IJEBR-08-2022-999>
- Tumbas, S., Berente, N., Seidel, S., & vom Brocke, J. (2015). The 'digital façade' of rapidly growing entrepreneurial organizations. *Thirty Sixth International Conference on Information Systems*.
- Upadhyay, N., Upadhyay, S., Al-Debei, M. M., Baabdullah, A. M., & Dwivedi, Y. K. (2023). The Influence of Digital Entrepreneurship and Entrepreneurial Orientation On Intention of Family Businesses To Adopt Artificial Intelligence: Examining the Mediating Role of Business Innovativeness. *International Journal of Entrepreneurial Behavior & Research*, 29(1), 80–115. <https://doi.org/10.1108/IJEBR-02-2022-0154>