

Bibliometric Insights into Digital Transformation in Family Businesses

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Abstract

This research looks at how dynamic capabilities, human capital, and creativity work together to help family businesses become more digital. Family businesses make a big difference in the world economy, but it is getting harder for them to use digital tools while staying true to their values and thinking about the long term. A bibliometric analysis of 750 peer-reviewed papers from 2013 to 2023 is used to find important themes, new trends, and important contributors to the field. The results show that family businesses are both resistant to and able to adapt to digital change. This is often because of differences in how generations lead and worries about social and emotional wealth. Digital usage is driven by leaders from the next generation. Older members, on the other hand, often fight change because they like the way things were managed in the past. The study shows how important strategic leadership, investments in technology, and backing from institutions are for making digital transformation (DT) work. Also, there are clear differences between places in how people use technology. Developed economies use structured methods, while emerging markets have trouble with money and infrastructure. Innovation is a key factor in DT, but how it is used varies by industry. For example, manufacturing companies use Industry 4.0 technologies, while service-based companies focus on digital marketing and customer interaction. Even though scholars are becoming more interested, we still do not fully understand the social effects of digitisation, the problems that come with good governance, and the role that artificial intelligence (AI) plays in helping family businesses stay in business. The study's conclusion is that family

businesses need to find a balance between custom and new ideas in order to be successful in the digital world. It stresses the importance of structured frameworks, professionalisation, and collaborative leadership. It encourages more study into cross-regional comparisons, AI-driven governance models, and ethical issues in DT. This will help academics, practitioners, and policymakers who want to make family businesses more resilient in the digital age.

Keywords: Family Business, Digital Transformation, Bibliometric Study, Dynamic Capabilities, Human Capital and Creativity

Introduction

China ranks top globally in the quantity and application of family-owned enterprises, followed by the United States and India (Credit Suisse Research Institute, 2018). Family enterprises have increasing difficulties in maintaining competitive advantage within the interconnected global economy. Family enterprises significantly contribute to the global economy, distinguished by their distinctive integration of familial connections and commercial activities. These firms are characterised by the participation of many generations in decision making, ownership, and management, which cultivates a robust dedication to the business's enduring success (Kumar, 2024). Thukral and Jain (2021) studied the tendency in the definition of family enterprises and recognised the principal terminology associated with the notion of family firms. The study's results revealed that family businesses were often inadequately explained, and when definitions

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were provided, the focus predominantly centred on the business aspect of the family enterprise. The definitions frequently fail to operationalise the term ‘family’ because of its ambiguous composition. During the first research period from 1964 to 1987 investigators found that family ownership defined family businesses with management by family members ranking second.

During 1988 to 2002 both ‘ownership’ and ‘management’ defined family businesses but management stood out as the most significant factor during this period. During the last period from 2003 to 2013 family enterprises required both owners and managers to exist as defining elements. During this phase governance and continuity earned top priority, which shows that succession is now a key factor in building family enterprises. DT is now crucial for family businesses because it helps them work better with customers while making their operations and future performance stronger. The use of digital technology particularly artificial intelligence (AI) affects how these organisations run their business operations and compete in the market. The transformation happens because of how organisations run their business plus how they handle changes and bring young leaders into top positions.

Academics now focus their research on how family businesses transform digitally since digital tools quickly changed traditional business models. Family companies, which make up a large part of global businesses, operate effectively with digital tools because they think long term and have strong family ties plus socio-economic wealth (Gersick et al., 1997; Zahra, 2021). Researchers have not fully studied the relationship between family company operations and digital transformation (DT) including how these businesses merge their legacy standards with digital necessities. Research shows dynamic capacities, human capital, and innovation’s roles in family organisations (De Massis et al., 2018; Kraus et al., 2022); however, studies still need to show how these factors help or hinder DT. Research lacks a comprehensive approach to DT in family businesses because few studies combine insights from strategic management with technology studies and organisational behaviour. This research project takes its starting point from the increasing real-world importance of DT for family businesses as they adapt to new global

technology breakthroughs such as Industry 4.0, AI, and internet of things (IoT) (Hanelt et al., 2021). Family enterprises need to balance digital adoption with defence of core values and long-term goals according to Miller et al. (2020) and Hanelt et al. (2021). The COVID-19 pandemic has made digital resilience essential now, which proves that family businesses need to learn effective ways to use digital tools in their operations (Seetharaman, 2020). Even though DT of family businesses needs urgent attention researchers have not yet gathered enough evidence about successful digital adoption methods. This research project studies all available literature to find out what makes family enterprises transform digitally and what stands in their way.

- The foremost aim of this study is to elucidate the DT procedure in family enterprises by analysing the interaction among dynamic capabilities, human capital, and creativity.
- The study specifically intends to investigate the conceptual framework of the available literature on family businesses and DT, to ascertain principal research clusters, co-citation trends, and to furnish a systematic overview of prominent writers, journals, and geographical contributions.

This study encompasses a thorough evaluation of literature regarding family enterprises and DT from 2013 to 2023. The research concentrates on peer-reviewed journal articles and book chapters published in English, specifically highlighting interdisciplinary studies that amalgamate perspectives from business, management, and technology disciplines. The geographical scope is worldwide, emphasising both developed and emerging economies to encompass the varied cultural and institutional environments in which family enterprises function. The research used a mixed-methods approach, integrating bibliometric analysis to discern developing trends to reveal the underlying themes and patterns within the literature.

Subsequent to this introduction, the paper is organised as follows:

Section 2: Literature Review – conducts a critical analysis of the current literature on DT in family enterprises,

emphasising key theoretical frameworks, empirical evidence, and research deficiencies.

Section 3: Methodology — outlines the bibliometric approach, data sources, and analytical tools employed for delineating the study domain.

Section 4: Results — displays principal findings from the bibliometric analysis, encompassing citation networks, thematic groupings, and geographical research contributions.

Section 5: Discussion, Conclusion, and Prospective Directions – consolidates essential findings and suggests possible directions for subsequent investigation.

This study provides a structured and systematic analysis, contributing to the debate on family business digitisation and offering researchers and practitioners useful insights into developing research trends and strategic consequences.

Literature Review

Family Firms: A Comparative Analysis of India and Global Contexts

Family enterprises are a prevalent organisational model in both developed and emerging economies, although their structure and operations differ markedly according to institutional, cultural, and economic conditions. In India, family enterprises represent around 75% of publicly traded companies and are distinguished by concentrated family ownership, frequently upheld through pyramidal structures (Sarkar & Selarka, 2022). These companies face unique governance challenges such as their preference for male family members in leadership positions and their reluctance to hire professionals because they trust their family members to lead (Dutta & Bose, 2023; Gupta et al., 2021). Indian institutions that have weak legal enforcement and strong caste connections push family enterprise leaders to mostly use informal management systems (Damaraju & Makhija, 2023; Khanna & Palepu, 2023). Under Chinese business norms state involvement and Confucian values drive family firms to support family loyalty (Ding et al., 2023; Chen et al., 2022). Businesses in

North America and Europe maintain an effective division between ownership and management because of strong investor protection laws, which prevent family control (Schulze et al., 2023; Bennedsen et al., 2023). Family companies in Latin America and Africa must depend heavily on family connections because their countries deal with political turbulence and informal economic systems (Amoako et al., 2022; López-Iturriaga et al., 2023).

Research needs focus on digital revolution's influence on Indian family businesses plus international studies of succession strategies and policies that improve governance in developing countries. The evaluation shows that while family businesses worldwide deal with succession and professionalisation problems they need special policies for their local institutions and cultural backgrounds. These tailored policies can help family businesses navigate the complexities of their environments, fostering greater resilience and adaptability. By understanding the unique challenges they face, researchers and policymakers can develop strategies that not only support individual enterprises but also contribute to the broader economic stability of their regions. Ultimately, this collaborative approach can lead to sustainable growth and empower family businesses to thrive in an ever-changing global landscape.

Digital Transformation

Digital transformation (DT) helps companies become more successful by changing their business designs and operations while improving customer connection across all sectors (Vial, 2021). DT means companies use digital technology to transform how they work and make value (Hess et al., 2016). The transformation includes AI, big data analytics, cloud computing, and IoT (Kane et al., 2019). Good DT success depends on both implementing technology and developing strategic leadership teams through culture shifts while training employees (Warner & Wäger, 2019). dt in Indian markets takes form from network problems alongside government rules and social wealth disparities according to Dwivedi et al. (2022). Many studies highlight that organisations achieve better agility and innovation through DT (Bharadwaj et al., 2013). This improved

agility not only enhances operational efficiency but also fosters a culture of continuous improvement and adaptability. As organisations navigate these changes, they must prioritise collaboration and communication to ensure that all team members are aligned with the new digital goals. Companies utilising AI and automation indicate enhanced productivity and decision making (Davenport & Ronanki, 2018), while blockchain use improves supply chain transparency (Kshetri, 2021). Nonetheless, obstacles include cybersecurity threats, the digital divide, and opposition to change, which remains prevalent (Matt et al., 2015). Sector-specific analyses indicate that manufacturing enterprises use Industry 4.0 for intelligent production (Zheng et al., 2021), whereas service sectors emphasise customer experience via digital platforms (Pagani & Pardo, 2017). Institutional pressures, such as governmental digitalisation initiatives and competitive dynamics, furthermore, influence DT trajectories (Hanelt et al., 2021). Future studies ought to investigate sustainable DT, ethical AI implementation, and cross-industry benchmarking to rectify deficiencies in existing literature.

Family Firms and DT

DT is a crucial factor in redefining corporate operations across several industries; yet, its implementation in family enterprises has distinct problems and opportunities that require academic exploration. Family enterprises, defined by their long-term focus, emotional connection to legacy systems, and centralised decision making (Chua et al., 2012), demonstrate unique trends in adopting digital technologies in contrast to non-family organisations. Research shows that family businesses know DT is essential for their strategy but often hold on to socioemotional wealth (SEW) and preferential resource use when implementing it (De Massis et al., 2018; Röd, 2023). Family businesses face a challenge to balance digital progress with preserving their family's core values and decision-making structure (Arzubiaga et al., 2022).

Family businesses struggle to transform digitally because their founders or senior members strongly oppose changing their established ways of doing things according to Soluk et al. (2021). Older family members lack digital skills and prefer traditional management

systems that do not align with DT needs according to Kammerlander and Ganter (2015). The younger generations of G2 and G3 often drive DT through bringing new tech skills and global perspective plus their willingness to test emerging technologies (Calabrò et al., 2019). Family companies that involve their next-generation members in operations are more likely to adopt AI, blockchain, and data analytics according to research findings (Xi et al., 2023). These businesses use these technologies to enhance operational efficiency and customer engagement. SEW plays a very intricate role in helping family businesses adopt digital technology. According to Gómez-Mejía et al. (2007), some family businesses put non-financial goals ahead of technology investments while Pukall and Calabrò (2014) show that family businesses see DT as a path to future business success. Digital tools help family businesses store and improve their governance systems (Bauweraerts et al., 2023). Family businesses in India and other emerging economies face additional challenges because they have limited access to finance and poor infrastructure plus unclear rules that make DT more difficult (Dutta et al., 2022). The different industries influence how businesses use DT. Manufacturing family businesses embrace Industry 4.0 technologies to stay competitive, according to Frank et al. (2019), while service-based family firms focus on digital marketing and customer relationship management (CRM) systems, per Craig et al. (2022). Family companies with fewer employees are better at implementing digital changes than their larger and more structured family conglomerates (König et al., 2023).

Research needs to explore how official support from governments and business connections help family companies embrace digital change. Research that studies DT acceptance methods in family companies between developed and emerging countries will provide useful information. The ethical problems linked to DT need more research focus, especially in data protection and workforce elimination within family businesses.

Methodology

The study utilises a three-step methodology for the systematic analysis of research papers: selecting publications based on the Preferred Reporting Items

for Systematic Reviews and Meta-Analyses (PRISMA) criteria (Moher et al., 2009) and conducting bibliometric analysis to uncover emerging trends in the pertinent research domain. The PRISMA standards utilise a four-phase technique (identification, screening, eligibility, and inclusion) to guarantee that article selection is transparent and unbiased, therefore yielding more complete and reliable results (Fig. 1). A systematic material review exceeds conventional reviewing techniques by assessing material in a systematic and reproducible manner (Cook et al., 1997). The scientific community is progressively focusing on interdisciplinary study (Parris & Peachey, 2013). Thus, the systematic review will facilitate the reconciliation of varied opinions among academics from multiple fields.

Procedure for Article Selection

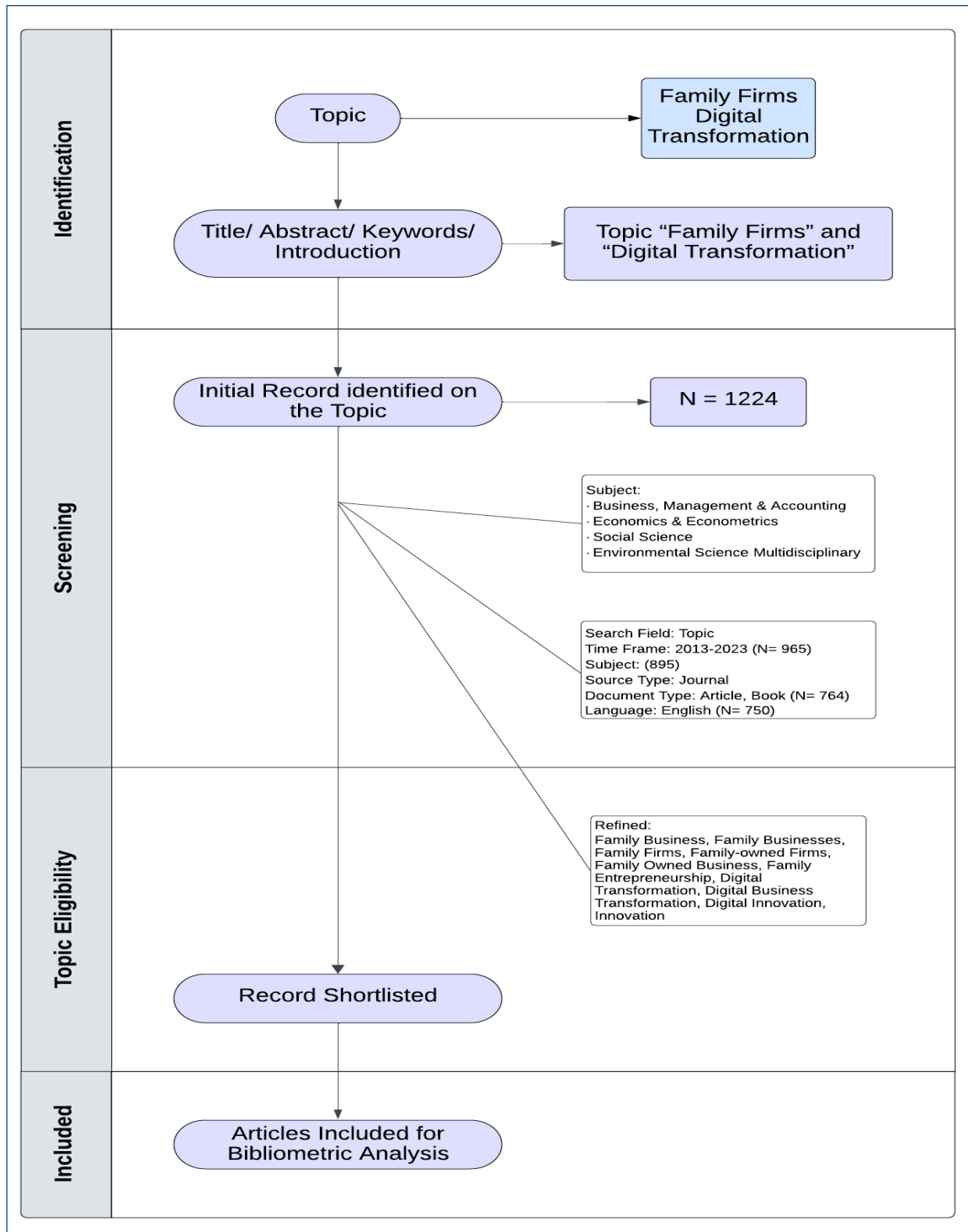
- The study sourced research articles from the Scopus online database, which offers extensive coverage of the social sciences and humanities. The database facilitated the identification and selection of journals within the relevant domain, culminating in a definitive sample of 750 research papers.
- *Inclusion Criteria:* Our study employed the following inclusion criteria:
 - In alignment with previous research (Pukall & Calabro, 2014; Kontinen & Ojala, 2010), we searched for the following terms in the title, abstract, and keywords: ('Family Business' OR 'Family Businesses' OR 'Family Firms' OR 'Family-owned Firms' OR 'Family Owned Business' OR 'Family Entrepreneurship') AND ('Digital Transformation' OR 'Digital Business Transformation' OR 'Digital Innovation' OR 'Innovation').
 - We included only peer-reviewed research articles at the final publication stage.

- We maintained an open-minded approach regarding the time period, encompassing articles from a decade (2013–23).
- The relevant disciplines considered were business, management and accounting, social sciences, environmental science, and multidisciplinary studies.
- Only articles published in the English language were included.

The use of PRISMA principles initially resulted in 1,224 research articles that met the specified inclusion criteria. Upon reviewing the title, keywords, abstract, and, when necessary, the introduction, we meticulously analysed the complete research papers to refine our selection, ultimately yielding a final sample of 750 research articles.

Bibliometric Analysis

The bibliometric analysis was performed utilising RStudio software (RStudio Team, 2020) and VOSviewer to get descriptive statistics for the 750 research papers that were previously extracted (Aria & Cuccurullo, 2019). RStudio software, utilising the 'bibliometrix' package (Aria & Cuccurullo, 2017), processes a substantial volume of information, encompassing citation details of authors and documents, along with bibliographical data pertaining to authors' affiliations, document language, and additional relevant information. As a result, different people give us different written and visual evaluations of this complicated and disjointed set of facts. The goal is to find the most important points of view on the internationalisation of family businesses in the current literature, as well as the most prolific authors, the most important journals and articles, and to pull out networks through co-citation analysis.



Source: Created by author.

Fig. 1: Flow Diagram of Search Strategy

Results

Descriptive statistics through bibliometric analysis:

A bibliometric analysis performed with RStudio produced descriptive statistics and network linkages for 750 academic papers. The software examined substantial extensive bibliographical and citation data, yielding the subsequent outcomes:

Illustrative Bibliometric Statistics

Fig. 2 illustrates key bibliometric insights of family business and their DT from a dataset spanning 2013–23, comprising 750 research documents with 616 journal articles and 134 book chapters sourced from 327 distinct publications. The manuscripts demonstrate an annual growth rate of 18.41%, an average age of 4.49 years, and an average of 24.31 citations each. A total of 1,531 authors contributed to a variety of document categories. The existence of 116 single-author documents indicates more potential for joint endeavours. Collaboration is a significant theme, as demonstrated by the notable worldwide co-authorship rate of 30.53% and an average of 2.78 co-authors per document. Moreover, keywords are crucial in document characterisation, with 565 supplementary keywords and 1,701 author-supplied keywords enhancing the dataset's content. The substantial citing (43,731 citations) indicates a robust foundation, synthesising viewpoints from strategic management, organisational behaviour, and technology transformation. The preference for journal publications underscores the focus on empirical and theoretical contributions in this developing study field.

Annual Scientific Output

Fig. 3 shows consistent growth since 2013, with a marked acceleration from 2020 to 2023 in research pertaining to family business and DT. This underscores the growing importance of digital initiatives in family businesses, propelled by technology progress and global upheavals such as COVID-19. Initial studies concentrated on digital adoption in governance and innovation (Kraus et al., 2018), whereas contemporary research investigates intergenerational dynamics and transformative tactics (De Massis et al., 2021). The rise in annual publications shows

the growing importance and intricacy of DT of family businesses. It also signifies the increasing importance and the scholars' focus in both academic and practical realms.

Description	Results
MAIN INFORMATION ABOUT DATA	
Timespan	2013:2023
Sources (Journals, Books, etc)	327
Documents	750
Annual Growth Rate %	18.41
Document Average Age	4.49
Average citations per doc	24.31
References	43731
DOCUMENT CONTENTS	
Keywords Plus (ID)	565
Author's Keywords (DE)	1701
AUTHORS	
Authors	1531
Authors of single-authored docs	101
AUTHORS COLLABORATION	
Single-authored docs	116
Co-Authors per Doc	2.78
International co-authorships %	30.53
DOCUMENT TYPES	
article	616
book chapter	134

Fig. 2: Descriptive Details

Average Citations Per Year

Fig. 4 highlights the citation reached its zenith around 2015 in the research area of DT of family businesses, indicating seminal studies on creativity and resilience (De Massi et al., 2018). However, after 2016, the decrease in the number of citations per article can be seen due to the rising volume of publications (Kraus et al., 2021). An increased interest in 2019 coincided with improvements in Industry 4.0, emphasising digital integration in family businesses (Del Giudice et al., 2019). Although, it shows a need for high-impact research to be maintained in this discipline to sustain scholarly impact.

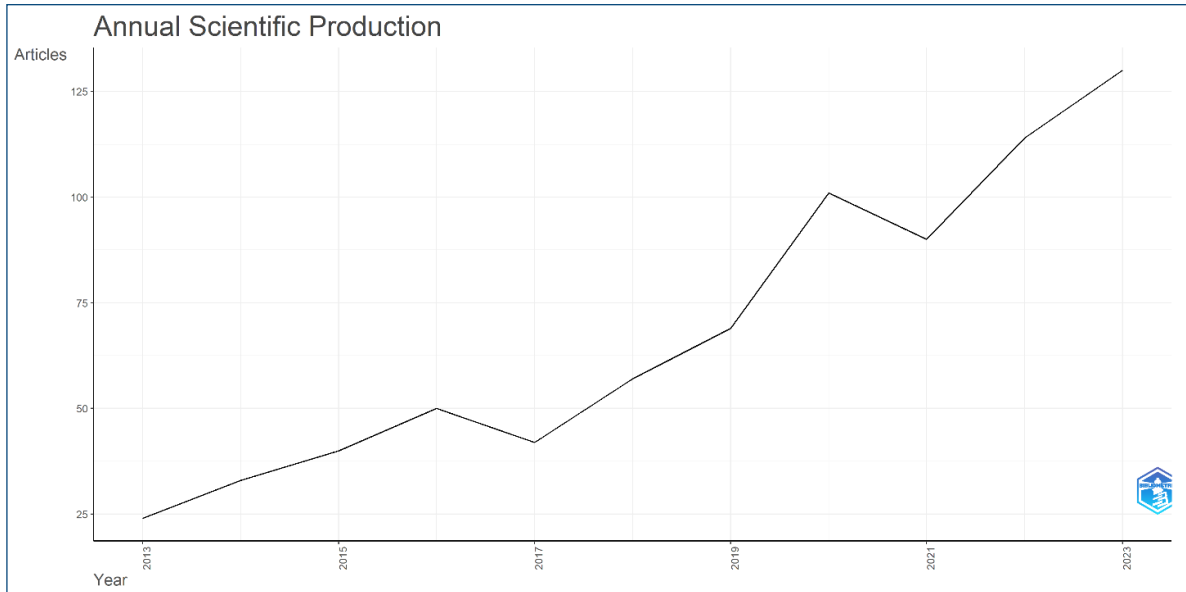


Fig. 3: Annual Scientific Production

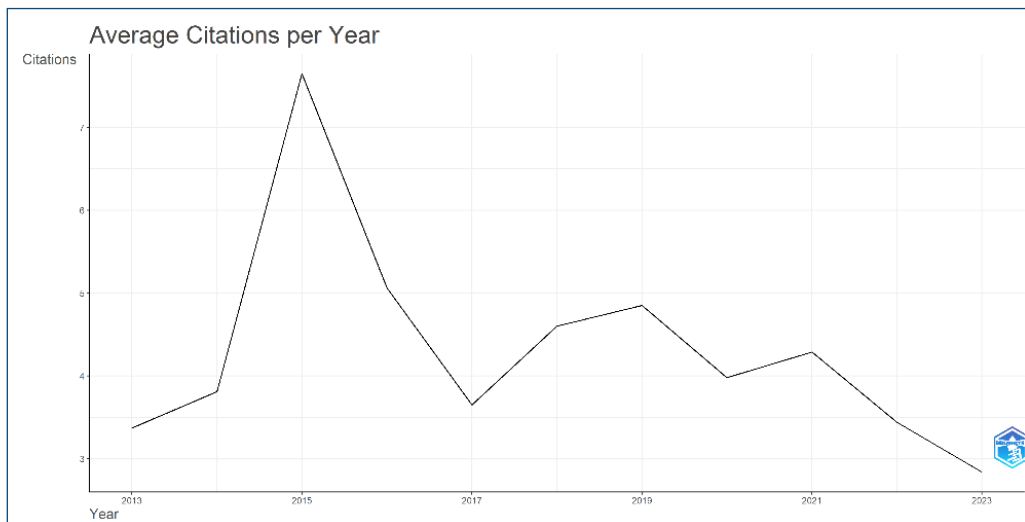


Fig. 4: Average Citations per Year

Three-Field Plot

Fig. 5, the three-field plot, illustrates the relationship among three domains utilising Sankey plots, where the dimensions of each segment correspond proportionally to the value of the node (Riehmman et al., 2005). The authors are positioned on the left side of the Sankey plot, the keywords occupy the centre row, and the sources selected for analysis are located on the right side contributing to the discussion on family business and DT. According to De Massis et al. (2021) and Kraus et al. (2021), these experts

consistently discuss topics such as ‘innovation’, ‘family business’, and ‘entrepreneurship’, which show why proper governance and technology updates matter most to family firms. Combining fields of entrepreneurship and strategic management with DT research makes this multidiscipline field visible through leading journals such as the *Journal of Family Business Management* and the *Journal of Business Economics* (Kotlar et al., 2020). By showing how digital tools help family businesses succeed, the author expands both research and practical knowledge of this subject.

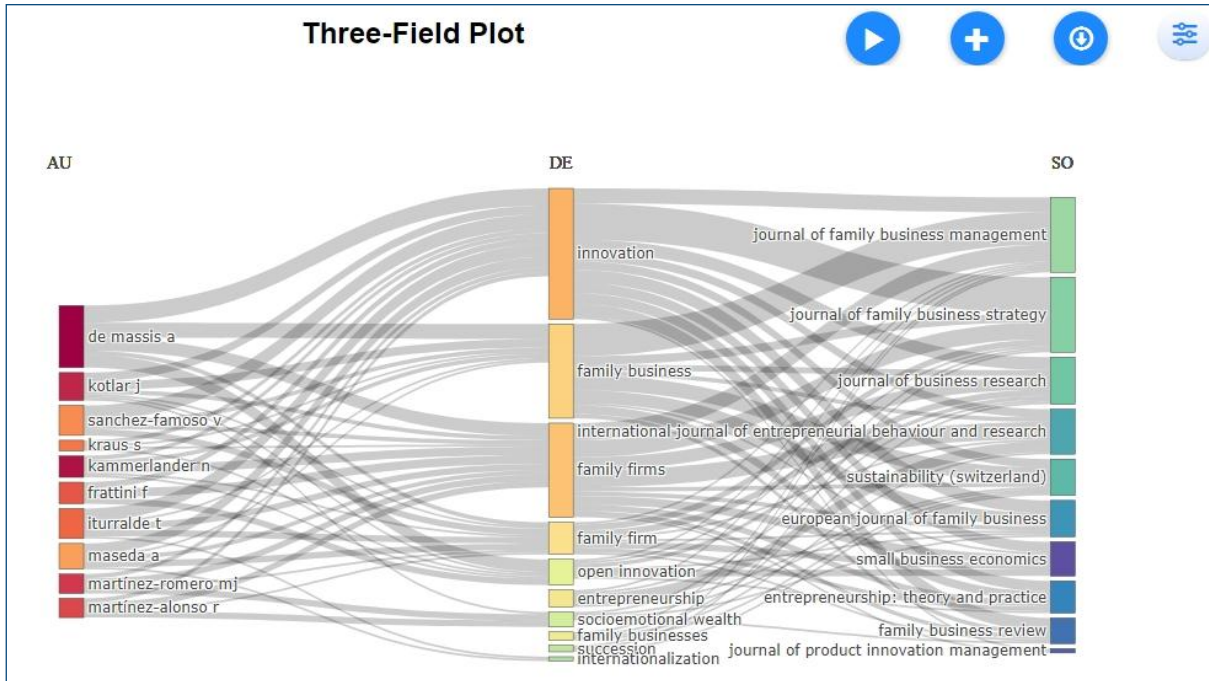


Fig. 5: Three-Field Plot

Leading Publication Countries

In Fig. 6 and 7 and Table 3 it is clearly visualised that Italy dominates the research field with 276 published works and 3,485 citations, highlighting its substantial academic contribution and impact. Spain follows with 253 documents and 1,247 citations, indicating significant research engagement. China (220 documents, 1,068 citations) and the United States (145 documents, 1,345 citations) exhibit substantial contributions, underscoring

their focus on DT in family businesses. Germany (135 documents, 1,407 citations) and the United Kingdom (105 documents, 1,062 citations) demonstrate a significant presence in this domain. India, despite its booming entrepreneurial ecosystem, has 79 documents and 361 citations, reflecting a growing research interest. France, with 54 publications and 421 citations, demonstrates a moderate contribution; these results align with earlier bibliometric analyses underscoring Europe’s dominance in family business research (Ferreira et al., 2021).

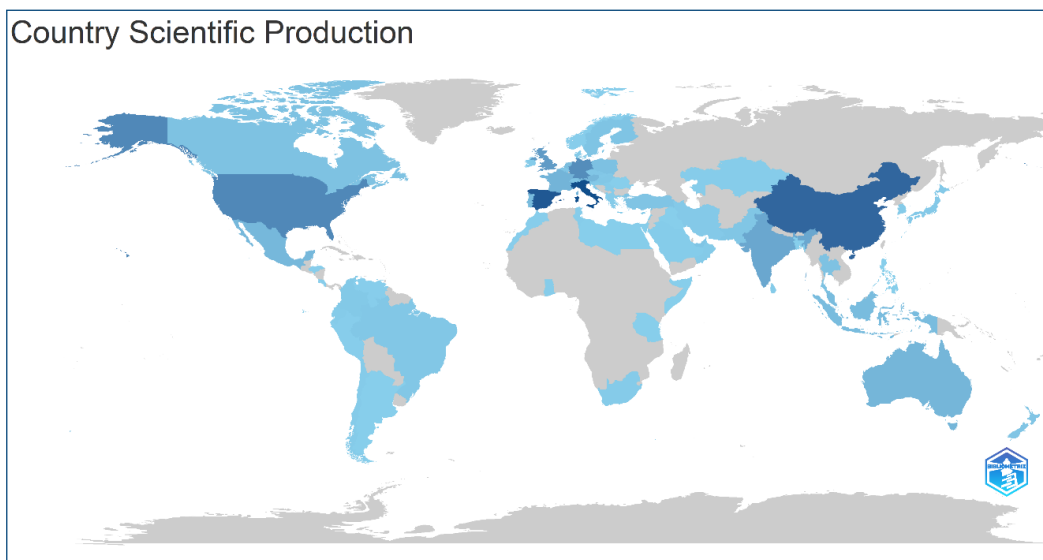
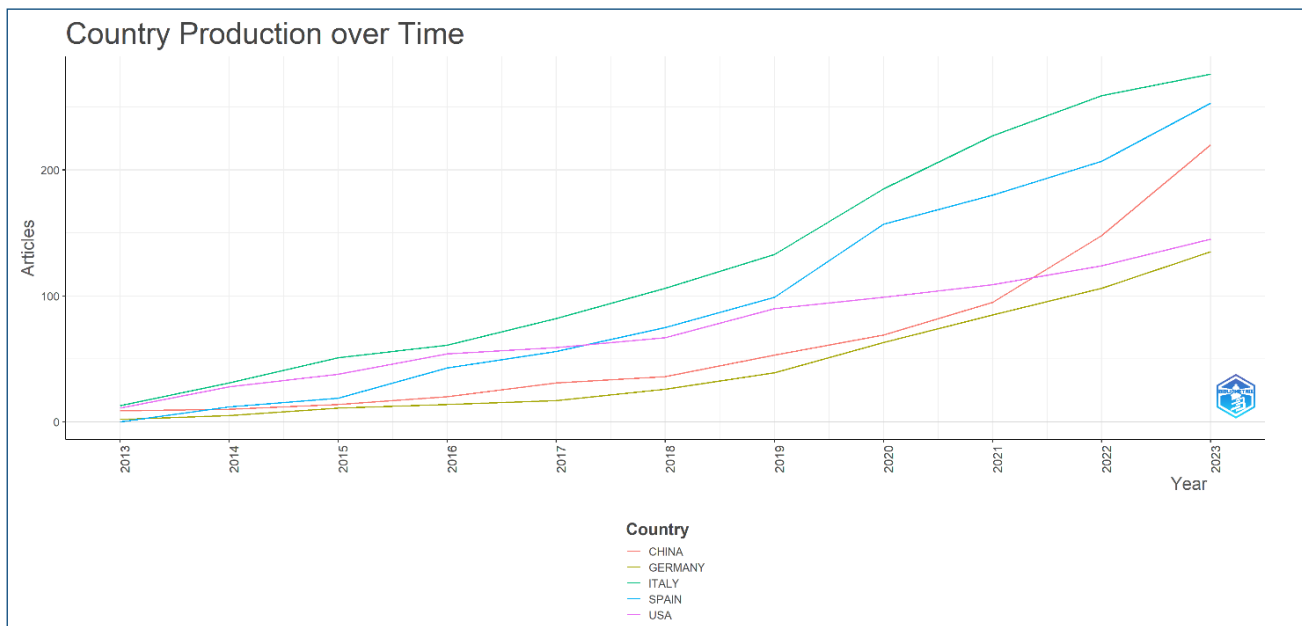


Fig. 6: Country Scientific Production

Table 1: Country-Wise Documents Published and Citations Received

Country	Total Documents	Total Citations
Italy	276	3,485
Spain	253	1,247
China	220	1,068
USA	145	1,345
Germany	135	1,407
UK	105	1,062
India	79	361
France	54	421

**Fig. 7: Country Production Over Time**

Most Prominent Journals

Interdisciplinary research concerning family business and DT is prominently represented in leading academic journals, notably the *Journal of Family Business Management* (31 articles) and the *Journal of Family Business Strategy* (27 articles). Other notable sources include the *Journal of Business Research* (22 articles) and *Sustainability* (Switzerland) (21 articles), highlighting the diverse academic emphasis within the area. The cumulative production trends indicate a steady rise in research output from 2013, with significant increases post-2018, corresponding with advancements in Industry

4.0 and digitalisation. The *Journal of Family Business Management* and the *Journal of Business Research* exhibit the highest cumulative frequencies, underscoring their critical importance in shaping the discourse. The *International Journal of Entrepreneurial Behavior and Research and Sustainability* (Switzerland) exhibits an increasing number of submissions, highlighting the heightened focus on the strategic and sustainable implications of DT for family businesses. This tendency underscores the growing academic significance of the field and the necessity for continuous multidisciplinary research.

Table 2: Sources and Number of Articles Published by Them

Sources	Articles
Journal of Family Business Management	31
Journal of Family Business Strategy	27
Journal of Business Research	22
Sustainability (Switzerland)	21
International Journal of Entrepreneurial Behaviour and Research	15
European Journal of Family Business	13
Entrepreneurship: Theory and Practice	12
Family Business Review	12
Journal of Product Innovation Management	12
Small Business Economics	12

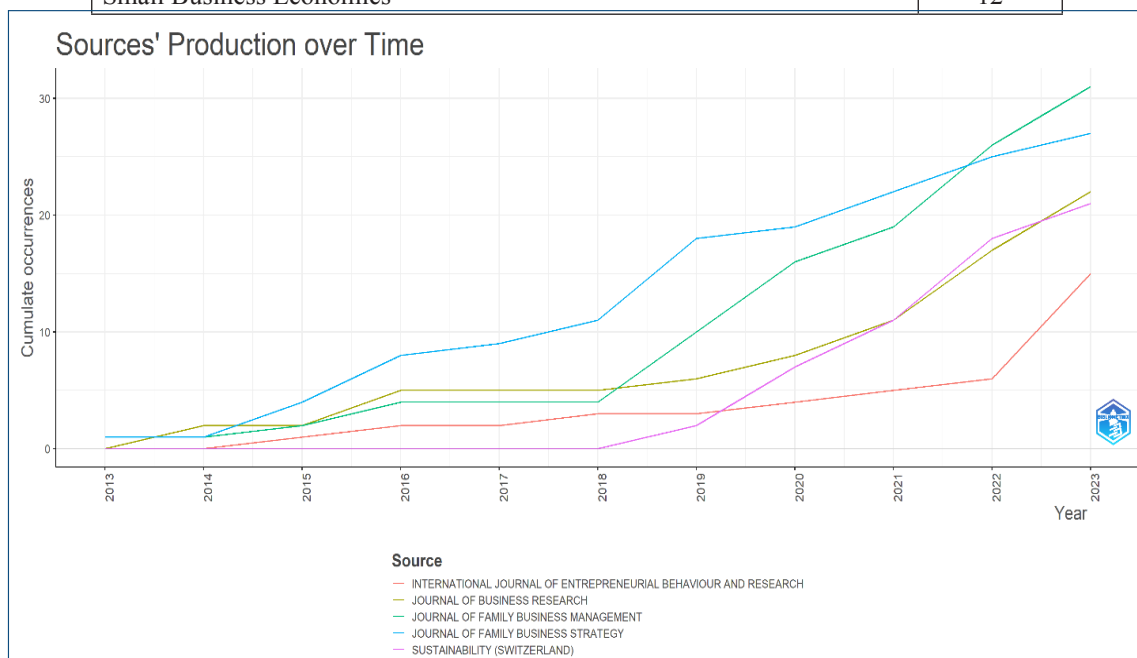


Fig. 8: Sources' Production Over Time

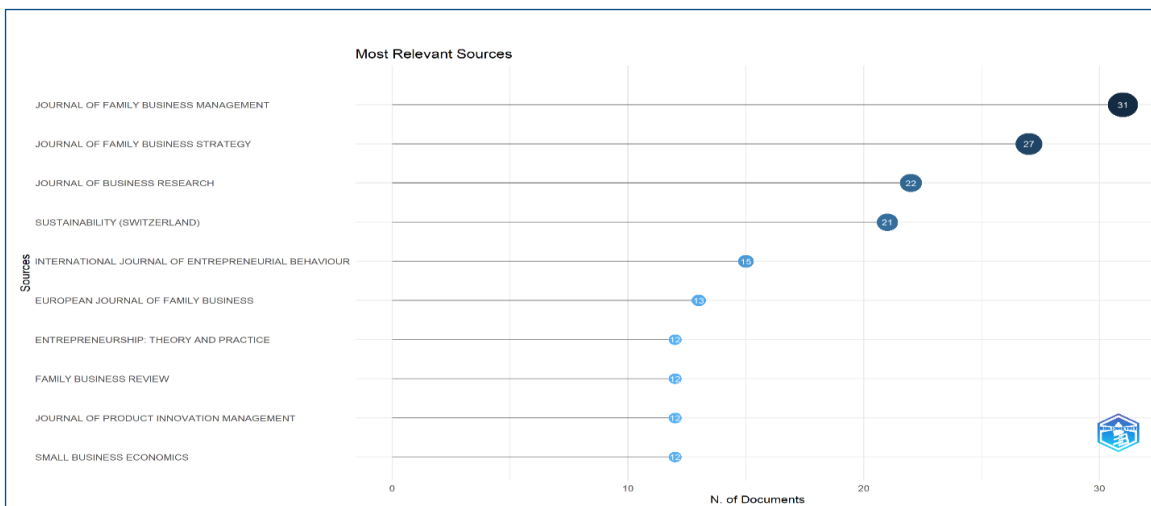


Fig. 9: Most Relevant Sources

Co-Authorship Network

The uploaded graph shows how researchers work together on family business and DT research across different countries. Major research facilities are in the United States, the United Kingdom, Germany, Italy, and Spain and form a tightly connected group. China and India exhibit increasing contributions, connecting with Western

economies (Zahra et al., 2020). Peripheral countries such as Chile and Indonesia indicate burgeoning interest, although they exhibit constrained global collaboration. Enhanced connections between European and North American experts signify dominance in this study domain. The picture underscores the imperative for augmented international collaborations to improve cross-regional knowledge transmission (De Massis et al., 2018).

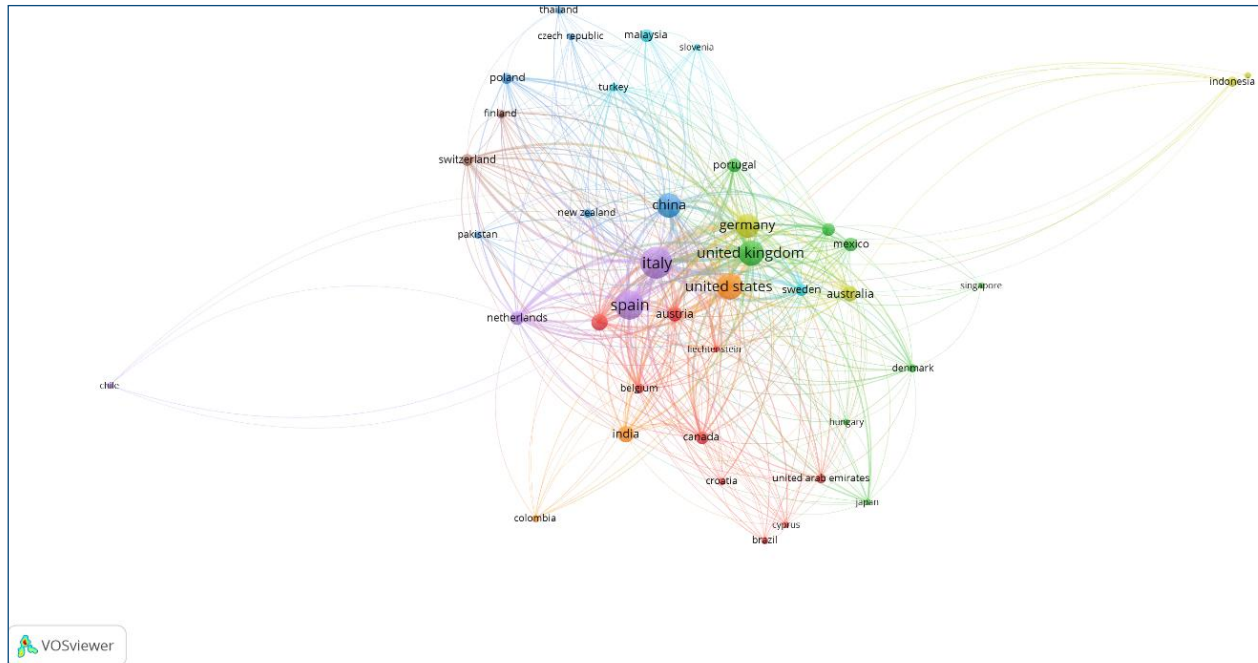


Fig. 12: Co-Authorship Network

Treemap

The treemap visualisation illustrates main study themes within a dataset, organised by frequency. Innovation (14%) predominates the research environment, underscoring its crucial significance in company expansion and competitive advantage (Schumpeter, 1934). Family firms (7%) and sustainability (4%) underscore the growing emphasis on enduring company viability and ethical governance (Chrisman et al., 2012). Subjects including China (4%), business (4%), and small and medium-

sized enterprises (4%) indicate a pronounced interest in regional and entrepreneurial dynamics (Bruton et al., 2008). Additional significant areas are decision making (2%), research and development (3%), and firm size (3%), highlighting structural and strategic determinants of business performance (Penrose, 1959). Emerging subjects such as COVID-19 (1%) and behavioral research (1%) highlight current difficulties influencing management science (Gigerenzer & Selten, 2002). This analysis offers insights into current academic discourse and shifting objectives in business research.

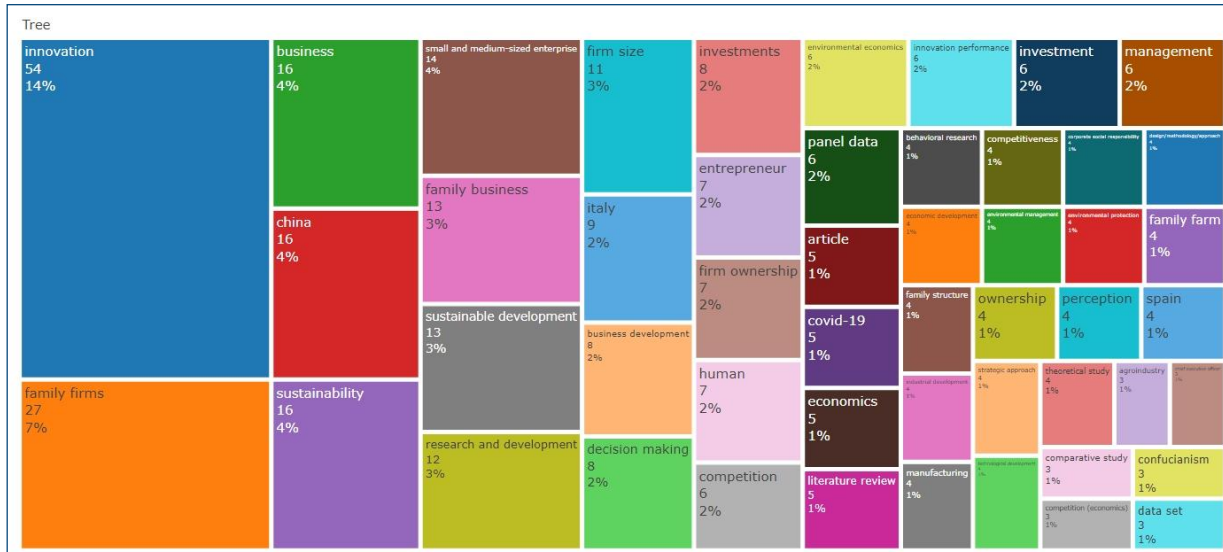


Fig. 13: Treemap

Themes

The graphic displays a strategic diagram that delineates research themes according to their importance (centrality) and development (density). In the research on family business and DT, family firms and small and medium-sized enterprises serve as fundamental concepts,

establishing the conceptual framework (De Massis et al., 2018). Innovation, commerce, and sustainability serve as essential elements propelling progress in DT (Rogers, 2016). The subjects of China, economics, and behavioral research possess little impact, while dynamic capabilities is seeing a decline (Teece, 2018). These observations inform future study directions in DT in family enterprises.

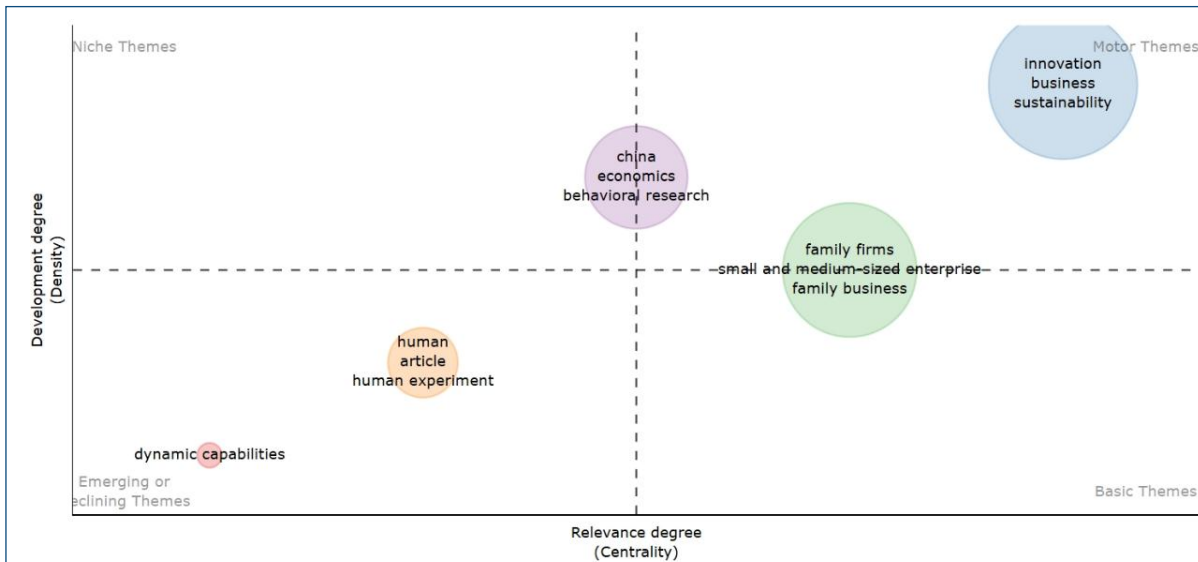


Fig. 14: Cluster of Themes

Discussion, Conclusion, and Future Directions

Discussion

Research proves that DT affects family businesses through both possible advantages and present challenges. The research by De Massis et al. (2018) and Kraus et al. (2022) shows that many studies analyse family business linkages with dynamic abilities, human resources, and innovation development. Companies led by family owners show strong resistance towards DT because they stick to traditional practices and protect their SEW (Gómez-Mejía et al., 2011; Kammerlander & Ganter, 2015). Through research, this analysis demonstrates how business flexibility, intergenerational leadership, and external relationships can assist family companies in adopting digital systems. Human capital works in two ways during DT – helping change proceed faster while also slowing down the process. These companies benefit from next-generation leaders with advanced digital knowledge and innovative thinking because of strong intergenerational involvement (Calabrò et al., 2019; Xi et al., 2023). Due to weak digital skills and reliance on traditional management formulas, older family members create strong hindrances to digital adoption (Soluk et al., 2021).

Past research shows similar results that enterprise growth improves with professional experience from outsiders (Klein et al., 2021). Authorities should take steps to teach digital skills in family businesses to boost their transformation progress more quickly. The analysis reveals that DT research occurs mainly in Italy, Spain, China, and the United States because these countries lead research production and impact (Ferreira et al., 2021). Countries with developed economies have clear plans to accept digital technology through their established government institutions, whereas India and Latin American countries face difficult infrastructure and money problems in their DT (Dutta et al., 2022; Wang & Zhou, 2023). Government support through incentives and financial help with regulations helps family businesses improve digital changes when they have limited resources. Different industries show different levels of digital technology usage by family enterprises. Manufacturing family organisations use Industry 4.0

technologies to make their production stronger (Frank et al., 2019), while service-oriented family firms focus on digital marketing and CRM systems (Craig et al., 2019) and recruit from existing family members. This careful approach allows family businesses to leverage modern technologies without losing sight of their foundational principles, ultimately leading to a more resilient and adaptive organisational culture.

The bibliometric research indicates that each business sector needs a unique digital strategy because technology solutions do not work everywhere (Del Giudice et al., 2019). Researchers found repeatedly that SEW plays a vital role in DT. Different family enterprises decide whether to protect their traditions or embrace DT because Pukall and Calabrò (2014) and Rondi et al. (2019) show DT helps maintain transgenerational business continuity. Research suggests that the balance between innovation and tradition is critical for these enterprises. By strategically integrating digital tools while honouring their legacy, family businesses can enhance their competitiveness in the market while ensuring long-term sustainability. This shows that businesses succeed better when they integrate digital adoption with their core family values during technology innovation implementation (Gómez-Mejía et al., 2007).

DT creates many business opportunities for family firms but needs them to balance digital changes with established practices while bringing in new leaders and gaining official support from existing family members. This careful approach allows family businesses to leverage modern technologies without losing sight of their foundational principles, ultimately leading to a more resilient and adaptive organisational culture. This research provides new details about digital adoption in family businesses by presenting facts and theoretical findings for scholars and business professionals to use.

Conclusion

This study emphasises the crucial importance of DT in family businesses, illustrating the interaction of dynamic capabilities, human capital, and innovation in influencing digital adoption. Next-generation leadership and external collaborations facilitate progress; nonetheless, opposition from older generations, financial limitations, and worries around SEW provide substantial obstacles. The

bibliometric and thematic study indicates a significant increase in scholarly interest, especially in industrialised economies, highlighting the necessity for context-specific digital initiatives in growing markets such as India.

Implications

The results possess considerable theoretical and practical ramifications. This study enhances the discussion on family company sustainability and DT by incorporating ideas from strategic management, organisational behaviour, and technology. The report provides significant insights for family business proprietors, legislators, and industry professionals by highlighting the necessity for organised digital adoption frameworks, professionalisation, and intergenerational collaboration. Governments and industry stakeholders must promote institutional support mechanisms, digital literacy initiatives, and financial incentives to enable smooth digital integration in family enterprises.

Future Scope

Future study may reveal various promising avenues. Comparative analyses between developed and emerging economies may yield profound insights into regional disparities in DT strategies. Furthermore, examining the impact of AI, blockchain, and big data analytics on improving governance and decision making in family firms may be beneficial. An in-depth examination of the ethical and socioeconomic obstacles associated with DT – such as data privacy issues and employment displacement – can enhance the comprehensive knowledge of the long-term viability of digitalised family enterprises.

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