

## FACTORS OF SUCCESS FAMILY FARM: A BIBLIOMETRICS ANALYSIS

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### ABSTRACT

*Family farming has long served as a foundation for global food security, rural livelihoods, and sustainable agricultural systems. However, its success is influenced by diverse demographic, economic, environmental, technological, and institutional factors. This study analyzes the global scientific landscape on family farm success using a bibliometric approach based on 84 Scopus-indexed publications from 1977 to 2025. Bibliometric analysis conducted with the Bibliometrix and Biblioshiny packages examines publication trends, citation patterns, thematic evolution, and keyword networks. Results show a steady increase in research attention, with significant growth after 2015 driven by global concerns about food security, climate change, and rural development. Co-occurrence and thematic mapping reveal three dominant dimensions shaping family farm success: demographic characteristics (age structure, gender roles, family labor, succession), geographic context (Africa, East Asia, Latin America), and methodological orientation (socioeconomic and demographic analysis). The thematic structure also indicates a transition from production-focused studies toward broader multidimensional perspectives that incorporate sustainability, health, technology adoption, and social resilience. Despite Indonesia's large family farm sector, its participation in global scientific collaboration remains limited. Overall, the study highlights that family farming success is determined by interconnected human, environmental, economic, and policy factors and emphasizes the need for more integrative, context-specific research to strengthen family farming systems, especially in developing countries.*

## INTRODUCTION

Family farming has an important and strategic role in supporting agriculture and its contribution to the country's economy. Family farming represents a predominant agricultural system globally, serving as a cornerstone of food security and rural development. The FAO provides dual definitions of family farming. Substantively, family farming constitutes "a means of organizing agricultural, forestry, fisheries, pastoral, and aquaculture production which is managed and operated by a family and predominantly reliant on family capital and labour, including both women's and men's." This definition emphasizes that "the family and the farm are linked, co-evolve, and combine economic, environmental, social, and cultural functions" (FAO & IFAD, 2019). Statistically, "a family farm is an agricultural holding which is managed and operated by a household and where farm labour is largely supplied by that household". Recognizing family farming role critical importance, the United Nations Food and Agriculture Organization (FAO) designated 2019–2028 as the United Nations Decade of Family Farming (FAO, 2014). This initiative underscores the various aspects of family farming, which extends beyond mere agricultural production to encompass complex social, cultural, and economic relationships between farming households and their managed land. Recently, family farming and the agricultural sector in general have faced quite complex

challenges. Climate change, natural disasters, geopolitical turmoil, declining soil and air quality, decreasing land area, and even declining interest in farming among the younger generation have led to a gradual decline in family farming. Several countries have released data showing a downward trend in family farming (Lursinsap et al., 2023). The decline in family farming is evident in the decline in land area, production scale, and economic value.

There has been increased scholarly attention toward family farming research in recent decades. Discourse surrounding family farming has evolved in response to shifting global dynamics, including demographic pressures, climate change, market globalization, and evolving agricultural policies. This evolution has catalyzed an increase in scholarly attention toward family farming systems in recent decades, reflecting the complexity and diversity of challenges confronting this agricultural model. The growing research interest in family farming is partly attributed to its demonstrated advantages over conventional commercial agriculture. Kostov and Lingard (2002) argue that family farms frequently outperform commercial operations, achieving superior efficiency due to enhanced motivation and reduced managerial costs inherent in family-based organizational structures. The research of Suman et al. (2025) showed that there is a shift reflects a growing recognition of family farming's role in

promoting sustainable agriculture, addressing global challenges and shaping a food-secure future for generations to come.

The success of family farming is a relevant topic and deserves further study to enhance its role. Research by Tritsch, Mix, and Edwards (2021) shows that the success of small-scale farming is multifaceted and not limited to profitability. It also found that small-scale farming has diverse needs. Studies on the subject of family farming by Indonesian researchers are numerous and diverse, including the topic of family farming succession (Effendy et al., 2022; Firman, 2019; Timban et al., 2024) as well as various scientific fields and perspectives related to family farming development (Purnawan et al., 2022; Sari & Puspitawati, 2017; Wohlenberg et al., 2022)

Recent scholarship increasingly examines the determinants of family farming success, recognizing that success encompasses multiple dimensions beyond mere profitability. For instance, Yigit et al. (2024) identified resource availability and entrepreneurial orientation as key success factors among Finnish family farmers. Similarly, Micu et al., (2022) demonstrated that Romanian family farms benefit from cooperative membership and investment in processing and storage infrastructure, which additionally addresses rural depopulation challenges. Managuli et al. (2024) found that innovative family farming cultivates a variety of crops that enable increased profitability and sustainability. The

findings underscore the imperative for comprehensive understanding of the multifaceted determinants of family farm success, encompassing economic, social, environmental, and policy dimensions. Such holistic understanding is fundamental for developing targeted agricultural development strategies that foster sustainable family farming systems and amplify their contributions to global food security.

Bibliometric analysis represents a particularly relevant and effective methodological approach for examining research dynamics and trends within this domain. This quantitative method facilitates the identification of publication patterns, scientific collaborations, and thematic concentrations, while simultaneously revealing under-researched areas and emerging knowledge gaps. Through bibliometric techniques, researchers can objectively assess literature development trajectories and strategically direct research focus toward urgent yet under-explored aspects of family farming (Donthu et al., 2021). Furthermore, bibliometric studies of family farm literature can inform evidence-based policy formulation and agricultural development interventions, particularly within frameworks of sustainable development and family farmer autonomy.

The bibliometric approach has emerged as one of the most robust methodologies for quantitatively analyzing trends and developments within specific research domains. Contemporary family farming

research encompasses diverse bibliometric analyses spanning varied thematic scopes, database sources, and temporal periods. These analyses serve multiple purposes: revealing emerging trends in publication and journal performance, mapping collaboration networks, identifying research constituents, and exploring intellectual structures within existing literature. Specifically, bibliometric analysis enables researchers to (1) obtain comprehensive overviews of research landscapes, (2) identify knowledge gaps, (3) generate novel research ideas, and (4) position intended contributions within existing scholarly discourse (Donthu et al., 2021).

According to Donthu et al. (2021), bibliometric analysis is particularly warranted when review scope is extensive, necessitating systematic synthesis of large datasets to reveal topical trends. Family farming research exemplifies such breadth, encompassing diverse databases and analytical approaches across multiple disciplinary boundaries. Recent bibliometric studies have demonstrated this diversity, including Wohlenberg et al., (2022) Scopus-based analysis covering 2015-2020, which examined family farming sustainability indicators across economic dimensions (financial planning, productivity, profitability), environmental parameters (land use and quality, water resources, erosion, temperature, energy), and social factors (food security, employment generation, income distribution, government subsidies).

The application of bibliometric methodology provides systematic and quantitative insights into the scientific evolution of family farm success studies, encompassing publication volume, international collaboration patterns, emerging thematic areas, and their relevance to global policy frameworks. This article aims to present a comprehensive scientific landscape of family farming success research, specifically addressing the position of Indonesian research, while offering evidence-based recommendations for future investigations based on identified trends, knowledge gaps, and innovative developments in this field. This analysis of research trends, focusing on agriculture in Indonesia, is highly relevant for recommendations on agricultural development in countries characterized by a predominance of smallholder, family-owned farms.

## **METHODS**

This study uses bibliometric analysis to investigate scientific literature related to Family Farming Success Factors. In the first step of bibliometric analysis, it is very important to clearly define the purpose of your research to address a specific problem or question, so as to maintain a focused and relevant analysis (Passas, 2025). This approach was chosen for its ability to quantify patterns and trends in large scientific publications, providing a comprehensive understanding of the evolution and distribution of research in this field.

The following is an explanation of each research question (RQ) posed in this study:

- RQ-1: What are the number of publications, types of publications, and the countries that have published research related to the success factors of family farming?
- RQ-2: Which articles are most frequently cited in relation to the factors for successful family farming, and what are the main findings and dominant research themes in the publications?

RQ-3: How are themes classified based on centrality and density?

Data Source: Data for this analysis was taken from the Scopus database, which includes 84 articles published from 1977 to 2025 from Scopus Sources with a total of 129 authors. The inclusion criteria were articles containing the search string (“factors”) AND (“success”) AND (“family”) AND (“farming”).

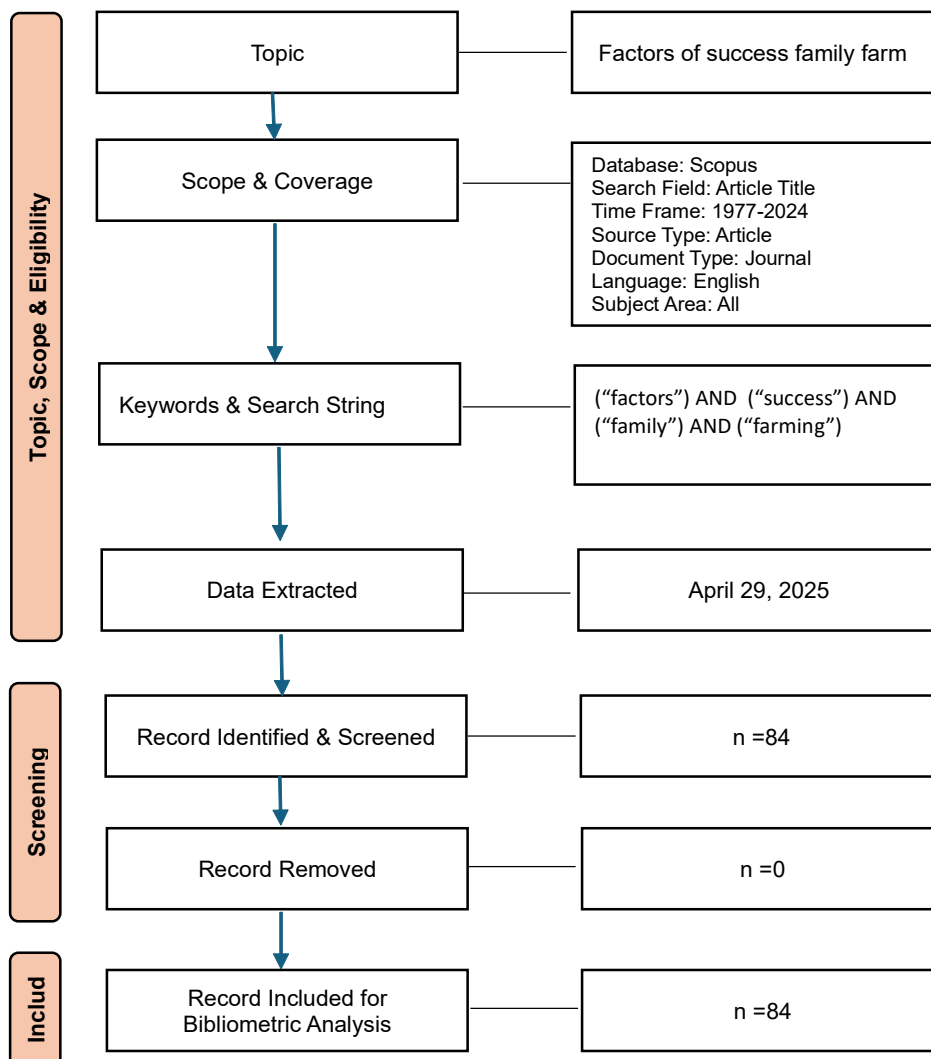
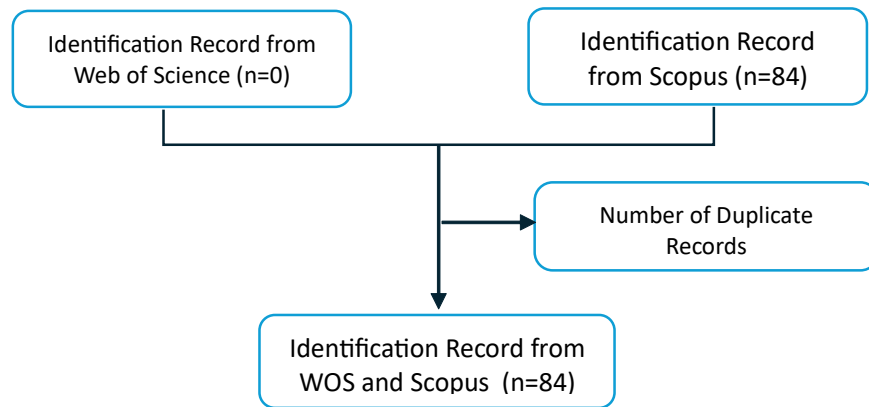


Figure 1. Flow diagram of the search strategy

As a result of searching the references following the steps shown in Figure 1, a total

of 84 publications were obtained that will be reviewed in this article.



**Figure 2.** Data source Flow Diagram

Data Collection Procedure: Using Bibliometrics software in R, data was extracted including information about authors, affiliations, publication years, keywords, and citations. This data was cleaned by removing duplicates and correcting entry errors.

The analyses were performed using the Bibliometric and Biblioshiny packages in R.

- a. Method Validation: The validity of the bibliometric methods used was confirmed through comparison with other bibliometric studies in similar literature and by consulting experts in the fields of bibliometrics and AI.
- b. Quality Control: To ensure the reliability of the results, the data extraction process was repeated twice with a one-month interval to check consistency in data collection and analysis.
- c. Research Ethics: This study used public data and did not directly involve human subjects, so it did not require approval from an ethics committee.

- d. Limitations: This study is limited to data available in the Scopus database and may not cover all relevant publications that are not indexed in this database.

We limited the search to full articles and conference papers to maintain consistent metadata, resulting in 84 articles, with none removed. The software then identified keywords that frequently appeared together and calculated the relationships among keyword networks. Based on centrality and density, the software grouped these keywords into thematic clusters, which were classified into four categories.

1. Motor themes: These are well-developed and highly influential themes that structure the research field. On the strategic diagram, they are positioned in the upper-right quadrant.
2. Niche themes: These refer to highly specialized and peripheral topics. They are located in the upper-left quadrant of the strategic diagram.

3. Emerging or declining themes: These themes have low density and low centrality, indicating that they are either newly developing or losing relevance. They appear in the lower-left quadrant.
4. Basic themes: These are important but not yet fully developed themes within the research field. Positioned in the lower-right quadrant, they represent fundamental, general, and cross-cutting topics.

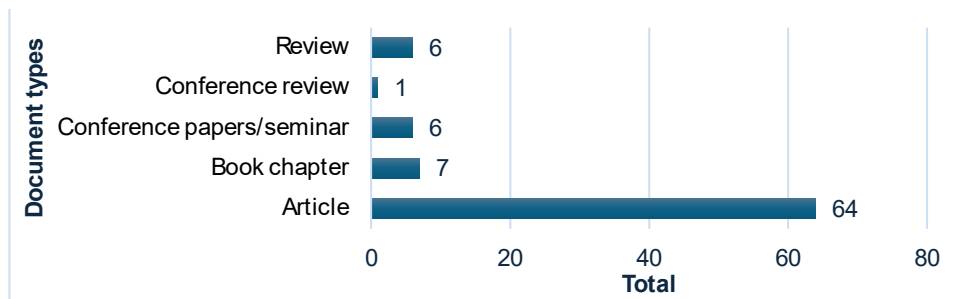
**RESULT AND DISCUSSION**

**1. Publication Distribution, Publication Types, and Contributing Countries in Research on Family Farming Success Factors**

The following section addresses the distribution and development of publications related to the factors influencing family farming success over the past decade. This discussion provides a comprehensive overview of global scientific output on the topic, encompassing trends in publication volume, citation growth, types of publications, and the contributions of various countries and research domains. It highlights the increasing academic attention directed toward family farming success, reflected in the expanding

multidisciplinary research landscape and the strengthening of this topic within international scientific discourse. The bibliometric analysis presented herein serves as a foundation for understanding the evolution of research in this field and the trajectory of its future development.

The distribution of articles related to the topic of family farm success between 1977 and 2024 yielded 84 articles that met the criteria. The types of publications on the theme of family farming success were predominantly published in the form of articles, with some writings on family farming as part of book chapters, reviews, and seminar papers. The full range of family farming publications is shown in Figure 3. The topic of family farming is frequently addressed as part of chapters in books discussing food security or other general agricultural topics. Specific topics on the success of family farming are mentioned in books but are mostly not discussed in detail. News and documents published by FAO and IFAD appear to be frequently referenced in publications on family farming, including the document “The State of Food and Agriculture: Innovation in Family Farming” (FAO, 2014).



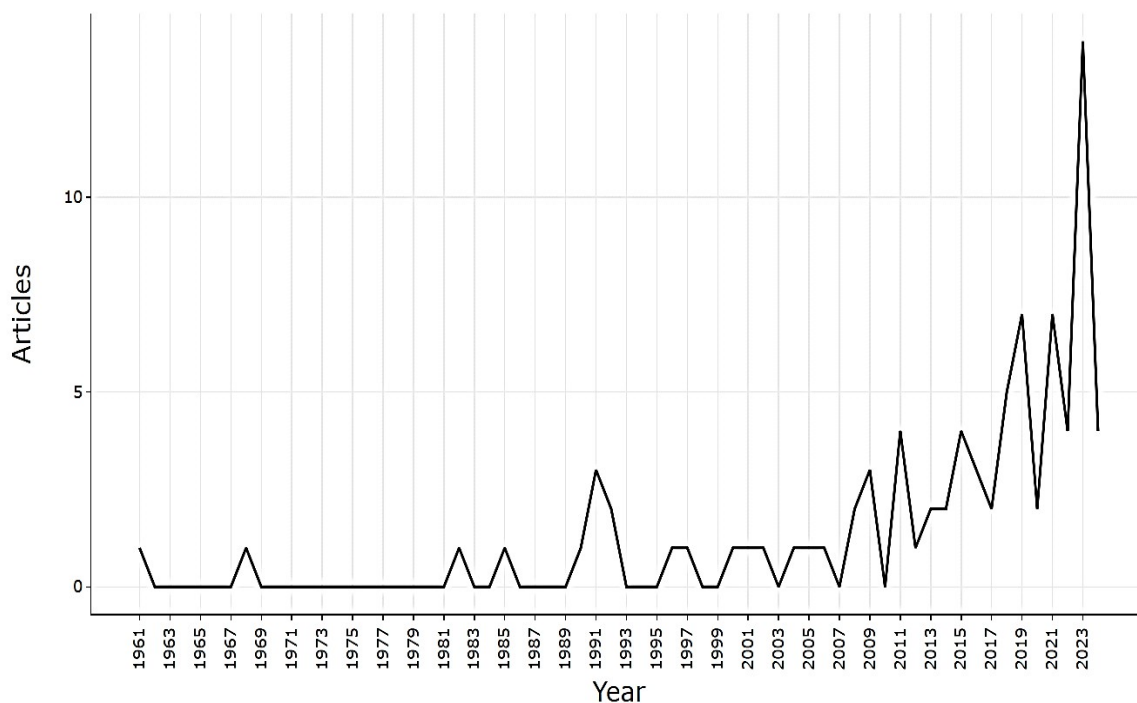
**Figure 3.** Types of Publications in Bibliometric Analysis

Review articles and seminar papers were found to be one type of publication on the topic of successful family farming. FAO and IFAD published “A Review of The First 5 Years and the Path towards Sustainable and Resilient Food Systems,” which also discussed family farming. Publications related to family farming have increased, with an average growth rate of 2.22 percent per year. The “Annual Scientific Production” graph shows the trend of publications in high-quality journals from 1977 to 2024.

Figure 4 shows that publications on family farm success have increased significantly over time. In the period 1961–1990, research was still very limited and inconsistent, indicating a low level of interest in this topic. Starting in 2008, the number of publications

began to rise more steadily, in line with increasing global attention to food security and the role of family farmers. After 2015, the upward trend became even steeper, peaking in 2023, indicating that the factors contributing to the success of family farms are increasingly becoming an important focus of international research.

Figure 5 shows the development of the number of citations for publications related to family farm success from 1961 to 2024. In the early period, citations were very low with almost no increase, indicating that research on family farm success had not received much attention. Starting in the early 2000s, citations began to increase sharply and showed several peaks, reflecting the growing academic relevance and increasing influence of research in this field.



**Figure 4.** Annual Scientific Production

The fluctuation in citations after 2010 shows that scientific interest in the topic of farmer success has grown stronger, in line with the development of issues such as food security, technology adoption, and sustainable agricultural practices. Overall, this graph confirms that research on farmer success has become increasingly important and frequently referenced in the last two decades.

The descriptive element (DE) field reveals key thematic clusters that define family farming success research. The economic empowerment of family farmers can be facilitated by

infrastructure improvements and market access measures, while their adaptive capacity can be enhanced through education and training programs (Chao, 2024). The plot identifies critical success factors including family farming practices, adoption mechanisms, climate change adaptation, and logistic regression modelling approaches. These themes align with contemporary research emphasizing the multifaceted nature of agricultural sustainability and resilience.

The visualization highlights the prominence of agro-ecological approaches and succession

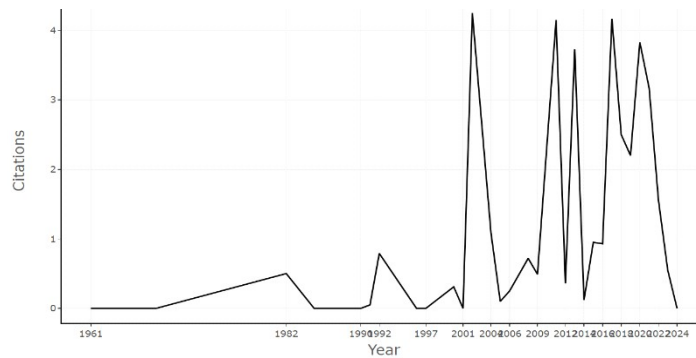


Figure 5. Average Citations per Year

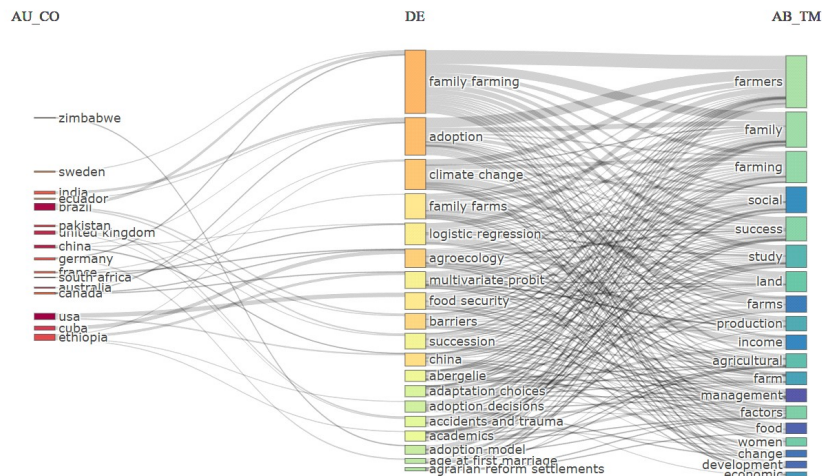


Figure 6. Relationship between Author Origin and Title and Source

planning as central themes. Agro-ecological practices are essential for sustainable agriculture, enhancing biodiversity, and soil health, and reducing chemical inputs while increasing climate resilience (Chimi et al., 2025). The connection between adoption studies and family farming success reflects the critical importance of technology transfer and knowledge dissemination in agricultural development.

The author keywords (AB\_TM) field emphasizes practical outcomes and measurable indicators of success, including farm management, production efficiency, income generation, and social factors. The majority of smallholder farmers primarily employed climate-smart agricultural practices to improve household food security (96.2%), reduce pests and diseases (95.6%), and obtain higher yields and greater farm income (93.2%) (Antwi-Agyei et al., 2021). This demonstrates the multi-dimensional nature of family farm success, encompassing economic, social, and environmental dimensions.

The interconnected flows in the diagram reveal how geographical contexts influence research methodologies and thematic focuses. Countries with established agricultural research infrastructure tend to emphasize sophisticated analytical approaches such as multivariate analysis and logistic regression, while developing nations often focus on practical adoption challenges and food security concerns. The research posits that family

farming facilitates easy access to food and nutrition by capitalizing on family-sourced land, labor, and capital, and by securing access to technology and markets (Chao, 2024).

The three-field plot analysis reveals that family farming success is a complex, multi-dimensional phenomenon requiring integrated approaches across geographical, methodological, and thematic domains. The visualization demonstrates that successful family farming depends on the convergence of appropriate technological adoption, climate-smart practice, effective succession planning, and supportive policy environments. The findings indicate that the extant literature on this topic falls into four different clusters: family business capital, family business strategy, family business social responsibility, and family business succession (Suess-Reyes & Fuetsch, 2016). The global research landscape shows increasing recognition of family farming's role in addressing food security, climate change adaptation, and sustainable rural development. Future research should focus on bridging the gap between developed and developing country contexts, emphasizing knowledge transfer mechanisms and culturally appropriate adaptation strategies to enhance family farming success globally.

Over the past decade, publications on the success factors of family farming have shown consistent growth, peaking in 2023, in line with increasing global attention to food security, climate change, and the

strategic role of family farmers. The distribution of research has become increasingly widespread geographically, involving countries such as the United States, India, China, and Ethiopia, as well as various regions in Asia and Africa. Published studies have also become more multidisciplinary, covering topics such as production, income, management, gender roles, technology adoption, agroecology, and climate-smart practices, with many referring to FAO–IFAD documents (Farran et al., 2022; Malesu et al., 2024). The increase in the number of publications, accompanied by a sharp rise in citations, indicates that the topic is becoming increasingly relevant and influential in international scientific discourse. Overall, publications related to the success factors of family farming have evolved from limited studies to more intensive, diverse, and globally recognized research.

## **2. Most frequently cited in relation to the factors for successful family farming, and what are the main findings and dominant research themes in the publications**

The bibliometric analysis demonstrates that research on family farming success has evolved significantly over the past several decades, both in conceptual scope and disciplinary orientation. The most globally cited documents indicate that foundational studies have emphasized technology adoption, socio-economic decision-making, rural welfare, and human–environment

interactions, underscoring the need to approach family farming through multi-dimensional rather than purely technical perspectives. Keyword analyses reveal that agriculture, rural population dynamics, demography, and developing-country contexts form the core of scholarly discourse. These recurring terms highlight the centrality of rural livelihoods, population characteristics, and regional inequalities in shaping the performance and resilience of farming families.

Moreover, the prominence of themes related to health promotion, family planning, food supply, and household characteristics indicates that contemporary research increasingly integrates public health, social development, and household welfare considerations. This shift points toward a growing acknowledgment that family farming outcomes are deeply intertwined with broader socio-economic and demographic conditions. Collectively, the findings affirm that successful family farming cannot be understood through isolated agricultural metrics alone. Instead, it requires holistic, interdisciplinary approaches that incorporate agronomic, economic, social, demographic, and health-related dimensions. This comprehensive perspective is essential for designing effective policies and interventions that support sustainable family farming systems, particularly in developing regions where these systems play a critical role in food security and rural development.

In addition, there are also articles by Waroux & Lambin, (2011) and (Raymond et al., 2011), published in the Australian Journal of Rural Health and the Journal of Environmental Management, respectively, with 86 and 82 citations. These two publications reinforce the scientific discourse on family farming through an approach that considers the welfare of rural communities and the ecological interaction between humans and the environment. This theme is particularly important given that family farming operates within a social and ecological framework that influences each other.

The Trend Topics visualization illustrates how key terms in the literature on family farming success factors have evolved from 1985 to 2021. Each term is represented by a horizontal line indicating the period during which it appeared in publications, while the size of the circles reflects its frequency of occurrence—the larger the circle, the more often the term was used. In the earlier years, research predominantly focused on topics such as

Africa, rural population, population, economic factors, and economics. These early themes suggest that studies on family farming were initially concentrated on developing-country contexts, rural demographic conditions, and economic determinants as the primary foundations for understanding family farming dynamics. Over time, the scope of research broadened with the emergence of topics such as food supply, agriculture, humans, animals, and health promotion, indicating a shift toward issues related to food security, human–environment interactions, and public health among farming communities.

In the more recent decade, new terms such as nonhuman, migration, female, male, adult, family characteristics, and mortality appear, reflecting the increasing adoption of multidisciplinary approaches that incorporate social, demographic, gender-related, and health dimensions into the study of family farming success. This evolution demonstrates that contemporary research no longer views

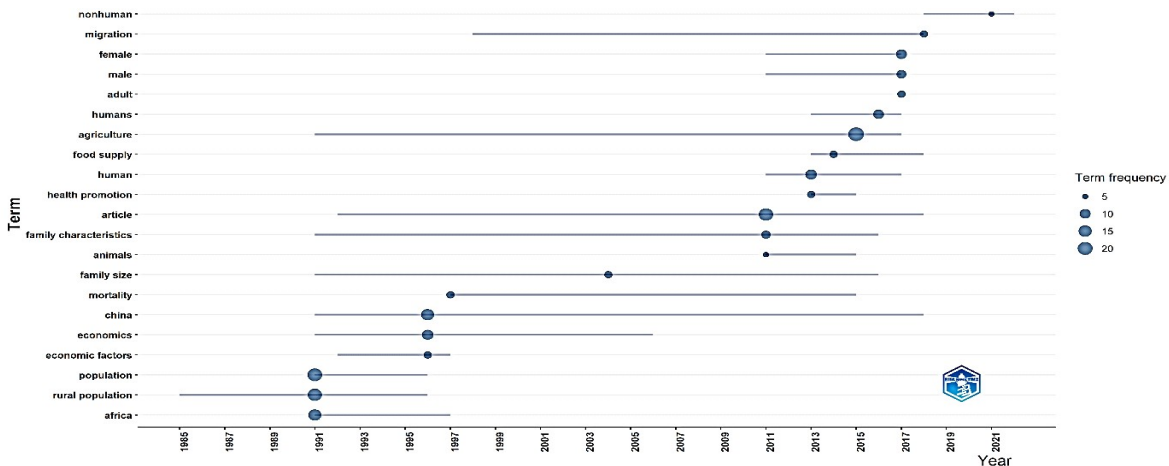


Figure 7. Trend Topics visualization



hensive research approach to understand the complexity of family farming systems. Cobo et al. (2011) emphasized that science mapping through co-occurrence analysis helps in understanding the evolution and thematic structure of a research field.

### 3. Themes classified based on centrality and density

This four-quadrant thematic map illustrates the position of various research themes based on their level of relevance (centrality) and level of development (density).

The Niche Themes quadrant represents topics with high development (density) but low relevance (centrality). These themes are explored in depth within specific areas but do not play a major role in the overall structure of the research field (Jha et al., 2021). Themes

such as farming system, farmer’s attitude, dairying, sanitation, animal husbandry, and reproductive success fall into this category because they are highly specialized and well-developed within smaller research communities, yet their contribution to broader research directions remains limited.

The Motor Themes quadrant contains topics that are both highly relevant and highly developed, making them the key drivers of research in this field. Themes such as demographic factors, population, rural population, female, male, and adult, along with regional contexts like China, Asia, and Brazil, indicate that demographic dynamics, social characteristics, and public policy are central concerns in studies on family farming and rural development (Zahaikevitch et al., 2022). These themes play a strategic role

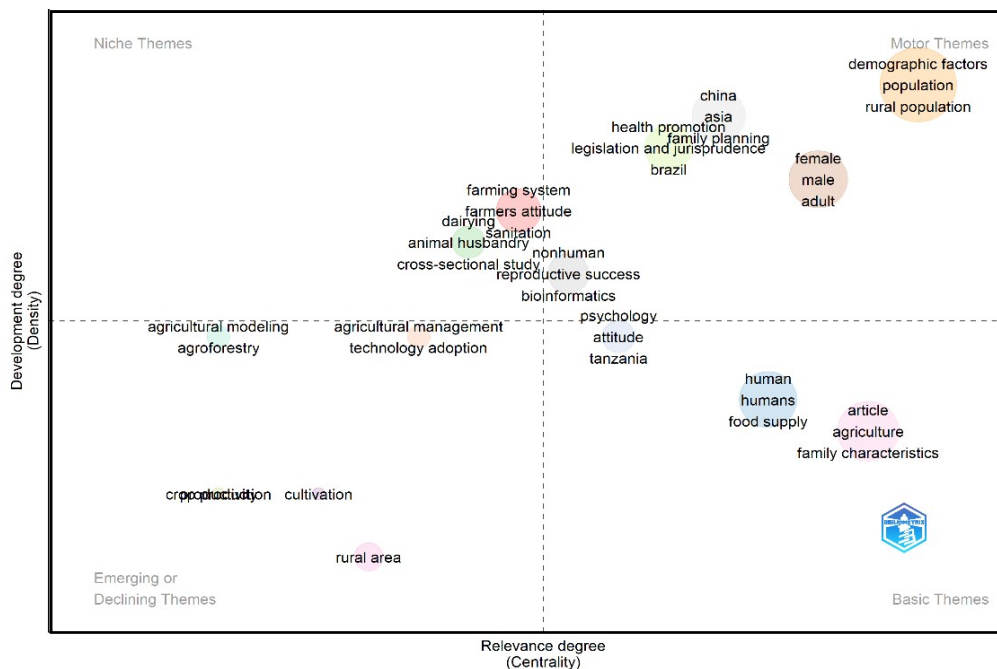


Figure 9. Co-occurrence Network

because they strongly influence the evolution and direction of research.

The Basic Themes quadrant includes topics that are highly relevant to the knowledge structure but are still underdeveloped. Themes such as human, humans, food supply, agriculture, article, and family characteristics serve as conceptual foundations for research on family farming success (Chao, 2024). Although fundamental and important, these themes exhibit relatively low development, suggesting that they have significant potential for deeper exploration in future research.

The Emerging or Declining Themes quadrant represents topics with both low relevance and low development. These themes can be interpreted either as emerging topics that have not yet received significant attention or as themes that are gradually declining in

scholarly interest. Topics such as crop production, production, cultivation, agro-forestry, agricultural modelling, and rural area fall into this category (Polain et al., 2018). While they may hold potential for future development, they currently do not play a major role in shaping research on the factors influencing family farming success.

**1. The Factors That Discuss the Success of Family Farming**

Previous publications indicate that the success of family farming have evolved to more diverse themes. The term “success” is not always highlighted in publication titles, but the success of family farming has been explored by previous publications through topics related to business sustainability, succession that keeps the farming business ongoing, or economic viability as an indicator

**Tabel 1.** The factors that discuss the success of family farming

Category	Aspect
Demographic factors	Family characteristics, number of members, and rural population dynamics determine the availability of labor and the capacity to manage farming businesses (Huber et al., 2015; Rogério et al., 2020; Timban et al., 2024), communication in the family (Rodriguez-Lizano et al, 2020).
Economic factors	Income, financial support, production costs, marketing and local economic conditions play an important role in farmers' ability to access resources and adopt new technologies (Adesina & Chianu, 2002; Miljatovi, et al, 2025; Suess-Reyes & Fuetsch, 2016; Palanisamy et al, 2025)
Environmental and ecological factors	Including land quality, climate conditions, and human-environment interactions (Chao, 2024; Da Silva, 2024; Shin et al., 2024).
Family health and welfare factors	Affects family productivity and food security, while issues of nutrition and food availability broaden the scope of analysis to include public health aspects (Muller, 2013; Song et al., 2024).
Geographically factors	Focus of research on developing countries shows that regional contexts, policies, and socio-economic conditions greatly influence the success of family farming (Belieres et al., 2015; Garner, 2014)
Organizational factors	The role of extensions professionals, community deveopment (Tritsch, et al, 2021; Toader & Roman, 2025), management of the productive units (Cardoso et al. 2021).

of success. The success of family farming publications is discussed various interrelated factors, including demographic, economic, environmental and ecological factors, geographical factors, technological aspect, organizational factors, and health dimensions.

The success of family farming is shaped by a combination of internal and external factors. Key elements include the availability and effective use of resources (land, labor, capital), the education and skills of family members, strong family cohesion, and access to supportive policies and markets. Efficient use of land, labor, and capital is crucial. Farms with higher capital input, access to credit, and adoption of new technologies tend to be more productive and profitable. The education level and management skills of family members also play a significant role in improving efficiency and adapting to market demands (Chen et al., 2022; Diaz et al., 2021; Li et al., 2022; Wu, 2022; Yigit et al., 2024). Successful family farms often join cooperatives, invest in processing or storage, and develop direct marketing channels to consumers. Brand registration and product quality also enhance competitiveness (Chen et al., 2022; Horská et al., 2020; M. Micu et al., 2022). Government policies, financial credit, and disaster management can either support or hinder family farm success. Well-designed public policies and rural infrastructure are essential for resilience and sustainable growth.

Generally, bibliometric analysis indicates a notable transition in focus from restrictive

quantitative metrics (centered on production and economic returns) towards a more holistic and sustainable perspective. This transition is characterized by an increasing significance placed on the resilience of smallholder farmers and the critical need for farmer-centric policy interventions (Syakirotin et al., 2025; Xu et al., 2024). In Indonesia, the success of family farming is strongly shaped by local characteristics, particularly severe land constraints, where most farmers cultivate less than one hectare and the ongoing issue of farmer regeneration. These conditions necessitate the optimized use of family labor and the development of strategies to attract younger generations. In addition, geographical discussions must be more detailed according to specific agroecological zones, such as distinctions between Java and non-Java regions, as environmental and policy variations significantly influence farming outcomes. (Dolok et al., 2022; Jasmawati et al., 2023; Kadir & Prasetyo, 2024; Wulandari et al., 2024). Thus, the success of family farming depends on farmers' ability to adapt to land constraints, the productive age of farmers, and the use of sustainable technology.

## CONCLUSIONS

Over the past decade, research on the success factors of family farming has expanded significantly in both volume and geographical reach, with publication output peaking in 2023 and involving a widening range of countries across Asia, Africa, Europe, and the Americas.

This growth reflects increasing global attention to food security, climate change, and the strategic importance of smallholder farmers. The thematic evolution of the literature shows a marked shift from narrowly focused analyses on production and economic outcomes toward more comprehensive, multidisciplinary perspectives that integrate social, economic, environmental, technological, and health-related dimensions.

Collaboration structures in this research domain reveal active yet uneven connections among authors, institutions, and countries, forming distinct clusters with limited cross-linkages. While existing collaborations enhance research quality, knowledge exchange, and scientific visibility, the weak integration across clusters indicates considerable potential for strengthening global cooperation. Enhancing such collaboration would enable richer comparative analyses and foster more robust, policy-relevant insights into the complex and interdependent factors influencing the success of family farming worldwide.

The success of family farming publications is discussed various interrelated factors, including demographic, economic, environmental and ecological factors, geographical factors, technological aspect, organizational factors, and health dimensions.

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