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Strengthening Agribusiness as a Pillar of Indonesia's Economic Progress: A Bibliometric Analysis of Research Trends, Developments, and Future Directions

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ABSTRACT

Agribusiness plays a strategic role in supporting Indonesia's economic development through its contributions to food security, employment creation, industrial growth, and national competitiveness. As an important economic sector, agribusiness requires continuous development through technological innovation, value chain integration, institutional strengthening, market expansion, and sustainable resource management. This study aims to examine the development of agribusiness research and identify its contribution to Indonesia's economic progress through a bibliometric analysis. Bibliographic data are collected from the Crossref database using relevant keywords related to agribusiness development, agricultural business, economic growth, business competitiveness, innovation, and sustainability. The collected publications are screened, selected, and cleaned to ensure their relevance and metadata consistency. Data analysis employs performance analysis and science mapping using Bibliometrix in R Studio and VOSviewer. Performance analysis is designed to examine publication growth, journal productivity, influential authors, and country contributions. Meanwhile, science mapping is used to identify dominant research themes, keyword relationships, thematic clusters, and scientific collaboration networks. The analysis also seeks to identify emerging research topics and potential knowledge gaps in agribusiness development. Particular attention is directed toward agricultural value chains, digital transformation, technological innovation, market competitiveness, institutional development, and sustainable agribusiness practices. By systematically mapping the scientific literature, this study is expected to provide an overview of research trends, intellectual developments, and future research directions in agribusiness. The findings are expected to contribute to academic discussions and provide insights for policymakers, researchers, and business stakeholders in formulating strategies to strengthen agribusiness as a pillar of Indonesia's economic progress and long-term competitiveness.

Keywords: Agribusiness Development; Economic Progress; Business Competitiveness; Bibliometric Analysis; Sustainable Agribusiness.

A.**INTRODUCTION**

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Agribusiness plays a strategic role in supporting economic growth, strengthening national competitiveness, and improving the welfare of communities. It encompasses interconnected economic activities ranging from agricultural production and processing to distribution, marketing, and consumption. In the modern economy, agribusiness is no longer limited to farming activities but has developed into an integrated business system involving technology, finance, logistics, entrepreneurship, and market institutions. This transformation creates opportunities for increasing economic value, expanding employment, and strengthening the contribution of agriculture to national development. The development of agribusiness also supports food security by connecting agricultural producers with processing industries and consumer markets. However, its contribution to economic progress depends on productivity, innovation, institutional capacity, and the effectiveness of agricultural value chains. The transformation of agribusiness therefore requires a comprehensive approach that integrates economic, social, technological, and environmental considerations. In this context, strengthening agribusiness represents an important strategy for supporting sustainable economic development and improving Indonesia's competitiveness (Food and Agriculture Organization of the United Nations [FAO], 2024).

At the global level, agribusiness development has become increasingly important due to population growth, changing consumption patterns, technological advancement, and the expansion of international agricultural trade. Global agricultural markets are increasingly interconnected through international supply chains, food processing industries, logistics networks, and digital trading platforms. The OECD and FAO (2024) emphasize that emerging economies will play an increasingly important role in shaping global agricultural production, consumption, and trade over the coming decade. These developments create opportunities for agricultural producers and businesses to participate in broader markets while also increasing competition among countries. Nevertheless, global agrifood systems continue to face challenges associated with climate change, environmental degradation, food losses, unequal market access, and economic vulnerability. The FAO (2024) highlights the importance of transforming agrifood systems to address their economic, social, environmental, and health-related costs. Reardon et al. (2009) also demonstrate that the

transformation of agrifood industries has changed the relationships among farmers, processors, retailers, and international markets. Consequently, agribusiness competitiveness increasingly depends on innovation, efficient value chains, institutional coordination, and the ability to respond to global market developments.

Indonesia possesses substantial agricultural resources and a large rural population, providing significant opportunities for developing agribusiness as a driver of national economic progress. Agriculture remains an important sector in supporting employment, rural livelihoods, food availability, and industrial development. According to the World Bank (2023a), approximately 43% of Indonesia's population lived in rural areas, while agriculture employed nearly 29% of the national workforce in 2022. These conditions demonstrate the importance of agricultural transformation in supporting inclusive economic development and improving rural welfare. The World Bank (2023b) further emphasizes that strengthening Indonesia's agrifood system requires improvements in productivity, food security, market connectivity, and agricultural competitiveness. In addition, the development of agribusiness at the local level is closely related to the capacity of farmers, agricultural enterprises, cooperatives, small and medium-sized businesses, and local institutions to participate in agricultural value chains. However, differences in infrastructure, technology adoption, financial access, and business management continue to influence the performance of agribusiness across regions. Therefore, strengthening agribusiness in Indonesia requires policies and development strategies that connect local economic potential with national and international market opportunities.

Despite its considerable economic potential, agribusiness development in Indonesia continues to face structural and institutional challenges that may limit its contribution to national economic competitiveness. These challenges include low productivity among certain agricultural producers, limited access to financing, inadequate infrastructure, technological disparities, and weak integration between production and downstream processing activities. Small-scale farmers and agricultural entrepreneurs may also experience difficulties accessing reliable market information, developing business networks, and meeting increasingly demanding market standards. Bannor and Arthur (2024) identify several agribusiness development gaps in emerging markets, including deficiencies in business management, entrepreneurship, technology adoption, innovation, and institutional support. These problems indicate that agribusiness development

requires more than increasing agricultural production because it also involves improving business capabilities, market institutions, and value chain coordination. Furthermore, the growing complexity of agricultural markets requires policymakers and business stakeholders to understand the factors that influence competitiveness and sustainable development. Without an integrated understanding of these issues, development strategies may remain fragmented and insufficiently responsive to changing economic conditions. Accordingly, examining the development of agribusiness research is important for identifying knowledge priorities and supporting more comprehensive agricultural business strategies in Indonesia.

Previous studies have examined agribusiness development from various perspectives, including agricultural competitiveness, value chain transformation, entrepreneurship, sustainability, and technological innovation. Porter (1990) explains that national competitiveness is influenced by the capacity of industries to innovate, improve productivity, and develop competitive advantages. This perspective provides a theoretical foundation for understanding the strategic position of agribusiness in strengthening Indonesia's economic performance. Reardon et al. (2009) examine the transformation of agrifood industries and its implications for small farmers, particularly in relation to processing, retail modernization, and market participation. At the national level, Suhartawan and Sulaiman (2024) map Indonesian agribusiness research from 2004 to 2024 and identify changes in research interests, including growing attention to technology, innovation, sustainability, and commodity diversification. Similarly, Ojochgebge and Gunawan (2024) examine agribusiness research trends and their relationship with rural development through bibliometric analysis. Bannor and Arthur (2024) investigate agribusiness development gaps in emerging markets and emphasize the importance of entrepreneurship, innovation, and institutional support. These studies provide valuable foundations for understanding agribusiness development, although they approach the subject through different geographical contexts, research objectives, and analytical perspectives.

Although previous studies have contributed important insights into agribusiness development, a broader understanding of its scientific development and relationship with Indonesia's economic progress remains necessary. Existing research has generally concentrated on particular themes, including agricultural production, rural development, entrepreneurship, value chain transformation, and sustainability. Meanwhile, Suhartawan and Sulaiman (2024)

provide a bibliometric overview of Indonesian agribusiness research, while Ojochgebge and Gunawan (2024) focus on agribusiness and rural development trends. These studies demonstrate the relevance of bibliometric approaches but also provide opportunities for further investigation into the broader relationship between agribusiness development and national economic competitiveness. Bibliometric analysis offers a systematic approach to identifying publication patterns, influential research contributions, thematic relationships, and emerging knowledge areas (Donthu et al., 2021). Aria and Cuccurullo (2017) further demonstrate how Bibliometrix can support comprehensive science mapping and the examination of scientific research structures. The novelty of the present study lies in integrating publication performance analysis and science mapping to examine agribusiness research in relation to Indonesia's economic progress. This approach is expected to identify dominant research themes, emerging topics, scientific collaboration patterns, and future research opportunities that can support the development of Indonesian agribusiness.

Based on the identified research issues and previous studies, this research aims to examine the development of scientific publications concerning agribusiness and its contribution to strengthening Indonesia's economic progress through a bibliometric approach. Specifically, the study analyzes publication growth and identifies influential journals, productive authors, institutional contributions, and country-level research participation. It also examines the intellectual and conceptual structures of agribusiness research through keyword co-occurrence, thematic clusters, and relationships among major research topics. Furthermore, the study investigates scientific collaboration patterns to understand how researchers and institutions contribute to the development of agribusiness knowledge. The analysis also seeks to identify emerging research themes related to digital transformation, agricultural innovation, entrepreneurship, value chain integration, sustainability, and business competitiveness. These objectives are consistent with bibliometric research principles that emphasize the systematic examination of scientific productivity, intellectual structures, and thematic evolution (Donthu et al., 2021). The use of Bibliometrix and VOSviewer is expected to provide complementary analytical perspectives for examining publication performance and visualizing scientific networks. Through these objectives, the study seeks to develop a comprehensive understanding of agribusiness research trends and their relevance to Indonesia's economic development.

This study is expected to contribute to the development of agribusiness scholarship by providing a systematic overview of research productivity, thematic development, and scientific collaboration. From an academic perspective, the findings may help researchers identify established research themes, emerging topics, and opportunities for interdisciplinary studies involving agricultural economics, business management, technology, entrepreneurship, and sustainable development. From a practical perspective, the research mapping may provide useful insights for policymakers, agricultural institutions, business actors, and other stakeholders involved in strengthening Indonesia's agribusiness sector. The identification of research priorities may also support the formulation of strategies addressing agricultural productivity, digital transformation, value chain efficiency, market access, and business innovation. Furthermore, the mapping of scientific collaboration may encourage stronger partnerships among universities, research institutions, government agencies, and agribusiness organizations. The study also provides a basis for identifying areas where future empirical research can examine the relationship between agribusiness development and national economic performance. By connecting scientific publication trends with broader economic and business development issues, this research seeks to strengthen the understanding of agribusiness as a strategic component of Indonesia's economic progress. Ultimately, the study is expected to provide an academic reference for developing more innovative, competitive, inclusive, and sustainable agribusiness strategies in Indonesia.

B.RESEARCH METHODS

This study employs a **quantitative bibliometric approach** to examine the development of agribusiness research and identify its main trends, intellectual structures, and future research directions. Bibliometric analysis is used because it enables the systematic examination of scientific publications through quantitative indicators, including publication growth, citation patterns, influential authors, institutions, journals, and keyword relationships. The approach provides an overview of how agribusiness research has developed over time and how its major themes are interconnected. Furthermore, this method helps identify research gaps and emerging topics that may contribute to strengthening agribusiness as a pillar of Indonesia's economic progress.

The data are collected from the **Crossref database**, which provides bibliographic metadata of scholarly publications, including article titles, authors, publication years, abstracts, keywords,

and digital object identifiers (DOIs). Data retrieval is conducted using keywords related to agribusiness, agricultural development, agricultural entrepreneurship, agroindustry, agricultural value chains, innovation, sustainability, and business competitiveness. The retrieved publications are screened according to their relevance to the research objectives, publication period, and availability of bibliographic information. The data are subsequently cleaned by removing duplicate records, incomplete metadata, and publications that do not correspond to the research focus. The final dataset is then organized for further bibliometric analysis.

Data analysis is conducted using VOSviewer and Bibliometrix through RStudio. VOSviewer is used to generate network, overlay, and density visualizations to identify keyword co-occurrence, thematic relationships, and the development of research topics over time. Meanwhile, Bibliometrix is applied to examine publication productivity, citation performance, influential authors, sources, and the intellectual structure of agribusiness research. The analysis consists of performance analysis and science mapping, allowing the study to identify established research themes, emerging topics, and potential areas for future investigation. The results are interpreted descriptively to explain the evolution of agribusiness scholarship and its implications for strengthening Indonesia's agribusiness competitiveness and economic development.

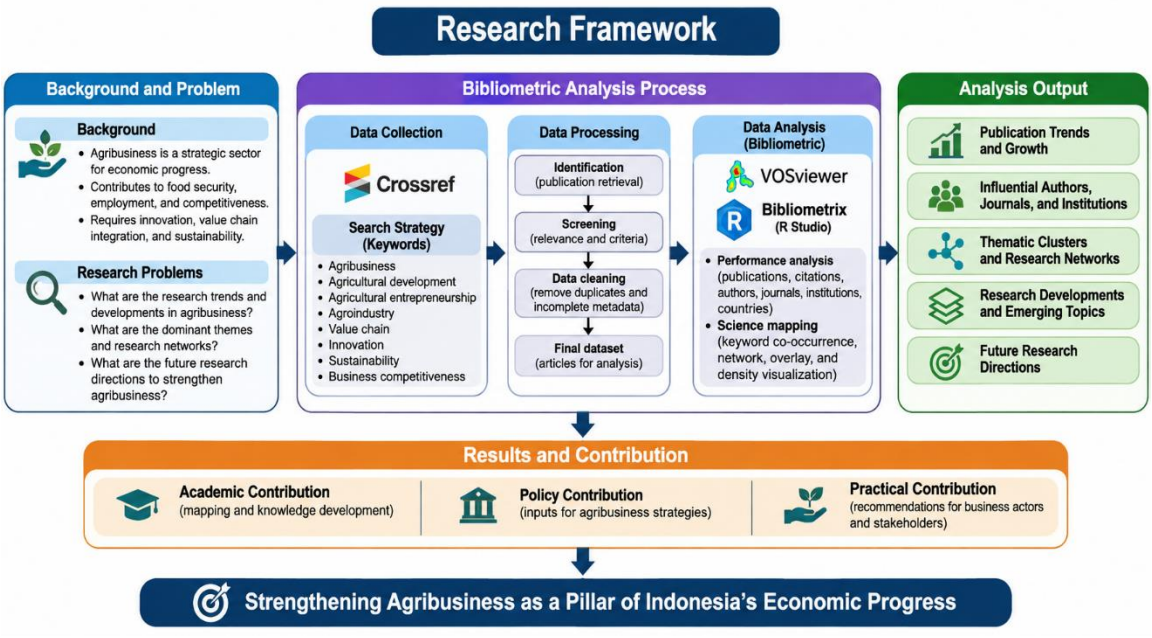


Figure 1 Research Framework for Strengthening Agribusiness as a Pillar of Indonesia's Economic Progress: A Bibliometric Analysis.

Figure 1 illustrates the research framework developed to examine the role of agribusiness in supporting Indonesia's economic progress through a bibliometric approach. The framework begins with the background and research problems, focusing on the development of agribusiness, its contribution to economic growth, and the need to identify research trends and knowledge gaps. The bibliometric analysis process consists of data collection from Crossref using relevant keywords, data processing through identification, screening, and cleaning, and data analysis using VOSviewer and Bibliometrix in RStudio. The analysis focuses on publication performance, citation patterns, influential authors and institutions, keyword co-occurrence, thematic networks, and emerging research topics. The resulting findings are expected to provide academic, policy, and practical contributions by identifying research developments, formulating strategic recommendations, and outlining future research directions. Ultimately, this framework aims to strengthen agribusiness as a pillar of Indonesia's economic progress.

C.RESEARCH RESULTS AND DISCUSSION

- Results

Data analysis in this study was conducted using a quantitative bibliometric approach supported by VOSviewer and Bibliometrix software through RStudio. The utilization of these tools was intended to assist the researcher in collecting, organizing, processing, visualizing, and systematically analyzing scientific publications related to agribusiness research. The study focused on examining research trends, developments, intellectual structures, and future research directions concerning the role of agribusiness in strengthening Indonesia's economic progress. Bibliographic data were obtained from the Crossref database using relevant keywords, including agribusiness, agricultural development, agricultural entrepreneurship, agroindustry, agricultural value chains, innovation, sustainability, and business competitiveness. The retrieved metadata included publication titles, authors, publication years, abstracts, keywords, journal sources, and digital object identifiers (DOIs), depending on their availability in the database. The collected records were subsequently examined to ensure their relevance to the research objectives. Duplicate publications, incomplete metadata, and records that did not correspond to the research focus were identified and excluded during the data preparation process. The use of bibliometric software

enabled the researcher to examine publication productivity, citation patterns, influential contributors, and thematic relationships within the development of agribusiness scholarship.

Through Bibliometrix and VOSviewer, the analysis was organized into two main components: performance analysis and science mapping. Performance analysis was conducted to examine the productivity and scientific impact of agribusiness research based on publication growth, citation patterns, influential authors, leading journals, institutional contributions, and geographical distribution of publications. This analysis provided an overview of the development and academic contributions of agribusiness research over the selected publication period. Meanwhile, science mapping was conducted using VOSviewer to visualize the intellectual and thematic structures of the research field. The visualization process included keyword co-occurrence analysis, co-authorship networks, citation relationships, and bibliographic coupling, where supported by the available metadata. Keyword co-occurrence analysis was particularly important for identifying frequently discussed research themes and examining relationships among concepts such as agricultural innovation, entrepreneurship, value chain development, sustainability, agroindustry, and business competitiveness. Network visualization was used to identify connections among research themes, while overlay visualization illustrated the temporal development of research topics. Density visualization provided an overview of the concentration and prominence of frequently occurring keywords within the analyzed publications. These analytical procedures helped identify established research themes, interconnected topics, and emerging areas in agribusiness scholarship.

The final stage involved interpreting the bibliometric findings to identify the major developments, research gaps, and potential future directions in agribusiness studies. The identified themes were examined in relation to their contribution to agricultural transformation, economic development, business competitiveness, innovation, and sustainability. Particular attention was given to understanding how agribusiness research has evolved from conventional agricultural production toward broader discussions involving entrepreneurship, agroindustrial development, digital transformation, market integration, and sustainable value chains. The interpretation also considered the relationships between established research themes and emerging topics to identify areas that require further scholarly investigation. The findings were subsequently synthesized to formulate academic, policy, and practical contributions relevant to strengthening agribusiness in

Indonesia. The academic contribution concerns the mapping of knowledge development and research trends, while the policy contribution provides insights for developing strategies that support agricultural productivity, value chain integration, innovation, and competitiveness. The practical contribution offers recommendations for agribusiness actors and other stakeholders in responding to emerging challenges and opportunities. Therefore, the application of VOSviewer and Bibliometrix not only facilitated the systematic analysis and visualization of scientific publications but also supported analytical transparency and the development of evidence-based insights into strengthening agribusiness as a pillar of Indonesia's economic progress.

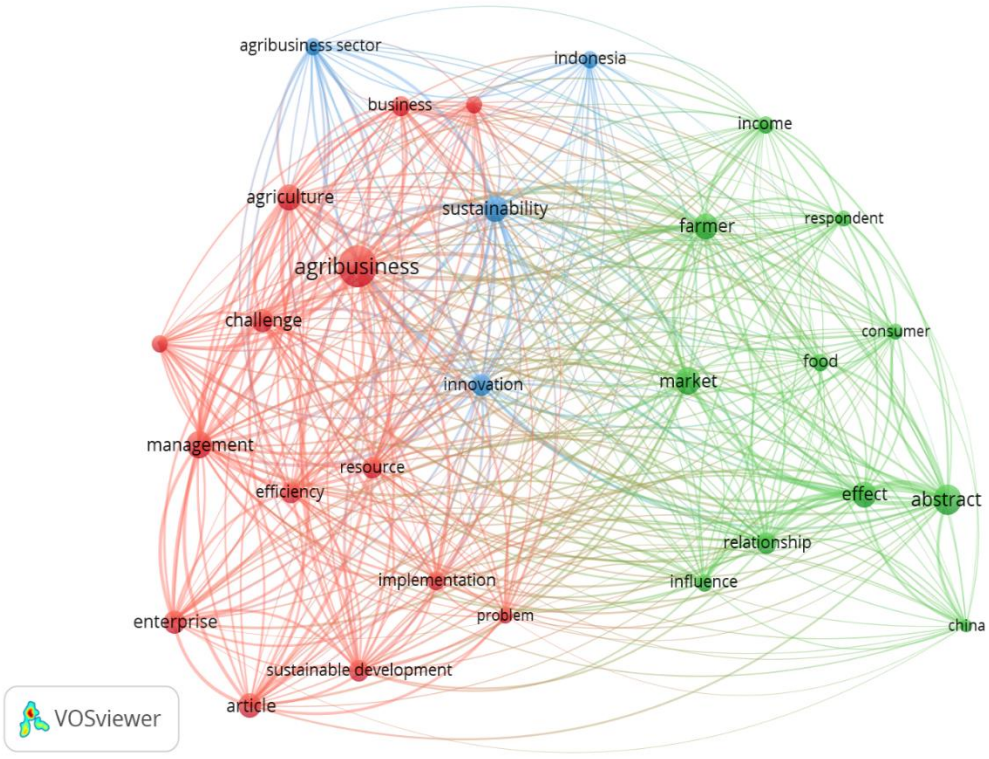


Figure 2 Keyword Co-Occurrence Network Visualization of Agribusiness Research Using VOSviewer.

Figure 2 presents the keyword co-occurrence network visualization of agribusiness research generated using VOSviewer. The visualization illustrates the relationships among frequently occurring keywords, with node size representing the relative frequency of keyword occurrences and connecting lines indicating the strength of relationships between keywords. The network is divided into three main thematic clusters, distinguished by red, blue, and green colors. The red cluster is primarily centered on *agribusiness*, which is strongly connected to terms such as *agriculture*, *business*, *management*, *enterprise*, *implementation*, *resource*, *efficiency*, *challenge*, and *sustainable development*. This cluster indicates a strong research focus on agribusiness management, agricultural business development, resource utilization, implementation strategies, and sustainability challenges. The blue cluster includes keywords such as *agribusiness sector*, *Indonesia*, *sustainability*, and *innovation*, reflecting research attention to the development of agribusiness within national economic contexts, particularly through innovation and sustainable development approaches.

Meanwhile, the green cluster is characterized by keywords such as *farmer*, *market*, *food*, *income*, *consumer*, *effect*, *relationship*, and *influence*. These terms indicate a research orientation toward the economic and market dimensions of agribusiness, including farmers' economic conditions, market interactions, food systems, consumer perspectives, and income-related outcomes. The strong connections among these keywords suggest that agribusiness research is closely associated with agricultural market dynamics and the economic welfare of agricultural stakeholders. The interconnections among the three clusters further demonstrate that agribusiness is a multidisciplinary research field linking business management, agricultural innovation, sustainability, and market development. Overall, the visualization highlights the central position of agribusiness in existing scholarly discussions while indicating opportunities for future research on integrating innovation, sustainable agricultural practices, market competitiveness, and farmers' economic welfare to strengthen Indonesia's agribusiness sector.

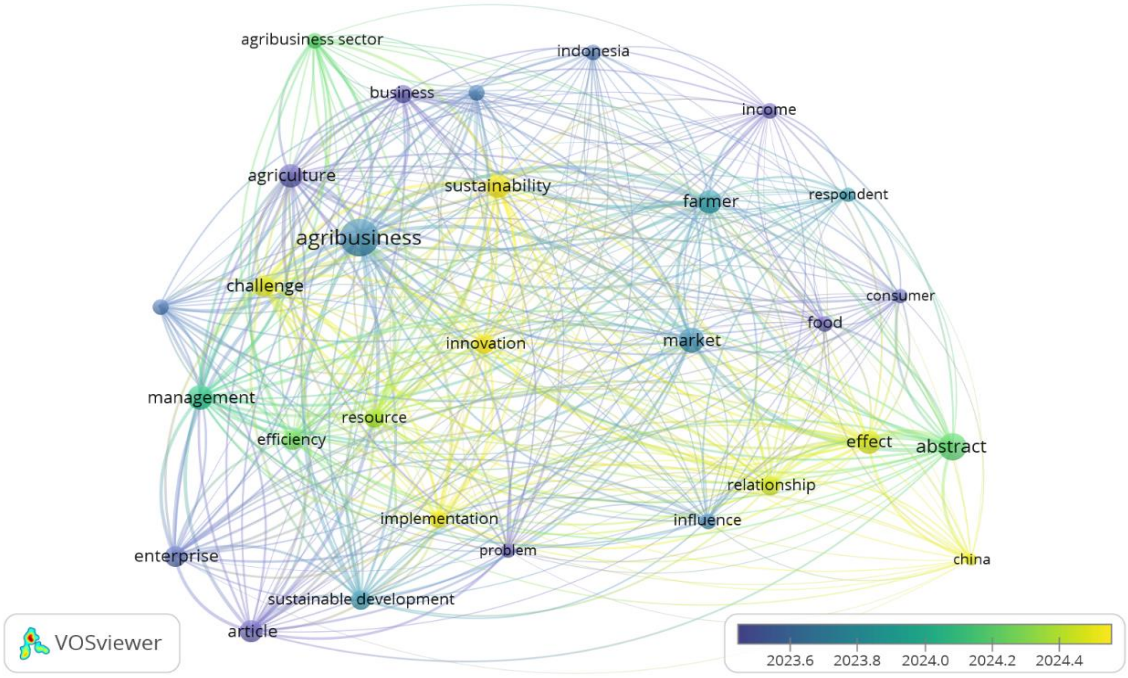


Figure 3 Overlay Visualization of Agribusiness Research Trends and Temporal Evolution Using VOSviewer.

Figure 3 illustrates the overlay visualization of keyword co-occurrence in agribusiness research, highlighting the temporal development of research themes based on their average publication years. The color gradient represents the average year of keyword occurrence, ranging from blue and purple, indicating relatively earlier research topics (approximately 2023.6), to green and yellow, representing more recent topics (approximately 2024.4). Keywords such as *agribusiness*, *agriculture*, *business*, *enterprise*, and *management* appear predominantly in the earlier period, suggesting that previous research placed considerable emphasis on agricultural business development, organizational management, and enterprise-related issues. Meanwhile, keywords such as *sustainability*, *innovation*, *resource*, and *challenge* occupy intermediate positions in the temporal distribution, indicating the growing attention given to innovation, resource management, and sustainable agricultural development. The visualization demonstrates that agribusiness research has evolved through interconnected themes rather than developing as isolated research topics.

Furthermore, the appearance of relatively recent keywords, including *effect*, *income*, *farmer*, *market*, *food*, and *agribusiness sector*, indicates increasing scholarly attention to the economic and practical dimensions of agribusiness. These themes reflect growing interest in farmers' income, market performance, food systems, and the broader contribution of agribusiness to economic development. The presence of *Indonesia* and *agribusiness sector* also highlights the relevance of national and sectoral perspectives in contemporary agribusiness discussions. The connections among these keywords suggest opportunities to integrate sustainability, innovation, market development, and farmers' economic welfare into future research agendas. Overall, the overlay visualization provides insights into the changing research priorities in agribusiness and identifies potential directions for further investigation, particularly concerning digital innovation, sustainable value chains, market competitiveness, and the contribution of agribusiness to Indonesia's economic progress.



Figure 4 Density Visualization of Research Themes in Agribusiness Using VOSviewer.

Figure 4 presents the density visualization of keyword distribution in agribusiness research generated using VOSviewer. This visualization illustrates the concentration and prominence of research themes based on the frequency of keyword occurrences and their relationships with other terms. The color intensity indicates the density of research topics, with yellow representing areas of higher keyword density, green indicating moderate density, and blue representing lower density. The keyword *agribusiness* appears as the most prominent area, characterized by a strong yellow concentration, indicating its central position and frequent occurrence in the analyzed publications. Other relatively dense areas include *management*, *agriculture*, *farmer*, *market*, *effect*, and *abstract*, suggesting that these topics have received considerable attention in agribusiness-related studies. Meanwhile, keywords such as *sustainability*, *innovation*, *resource*, *efficiency*, and *sustainable development* indicate important research dimensions associated with agricultural business management, innovation, and sustainable resource utilization.

Furthermore, the distribution of density across the visualization reveals that agribusiness research encompasses interconnected themes involving business management, agricultural production, market development, and economic outcomes. The relatively prominent density around *farmer* and *market* highlights the importance of agricultural stakeholders and market mechanisms in agribusiness studies, while the presence of *income*, *consumer*, and *food* reflects attention to economic welfare, consumer behavior, and food-related issues. In contrast, keywords with lower density, such as *enterprise*, *implementation*, *problem*, *influence*, and *China*, may represent comparatively less concentrated research areas within the analyzed dataset. These topics offer opportunities for further investigation, particularly regarding the integration of innovation, sustainable value chains, business efficiency, market competitiveness, and farmers' economic welfare. Overall, the density visualization provides an overview of the dominant and less concentrated research themes, helping identify potential research gaps and future directions for strengthening agribusiness as a pillar of Indonesia's economic progress.

- **Di**scussion

The bibliometric findings reveal that agribusiness has developed into a multidisciplinary research field encompassing agricultural production, business management, innovation, sustainability, market development, and economic performance. As illustrated in Figure 2, the

keyword co-occurrence network identifies *agribusiness* as a central theme connected to *agriculture*, *business*, *management*, *enterprise*, *resource*, *efficiency*, and *sustainable development*. These relationships indicate that scholarly discussions of agribusiness extend beyond agricultural production to include organizational capacity, resource utilization, business strategies, and sustainable economic activities. The presence of *Indonesia* and *agribusiness sector* also demonstrates the relevance of national and sectoral perspectives in understanding agribusiness development. This interconnected research structure supports the view that agribusiness should be examined as an integrated economic system involving production, processing, distribution, and market activities. In this regard, bibliometric analysis provides an important approach for identifying the intellectual structure and development of research themes within a particular field (Donthu et al., 2021).

Furthermore, the findings highlight the importance of market integration and farmers' economic welfare in agribusiness development. The green cluster in Figure 2 shows connections among keywords such as *farmer*, *market*, *food*, *consumer*, and *income*, indicating that agribusiness research is closely associated with market mechanisms, food systems, consumer relationships, and the economic conditions of agricultural stakeholders. These themes suggest that the competitiveness of agribusiness cannot be measured solely through agricultural production but should also consider farmers' access to markets, value addition, distribution systems, and participation in broader supply chains. This interpretation is consistent with Reardon et al. (2009), who explain that the transformation of agrifood industries has significantly changed food processing, retail systems, and the relationship between small farmers and markets. However, such transformation may create both opportunities and challenges for small-scale farmers, particularly regarding their ability to participate in modern value chains. Therefore, strengthening agribusiness requires strategies that improve farmers' market access, institutional capacity, business partnerships, and participation in value-added economic activities.

The overlay visualization in Figure 3 provides additional insights into the temporal distribution of agribusiness research themes. The color gradient, ranging from blue and purple to green and yellow, represents differences in the average publication years of the keywords. Within the displayed period, themes such as *agribusiness*, *agriculture*, *business*, and *enterprise* appear alongside topics related to *sustainability*, *innovation*, *farmer*, *market*, and *income*. This pattern

suggests that research discussions connect established concerns about agricultural business development with themes involving innovation, sustainability, and economic outcomes. Meanwhile, Figure 4 shows that *agribusiness* has the highest visual density, followed by relatively prominent areas associated with *agriculture*, *management*, *farmer*, *market*, and *effect*. The concentration of these keywords indicates their prominence within the analyzed publication dataset. This finding is relevant to the FAO (2024) perspective, which emphasizes the need for value-driven transformation of agrifood systems by considering their economic, social, and environmental impacts. Consequently, future agribusiness development should integrate productivity and business competitiveness with sustainability, responsible resource management, and inclusive benefits for agricultural stakeholders.

Overall, the findings from Figures 2, 3, and 4 demonstrate that agribusiness research encompasses interconnected dimensions of business management, agricultural innovation, market development, sustainability, and farmers' economic welfare. The network visualization identifies the relationships among major research themes, the overlay visualization illustrates their temporal distribution, and the density visualization highlights the concentration of frequently occurring topics. These complementary findings provide a basis for identifying future research directions, particularly concerning digital transformation in agribusiness, sustainable agricultural value chains, market competitiveness, institutional collaboration, and inclusive business development. For Indonesia, these research directions are particularly relevant to strengthening the capacity of agricultural enterprises, improving farmers' participation in markets, encouraging innovation, and increasing the value added of agricultural products. Nevertheless, the bibliometric visualizations describe patterns within the analyzed scientific publications and should not be interpreted as direct evidence of improved agricultural productivity or national economic growth. Further empirical studies are therefore needed to examine how the identified research themes translate into practical improvements in agribusiness performance and Indonesia's economic progress.

D.CONCLUSION AND RECOMMENDATIONS

- Conclusion

This study concludes that agribusiness research represents a multidisciplinary field that connects agricultural production, business management, innovation, sustainability, market development, and farmers' economic welfare. The bibliometric analysis using VOSviewer and Bibliometrix identifies *agribusiness* as a central research theme, strongly connected to *agriculture*, *business*, *management*, *farmer*, *market*, *income*, and *sustainable development*. The network visualization demonstrates the relationships among these themes, while the overlay visualization illustrates their temporal distribution and the density visualization identifies the most concentrated research topics. These findings indicate that agribusiness scholarship has expanded beyond conventional agricultural production toward broader discussions of business competitiveness, market integration, resource efficiency, and sustainable agricultural development. Therefore, strengthening agribusiness requires an integrated approach that considers economic, institutional, technological, and environmental dimensions.

Furthermore, the findings highlight several potential research directions for strengthening agribusiness as a pillar of Indonesia's economic progress. Important areas for further investigation include digital transformation, agricultural innovation, sustainable value chains, market competitiveness, institutional collaboration, and improving farmers' economic welfare. The integration of these dimensions is essential for developing a more competitive, productive, and sustainable agribusiness sector. From an academic perspective, this study contributes to mapping the intellectual structure and development of agribusiness research, while from a practical perspective, it provides insights for researchers, policymakers, agricultural institutions, and business stakeholders in identifying strategic priorities. Nevertheless, the findings reflect patterns in the analyzed scientific publications and do not directly establish the actual economic impact of agribusiness development in Indonesia.

- Recommendations

Based on these findings, future research should explore the relationship between digital innovation, sustainable agricultural practices, market integration, and agribusiness

competitiveness through empirical studies involving farmers, agricultural enterprises, policymakers, and other relevant stakeholders. Policymakers should strengthen institutional support, improve access to financing and technology, facilitate market partnerships, and encourage value-added agricultural processing to enhance the competitiveness of domestic agribusiness. Agricultural business actors are also encouraged to adopt innovative management practices, strengthen supply chain collaboration, and implement environmentally sustainable production systems. Furthermore, future bibliometric studies should expand publication coverage by incorporating additional databases, such as Scopus and Web of Science, and extending the publication period to obtain a broader understanding of global and national agribusiness research developments.

REFERENCES

Aria, M., & Cuccurullo, C. (2017). bibliometrix: An R-tool for comprehensive science mapping analysis. *Journal of Informetrics, 11*(4), 959–975. https://doi.org/10.1016/j.joi.2017.08.007

Bannor, R. K., & Arthur, K. K. (2024). A systematic review and bibliometric analysis on agribusiness gaps in emerging markets. *Research in Globalization, 8,* Article 100214. https://doi.org/10.1016/j.resglo.2024.100214

Donthu, N., Kumar, S., Mukherjee, D., Pandey, N., & Lim, W. M. (2021). How to conduct a bibliometric analysis: An overview and guidelines. *Journal of Business Research, 133*, 285–296. https://doi.org/10.1016/j.jbusres.2021.04.070

Food and Agriculture Organization of the United Nations. (2024). *The state of world fisheries and aquaculture 2024: Blue transformation in action*. FAO. https://doi.org/10.4060/cd0683en

Mahat, D. (2025). Trends and transformations in agribusiness research: A decadal bibliometric analysis. *International Journal of Management, Accounting and Economics, 12*(4), 662–682. https://doi.org/10.5281/zenodo.15492576

OECD & Food and Agriculture Organization of the United Nations. (2024). *OECD-FAO agricultural outlook 2024–2033*. OECD Publishing. https://doi.org/10.1787/4c5d2cfb-en

Ojochgebge, A. T., & Gunawan, R. N. (2024). A decade of agribusiness research: Bibliometric insights into rural development trends (2015–2025). *Journal of Science in Agrotechnology, 2*(2), 17–28. https://doi.org/10.21107/jsa.v2i2.32

Porter, M. E. (1990). *The competitive advantage of nations*. Free Press.

Reardon, T., Barrett, C. B., Berdegué, J. A., & Swinnen, J. F. M. (2009). Agrifood industry transformation and small farmers in developing countries. *World Development, 37*(11), 1717–1727. https://doi.org/10.1016/j.worlddev.2008.08.023

Suhartawan, I. G., & Sulaiman, Z. P. (2024). Ke mana arah penelitian agribisnis Indonesia? Analisis bibliometrik periode 2004–2024. *AGRINUS: Jurnal Agro Marin Nusantara, 1*(2), 162–175. https://doi.org/10.62180/w9cqf630

World Bank. (2023a). *Food security in Indonesia: Challenges and way forward*. World Bank Group. http://documents.worldbank.org/curated/en/099062623000515372

World Bank. (2023b). *Transforming Indonesia's agri-food system (P175446): Completion report*. World Bank Group.