



Research Article

Agricultural Enterprises in South and Southeast Asia: Research Trends, Thematic Evolution, and Knowledge Structure

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Abstract | This study reviewed 146 publications on South and Southeast Asian agricultural enterprises to trace the intellectual framework, research development, and new topics of interest in the domain. With the tools of Biblioshiny performance and science mapping, the review recognizes a fast-growing and more interdisciplinary research literature, with a growing rate of 13.16 per year. Scholarly output is dominated by India and Indonesia, which have good international cooperation, especially with the United States and European institutions. Thematic evolution includes the move to a more system-oriented theme, including value chain governance, agripreneurship, sustainability, digital transformation, and enterprise resilience. Value chains and sustainability have become central and highly developed motor themes, whereas digitalization, circular economy models, and social inclusion are central but emerging fronts. Co-authorship and institutional networking accentuate a blend of regional research and powerful world partners, yet collaboration is not evenly distributed among nations. Despite strong growth, there are gaps in gender inclusion, SME finance, and digital governance. Overall, the results indicate that agribusiness enterprise studies are moving toward incorporating technology-intensive and sustainability-driven strategies, which can provide useful information for future research as well as for the development of inclusive and resilient agribusiness systems in South and Southeast Asia.

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Introduction

South and Southeast Asia, both of which make significant contributions to GDP, employment, and social well-being, rely on agricultural enterprises for economic growth and development (Minten *et al.*, 2023). The emerging middle-income economies of Southeast Asia, with their strong demographic

growth rates, are some of the greatest market opportunities for global agribusiness in the next 20 years. Having come out of their post-COVID slowdown, the so-called tiger economies of Southeast Asia are estimated to record 4.75% economic growth in 2025 (Tanchum, 2024). The economies of the upper middle-income countries in the region, which are expected to continue to perform well economically,

will be Indonesia, Thailand, and Malaysia, and the lower middle-income economies of The Philippines, Vietnam, and Cambodia are projected to record an economic growth of 6% or above (Tanchum, 2024). The last 20 years have been characterized by rapid changes in the technological sphere, global food market shifts, pressures of global climate change, and changed preferences of consumers, which have altered the environment in which agricultural enterprises are conducted (Chumpanya and Panpakdee, 2025). The development of knowledge on how research on such enterprises has evolved is important for shaping responsive policies, innovations, and sustainable development directions in such regions (Hussen and Geleta, 2021; Sumarsono *et al.*, 2025).

The South and Southeast Asia regions are home to some of the largest and most vibrant agricultural systems in the world. India, Bangladesh, Vietnam, Indonesia, Thailand, and the Philippines are the countries in which changes in agricultural production, agribusiness growth, and market integration have occurred significantly (Rashid *et al.*, 2024; Dung Tuan, 2025; Sharma *et al.*, 2025). They have been influenced by several factors, such as the emergence of agripreneurship, the use of digital and climate-smart technologies, the strengthening of agricultural value chains, and the increase in agricultural small and medium enterprises (SMEs) (Amaran *et al.*, 2025; Rosmalah *et al.*, 2025). The study of agricultural enterprises has increased in this context, with research topics including the enhancement of productivity, sustainability, agro-enterprise development in relation to gender, value chain upgrading, and institutional innovations (Linh and Van Hai, 2025). Nevertheless, the academic scene remains diverse in the fields of agricultural economics, development studies, entrepreneurship, supply chain management, and sustainability sciences.

Although the literature has been increasing, little has been done to systematically synthesize how the scientific discourse on agricultural enterprises in these areas has developed over the years, what the predominant themes in the literature are, who the main contributors are, and what the gaps in knowledge remain. Current reviews are usually country-based, value chains, or thematic, that is, agri-food logistics or rural entrepreneurship (Lorenz *et al.*, 2024; Maniruzzaman *et al.*, 2024). A region-wide bibliometric evaluation should be conducted to chart

the intellectual landscape of this discipline, detect new research fronts, and trace thematic changes over a twenty-year history of publication (Hadawale and Sharma, 2025).

As a rigorous and transparent method of assessing scientific production, collaboration networks, research hotspots, and conceptual development in a research field, bibliometric analysis provides a reliable evaluation method. Bibliometrics allows the tracking of co-authorship trends, clusters of keyword co-occurrence, citation patterns, and time-varying themes using science-mapping methods (Schouten and Bitzer, 2015). To fast changing disciplines like agricultural enterprise research where interdisciplinary methodologies and regional dynamics overlap, bibliometric tools offer good information regarding the manner in which knowledge is created, structured and shared (Kumari *et al.*, 2024).

This study aims to conduct a bibliometric review of agricultural enterprise research in South and Southeast Asia between 2000 and 2025. This study examines the trends of publications, author and institutional productivity, collaboration patterns, thematic community, and the development of the content of research using the Scopus database and a narrower range of enterprise-specific keywords related to agriculture with country filters. The key themes identified in the findings, which are mainly mainstream, are agribusiness development, value chain integration, agricultural SMEs, sustainability transitions, and agripreneurship, whereas the under-researched areas are digitalization, gender-inclusive enterprise models, and climate-resilient agri-food systems (Dung Tuan, 2025)

This study contributes to the literature in three important ways. First, it offers an initial geographic-based bibliometric synthesis of agricultural enterprise research in South and Southeast Asian countries (Kuroiwa, 2021). Second, it traces the signatory scholarly communities' conceptual and thematic interests that have defined the field in the past 20 years (Minten *et al.*, 2023). Third, it reveals knowledge gaps and new frontiers that can inform future academic work and guide policymakers, development agencies, and industry stakeholders who aspire to strengthen agri-food enterprise ecosystems in developing Asia (Singh *et al.*, 2025). This study is motivated by the following research questions.

RQ1: How has agricultural enterprise research in South and Southeast Asia evolved between 2000 and 2024?

RQ2: What are the dominant themes, contributors, and collaboration patterns shaping this literature?

RQ3: How have research priorities shifted over time, and what gaps remain for future inquiries?

Methodology

Search strategy and data collection

To systematically map the scientific landscape of agricultural enterprise research in South and Southeast Asia, a structured search query was developed and executed in Scopus. Scopus is currently the largest curated repository of peer-reviewed scholarly literature. Scopus was chosen because of its strong coverage of journals in agriculture, economics, sustainability, business, and interdisciplinary social sciences, ensuring comprehensive representation of the topic. Although Scopus provides access to a wide range of peer-reviewed international literature, the use of a single database can lead to the underrepresentation of local journals or those that are not indexed, especially in some Southeast Asian nations. This may, in turn, fail to capture some nationally- or practitioner-oriented studies. Nevertheless, Scopus is also sufficient to trace globally visible research trends and patterns of collaboration, which is in line with the goals of this bibliometric analysis (Maqsoom *et al.*, 2025).

The final search string was constructed through iterative refinement to maximize precision (agriculture + enterprise filter) and regional relevance (South and Southeast Asia filter), while excluding unrelated SMEs, non-agricultural enterprises, and studies from outside the target region. The exact query used was: (“agriculture” OR agribusiness* OR “agri-food” OR farm) AND TITLE (enterprise* OR “value chain” OR agripreneur*) AND TITLE-ABS-KEY (India OR Pakistan OR Bangladesh OR Nepal OR “Sri Lanka” OR Bhutan OR Maldives OR Afghanistan OR Indonesia OR Malaysia OR Thailand OR Vietnam OR Philippines OR Cambodia OR Laos OR Myanmar OR Singapore OR Brunei OR “Timor-Leste”). The keywords related to enterprises were limited to the TITLE field to ensure that the retrieved publications had a primary and explicit focus on agricultural enterprises and were not mentioned in a marginal or incidental way. This will enhance accuracy and conceptual relevance, especially in bibliometric

analysis. In this analysis, agricultural enterprises are considered an umbrella term encompassing firm-level economic activities that run along the agri-food system, such as production, processing, marketing, and service delivery. Agribusiness has a narrower definition of market-oriented and value chain-integrated agricultural practices, whereas agricultural SMEs involve small- and medium-sized enterprises within the systems. These terms are analytically different, but they overlap in the literature; hence, this review uses an inclusive operational definition to encompass the entire range of enterprise-oriented agricultural research in South and Southeast Asia.

Inclusion and exclusion of the documents

To ensure methodological rigor and relevance, documents were filtered using well-defined inclusion and exclusion criteria. The publications were included when they: were peer-reviewed journal articles, review papers, book chapters, or conference papers; were published in English and specifically interested in agricultural enterprises, agribusiness, agricultural SMEs, agripreneurship, or agri-food value chains; and focused on South or Southeast Asian countries. Documents were excluded if they: targeted large-scale non-agricultural firms or non-SMEs; covered areas beyond South and South-East Asia; discussed enterprise-related concepts only briefly and did not discuss them analytically, or comprised non-academic materials, including reports, editorials, or commentary articles.

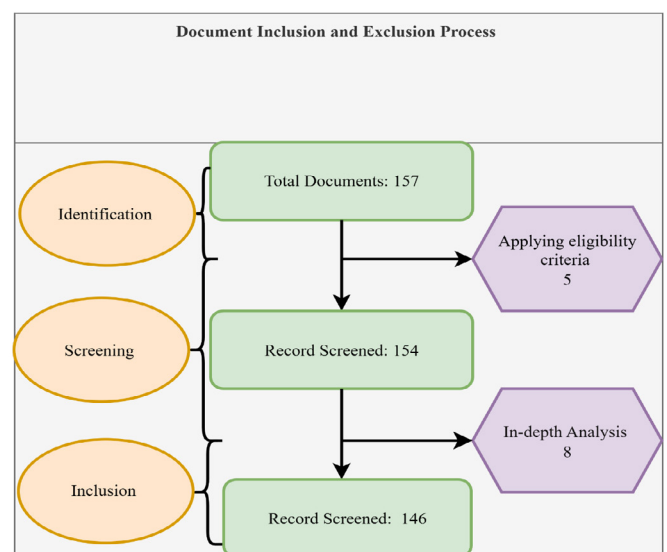


Figure 1: Search strategy

The screening was performed in three steps: (1) screening of records was performed using the Scopus

database; (2) screening of titles and abstracts was performed to determine their thematic relevance; and (3) eligibility using the full-text was performed to ensure that it met the objectives of the study (Figure 1). Only those documents that satisfied all inclusion criteria were retained for the final bibliometric analysis. The dataset also included conference papers because it was important to represent new research topics and initial scholarly debates, especially in the fields of agripreneurship, digital agriculture, and sustainability transitions, which are highly dynamic. Although the number of citations is usually less in conference papers than in peer-reviewed journal articles, their inclusion offers a more detailed picture of the research frontiers.

Analysis

Biblioshiny, the web interface of the R package Bibliometrix, was applied to analyse the data, and it includes all options to conduct a bibliometric and scientmetric analysis. The data analysis process commenced with data cleaning, which involved the elimination of duplicates, standardization of author names and journal titles, and optimization of keywords to achieve consistency. After preparing the dataset, descriptive bibliometric indicators were produced with the help of Biblioshiny: annual scientific output, the most impactful authors, journals, institutions, and countries that contribute to research on agricultural SMEs. Networks of co-authors, maps of keyword co-occurrences, and maps of thematic evolution were subsequently conducted to discover the intellectual hierarchy in the field, areas of research interest, and new frontiers. The patterns and relationships across the literature were interpreted using visualization tools in Biblioshiny, such as collaboration networks, conceptual structure maps, and thematic clustering. This computer-aided methodology guarantees a high standard and repeatable examination of the academic environment concerning agricultural SMEs.

Results

Descriptive statistics of the documents

The last Scopus dataset comprised 146 articles published between 2000 and 2025 in 105 sources, which is a rather wide and interdisciplinary research environment. This area has grown significantly, with the rate of growth standing at 13.16 per annum, as a testament to the growing scholarly interest in agricultural businesses in South and Southeast

Asia (Table 1). The average age of documents is relatively young (4.51), indicating that the majority of contributions are recent, which correlates with the increase in the relevance of agripreneurship, sustainability, and value chain modernization in regional agriculture. Each document was cited 9.84 times on average, indicating a moderately significant academic impact. The dataset has a rich conceptual base, as the two sets of Keywords Plus and author keywords, amounting to 328 and 526, respectively, reflect the diversity of the themes and the changing research themes. There were 465 unique authors in this literature, but only 18 authors produced single-authored papers, which shows that this field of study is collaborative.

Table 1: Main information

Description	Results
Main information about data	
Timespan	2000-2025
Sources (Journals, Books, etc)	105
Documents	146
Annual Growth Rate %	13.16
Document Average Age	4.51
Average citations per doc	9.842
References	0
Document contents	
Keywords Plus (ID)	328
Author's Keywords (DE)	526
Authors	
Authors	465
Authors of single-authored docs	18
Authors collaboration	
Single-authored docs	19
Co-Authors per Doc	3.48
International co-authorships %	30.14
Document types	
article	118
book chapter	12
conference paper	13
review	3

Documents growth trajectory

Annual production

The trend of the annual publication process indicates a definite shift in the attention to the research on the topic of agricultural enterprises in South and Southeast Asia in the last 25 years (Figure 2). The level of scholarly production was low and sporadic between

2000 and 2012, with 0 to 1 article per year, indicating the early stage of development of agribusiness research and insufficient scholarly attention to enterprise-based agricultural transformation in the period. The 2017-2020 years suggest a stable level of output (5–6 articles per year), which suggests the consolidation of the sphere. A significant increase then occurred in 2021, as 17 articles were published, presumably due to renewed policy interest in food system resilience, digital agriculture, and sustainability in the wake of COVID-19 upheavals. An increasing trend was observed in 2022 (10 articles), 2023 (20 articles), and 2024 (27 articles). This implies a growing scholarly and policy-topicality of agricultural enterprises, especially in the prospects of technological innovation, sustainability changeovers, and regional development agenda in South and Southeast Asia.

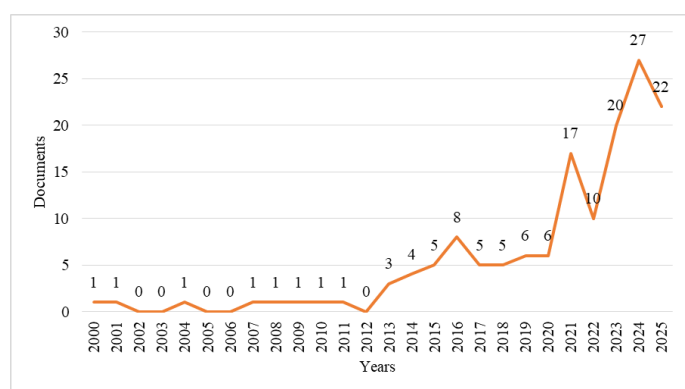


Figure 2: Annual growth of documents

Commulative growth forecast

The logistic growth models indicate that research on agricultural enterprises in South and Southeast Asia is still in the active stage of expansion, although it has not yet saturated. The annual publication life cycle (left panel) shows that scholarly output accelerated in 2015, and the logistic forecast shows that scholarly output will be the highest in approximately 2033 (Figure 3). This trend is supported by the cumulative growth curve (right panel). The foregone conclusion is that the saturation point is approximately 973 cumulative publications, and the inflection point, which is the point of the highest rate of growth, is between 2025 and 2035, according to the model. After this time, the curve starts to flatten, which means that the output of research will probably stabilize as the area is more established.

Countries performance

Contribution of countries by documents

India is the leading contributor of 66 publications (Figure 4), which is indicative of the size of its agricultural sector, the vast network of universities and research institutions, and its policy focus on agripreneurship, agri-SMEs, and value chain modernization. Indonesia comes second in terms of publication because it is an emerging agri-food country with growing academic interest in rural entrepreneurship, palm oil supply chains, and

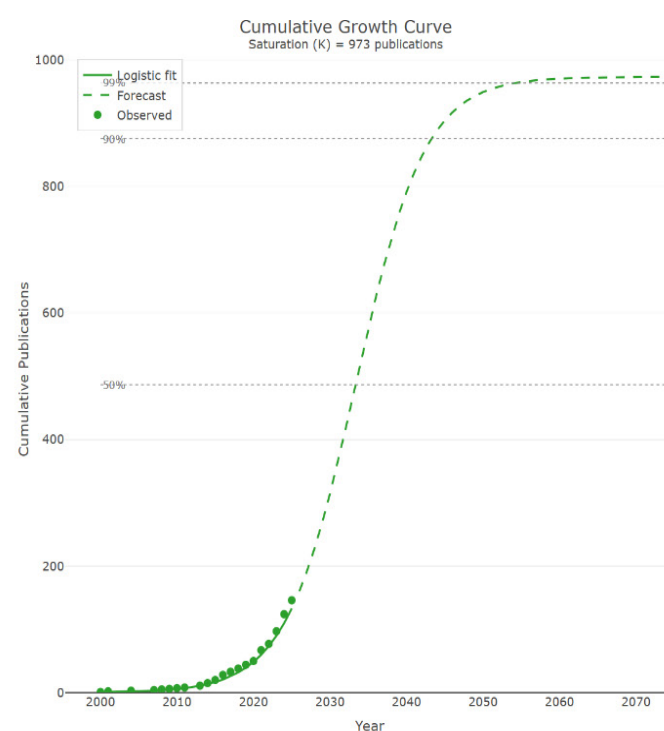
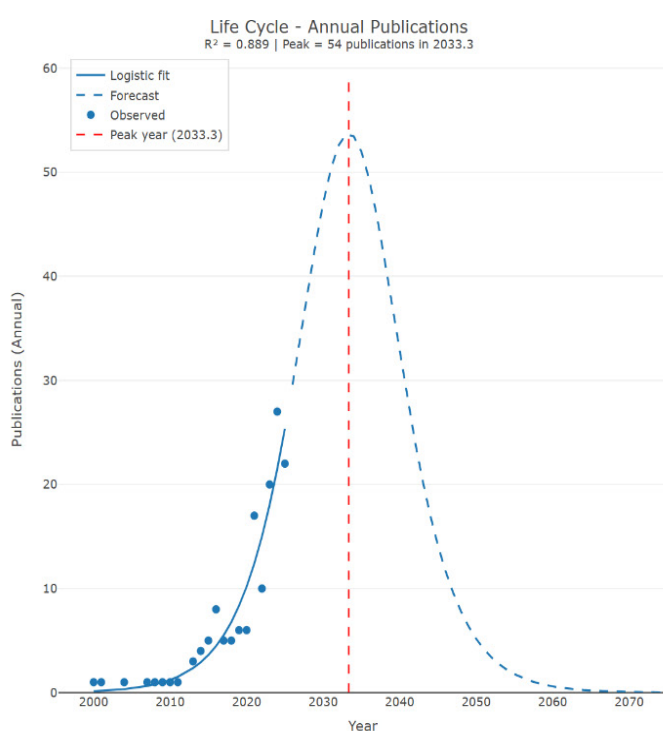


Figure 3: Growth forecast

sustainability transitions. Although the geographic focus is on South and Southeast Asia, the presence of the United States (35 publications) signifies its status as an important collaboration partner, as it co-authors studies with Asian researchers and frequently participates in agricultural research in the region through US-based development organizations and universities. Thailand (22 publications) and Malaysia (16 publications) are among the most active Southeast Asian countries, which are associated with a high level of agri-food development and institutional resources for agricultural innovation research.

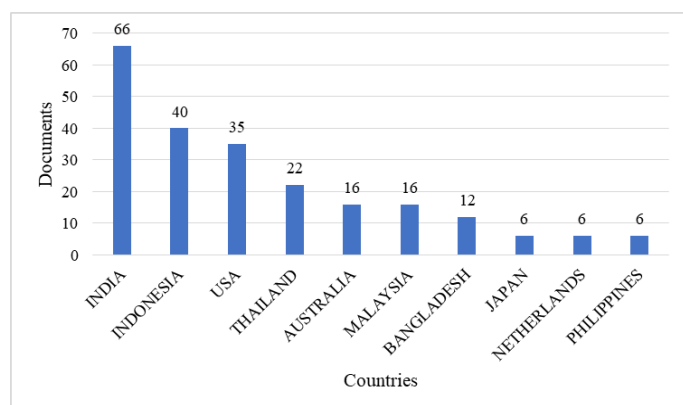


Figure 4: Prominent countries

Contribution of countries by citations

The total citation analysis shows the nations that have had the most intellectual impact on agricultural enterprise research in South and Southeast Asia. India has the highest number of citations (171) of the total scholarly impact, which includes not only a lot of publications but also good visibility and applicability of India-oriented studies to the discourse of agribusiness and value chains in the region (Figure 5). Although it is not a target country in the region, the United States occupies the second position with 156 citations and highlights its central role as a significant international partner and methodological contributor. A good percentage of the most frequently cited articles were co-authored with US institutions or published in US-based journals. A good percentage of the most frequently cited articles are co-authored with US institutions or published in US-based journals. Interestingly, the Netherlands (133 citations) and New Zealand (132 citations) have a relatively high number of citations compared with their publication rate, indicating that studies from these two countries, usually those concerning value chain governance, food system resilience, and agricultural innovation, have been used as cornerstones and frequently referenced works in the field. Australia (90 citations)

also has a high influence and shows that the country has a powerful agri-food research ecosystem and huge partnerships with Asian countries. The number of citations of contributors from Thailand (31 citations) and Malaysia (26 citations) is smaller, suggesting that these nations are active in terms of producing research, but their studies are more specialized or context-oriented. Contributors from Europe and East Asia, including France (24 citations), Korea (22 citations), and Switzerland (22 citations), are also seen as influential countries of origin, frequently contributing conceptual frameworks, sophisticated methods of analysis, or comparative data. It must be mentioned that the level of citation does not only indicate the quality of the research. There are also possibilities of citation performance that include journal visibility, publication language, international co-authorship, and the complexity of publishing outlets. Consequently, the number of citations in this paper is viewed as a measure of academic visibility and impact rather than scholarly excellence.

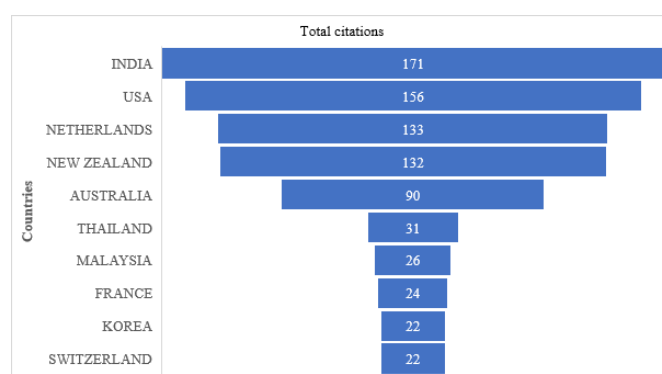


Figure 5: Citations by countries

Institutions, authors and source Analysis

Number of articles by Institution

Bangladesh Agricultural University and Charles Sturt University (Australia) have six publications each (Figure 6), which shows their high involvement in agricultural development, agribusiness management, and rural enterprise research. The high output of Bangladesh Agricultural University is related to the increasing attention to agricultural SMEs, upgrading of the value chain, and climate-resilient agribusiness models of Bangladesh, whereas the participation of Charles Sturt University refers to its comprehensive knowledge of agricultural innovation and its large-scale partnerships in Asia. Three publications from IPB University (Indonesia) are related to the fact that Indonesia has a strong national focus on agri-food systems and value chains based on SMEs. The influence of international research is also reflected, as universities such as Kobenhavns Universitet

(University of Copenhagen), Michigan State University, and Birmingham City Business School provided several publications, proving that global partnerships influence the process of conceptual and methodological development of the field. There is also a growing amount of research potential in Southeast Asia, with three or two publications each in regional universities such as Majalengka University, Universitas Muhammadiyah Malang, Rajamangal University of Technology Srivijaya, and Can Tho University, demonstrating increased academic interest in agripreneurship, community-based enterprises, and sustainable value chain initiatives.

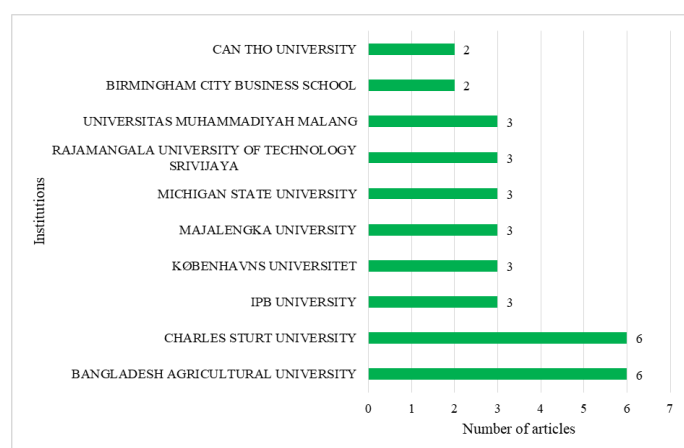


Figure 6: *Institutional contribution*

Authors' Productivity

The analysis of author productivity reveals a combination of scholars who have been very influential and whose work has influenced the field of agricultural enterprise research in South and Southeast Asia (Figure 7). Bart Minten is the most prolific author, with five publications, demonstrating his position at the forefront of agricultural value chains, modernization of food systems, and transformation in the market, especially in Bangladesh, India, and other South Asian countries. The others had three publications: A.H.M.S. Islam, S. Kumar, M.N. Larsen and L. Raimi, whose works cover agri-SME development, value chain upgrading, sustainability transition, and rural entrepreneurship models. Two publications were contributed by a significant number of authors with some of them including: Adhikari R.P., Alam M.M., Ali J., Belton B., Bitzer V., Bonney L.B., Bruun T.B., Chen K.Z., de Brauw A., Goeb J., Kafle K.K.A., Malapit H., Martinez E., Miles M.P., Ogata S., Onbuddha R., Quisumbing A., Ragasa C. and Reardon T. Many of these scholars, especially Quisumbing, Ragasa, Reardon, Belton,

and de Brauw, are known to work internationally in the areas of agricultural development, gender-inclusive value chains, food system transformation, and agribusiness dynamics in developing areas. Their repeated appearance also shows that there are high cross-country collaboration networks and that the impact of international research institutions such as IFPRI, MSU, and CGIAR centers is still effective.

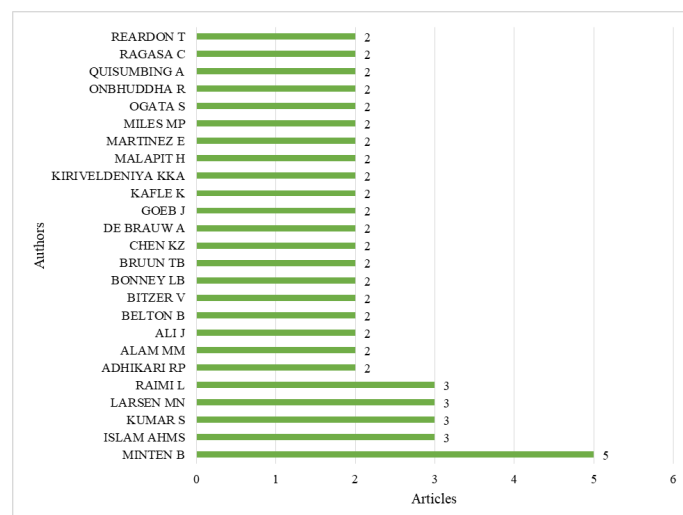


Figure 7: *Most productive authors*

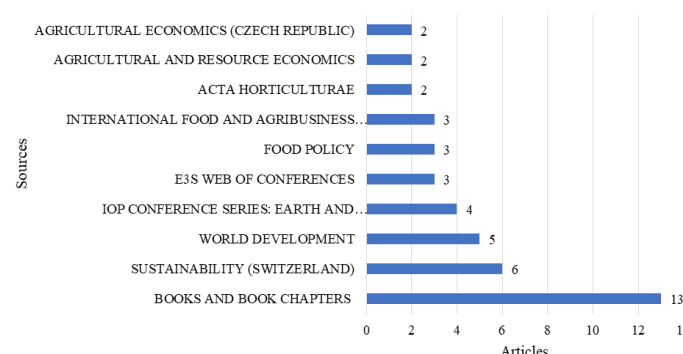


Figure 8: *Influential sources*

Influential sources (Journals)

Books and book chapters comprise the highest number of 13 contributions, demonstrating that agricultural enterprise research is often presented in thematic books on rural development, value chains, and sustainability (Figure 8). The most prolific outlet is the journal Sustainability (Switzerland), which has six articles, which is evidence of its great focus on agri-food systems, rural entrepreneurship, and sustainable business practices in developing countries. World Development is the next publication, which is in line with its reputation as a top journal on development-oriented and policy-relevant research, especially in the areas of agriculture, food systems, and livelihoods. Outlets such as the IOP Conference Series: Earth and

Environmental Science (four articles) and E3S Web of Conferences (three articles) reflect the upsurge of interest in the topic of environmental sustainability and the development of scholarly discourse on the subject of agri-innovation throughout academic circles.

Collaborative network analysis

Authors collaboration

There are several separate clusters of researchers who often cooperate in studies on agricultural enterprises in South and Southeast Asia, as evidenced by the co-authorship network (Figure 9). There are thick clusters around globally known scholars, implying that knowledge generation in this sphere is conditioned by the existence of strong research networks, whereas the lack of strong interconnections between smaller clusters presupposes the possibility of new collaboration and the spreading of knowledge. The biggest and most valuable cluster revolved around Minten B, whose interests in authors, including Reardon T., Belton B., and Singh K. M., among others, testify to the significant work on value chains and agrifood system transformation. The second noticeable cluster is Ragasa C., Quisumbing A., Malapit H., and similar co-authors, which is the research of gender, inclusion, and development of agriculture. Smaller, narrower clusters, for example, those including Winters and Kafle, Larsen and Bruun, and Adhikari, Bonney, and Miles suggest more specific work in collaboration on one or two themes (e.g., rural entrepreneurship, institutional constraints, and smallholder market access). In general, the network shows a moderate level

of interconnection in the field, with a combination of very robust research clusters and smaller thematic clusters, which underscores the interdisciplinary and diverse nature of agricultural enterprise scholarship.

Countries' Collaboration

Figure 10 illustrates the country collaboration network, suggesting that agricultural enterprise research in South and Southeast Asia is heavily influenced by international collaboration, especially with the United States and European nations. Although India and Indonesia serve as regional centers, the unequal level of collaboration among countries indicates differences in research ability and global integration. India is the most active network, with regular co-authorships with the USA, China, Ethiopia, and Kenya, as the country plays a central role in both regional and global agri-food research and development partnerships. Indonesia also seems to be a well-connected node, being connected with Malaysia, Japan, the Philippines, Pakistan, and a number of European partners, as it actively participates in the networks of Southeast Asian research. The USA is a powerful world partner and has significant cooperation with India, Bangladesh, China, and European nations (the Netherlands and France), which speaks in terms of their influential assistance in methodological and policy-oriented agricultural research. Smaller yet significant groups are those that involve Thailand, Switzerland, Denmark, and Lebanon, and a separate Europe-Oceania group of Australia, New Zealand, and the United Kingdom.

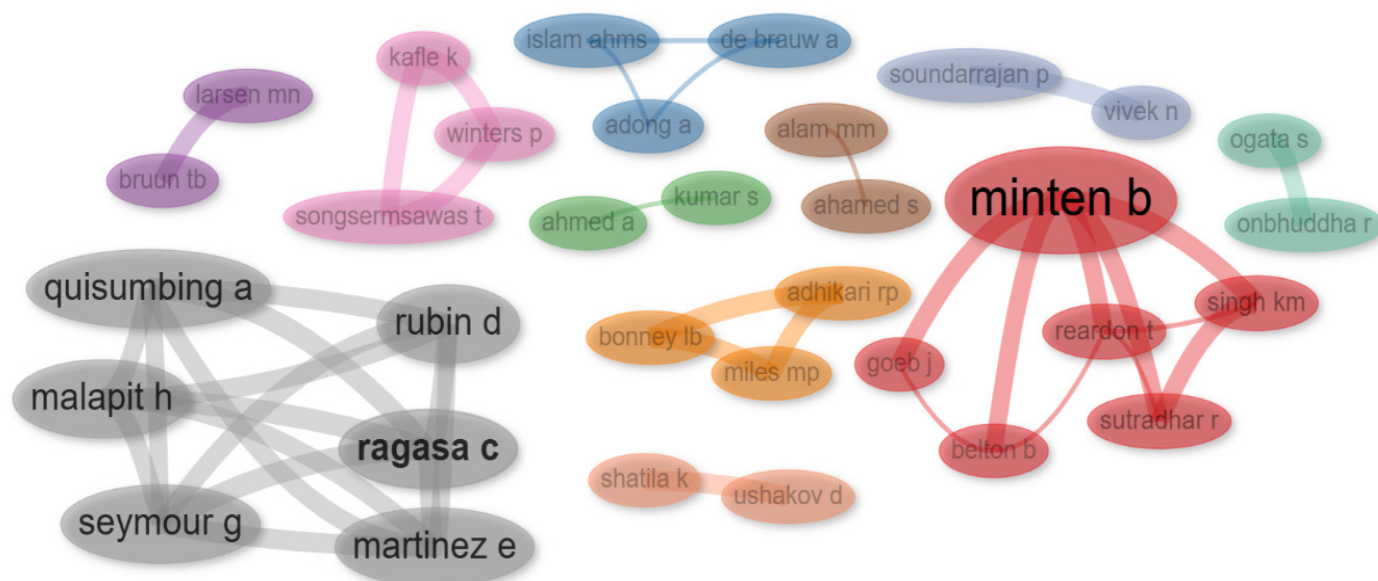


Figure 9: Collaboration by authors

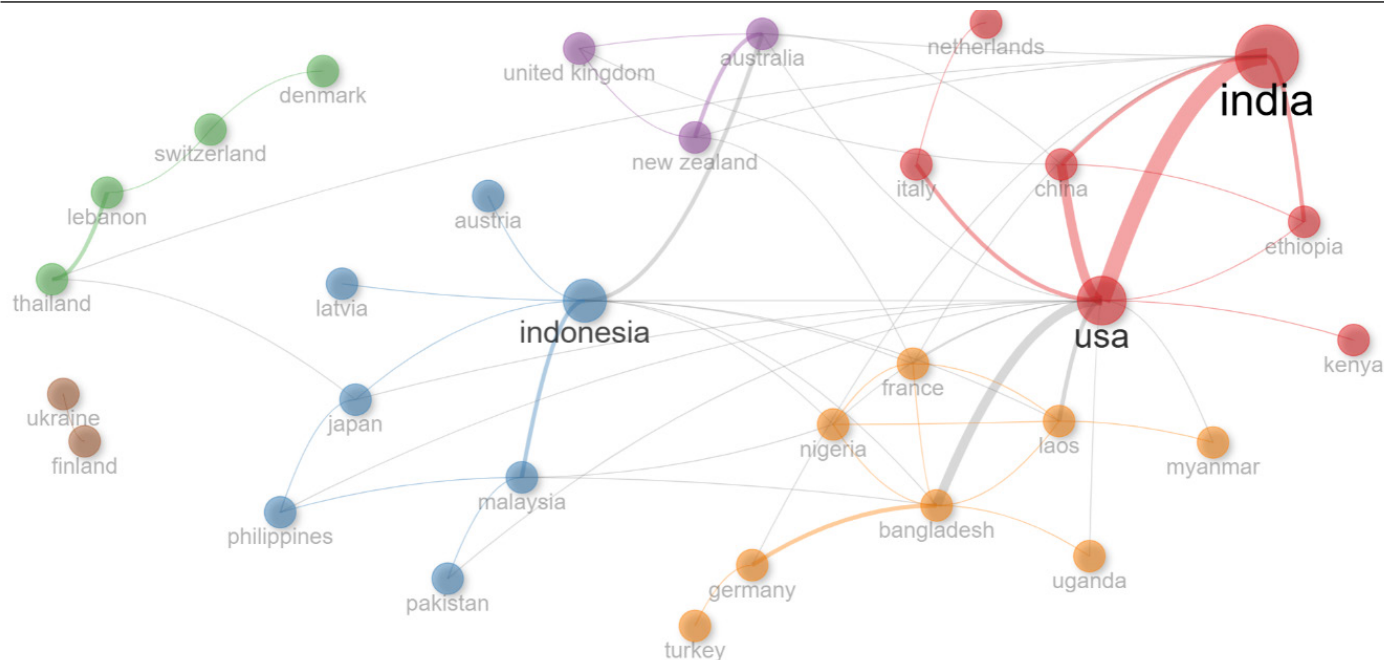


Figure 10: *Collaboration by countries*

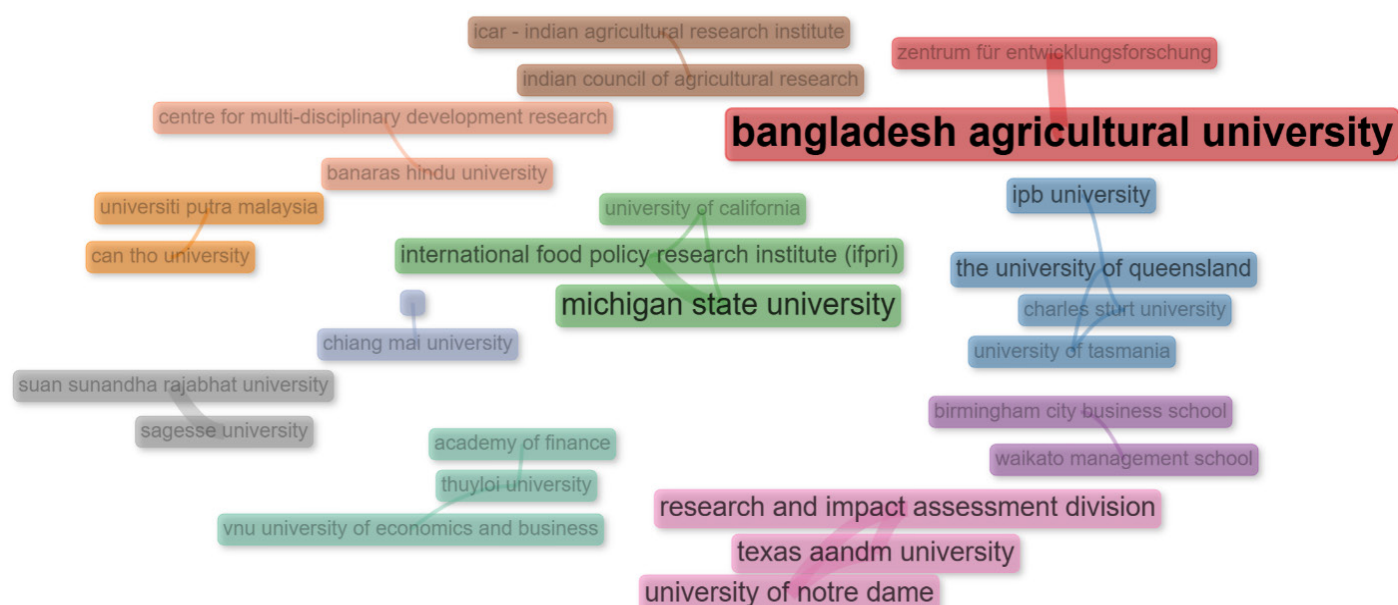


Figure 11: *Collaboration by institutions*

Institution's collaboration

Figure 11 reveals a highly internationalized institutional collaboration structure, with a few central universities and research institutes serving as knowledge hubs. The dominance of internationally connected institutions suggests that global research partnerships play a critical role in shaping the conceptual and methodological developments in agricultural enterprise studies. An institutional collaboration network revealed Bangladesh Agricultural University as the most notable institutional center, regularly teaming up with national research institutions such as the Indian Council of Agricultural Research (ICAR)

and international research institutions such as the Zentrum für Entwicklungsforschung (ZEF). The other centralized cluster is around Michigan State University and the International Food Policy Research Institute (IFPRI) because of the robust, long-standing contribution they have made to agricultural value chain research and their wide collaborations in South and Southeast Asia. An independent Southeast Asian cluster can be identified surrounding IPB University, Universiti Putra Malaysia, Can Tho University, and the University of Queensland, suggesting regional cooperation in agribusiness, food systems, and enterprise development. Other partners

include European and Australian universities, including Charles Sturt University, the University of Tasmania, and the University of Copenhagen, showing the international academic interest in the field. Comprehensively, the network displays a mixture of well-established regional research hubs and powerful international collaborators that portray the globally integrated and interdisciplinary character of agricultural enterprise studies.

Coupling analysis

Thematic evolution

Figure 12 illustrates the thematic evolution map; the intellectual structure of agricultural enterprise research has changed significantly between the earlier period (2000–2015) and the more recent period (2016–2025). The figure reveals a clear transition from livelihood- and income-oriented studies to system-level themes such as sustainability, agroindustry, and value chain governance. This shift indicates the maturation of the research field, reflecting broader structural changes in agri-food systems and an increasing policy emphasis on resilience and sustainable development. Themes of entrepreneurship, income generation, and employment prevailed in earlier research and were more related to the economic and livelihood aspects of agricultural business. Sustainability became a significant concept during this period. Later, these themes developed into more specialized and sector-oriented themes. The theme of sustainability takes centre stage, indicating its increased significance in debates concerning agri-food systems and enterprise resilience. The

idea of income flows to the more general theme of agriculture, implying the alteration of household-scale results to system-level results. The previous focus on entrepreneurship, in turn, develops into agroindustry, as the growing concern on value addition, processing, and industrialization in agricultural enterprises. In general, thematic development can be seen as a shift in concerns related to socioeconomic principles to sustainability-oriented, sector-specific, and country-oriented research agendas.

Thematic map

The thematic map detects four research themes based on their topicality (centrality) and stage of development (density). Within the upper-right quadrant, in the motor themes, there are clusters such as Indonesia-agroindustry-China and sustainability-agricultural development-crop production, which means highly developed and topical themes that push the sphere. The cluster of agriculture value chains in Vietnam's agriculture cluster can also be viewed as a powerful motor theme, indicating the core significance of value chain modernization in the research of agricultural enterprises in the region (Figure 13). In thematic mapping, each quadrant of the thematic map can be illustrated with examples from this study. Motor themes (high centrality and density), such as sustainability and value chain governance, represent well-developed and highly influential research areas that actively drive the field. Basic themes (high centrality but low density), including agribusiness and sustainable development, form the conceptual

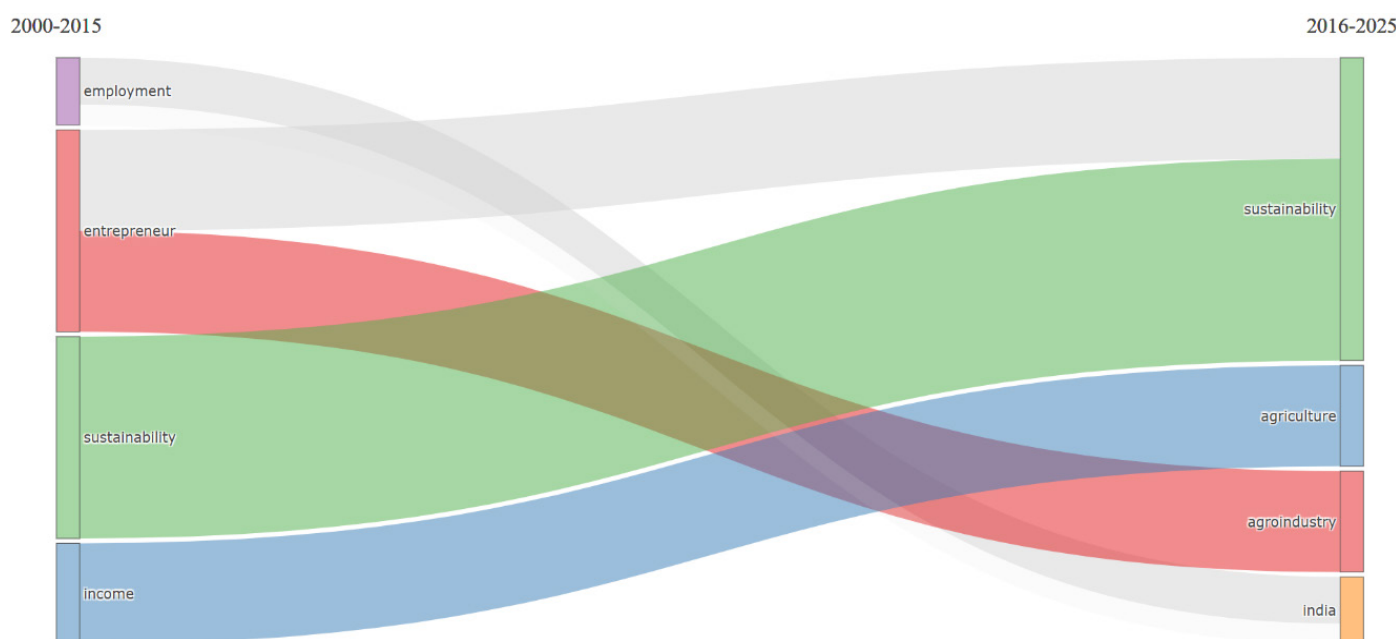


Figure 12: *Thematic evolution of keywords*

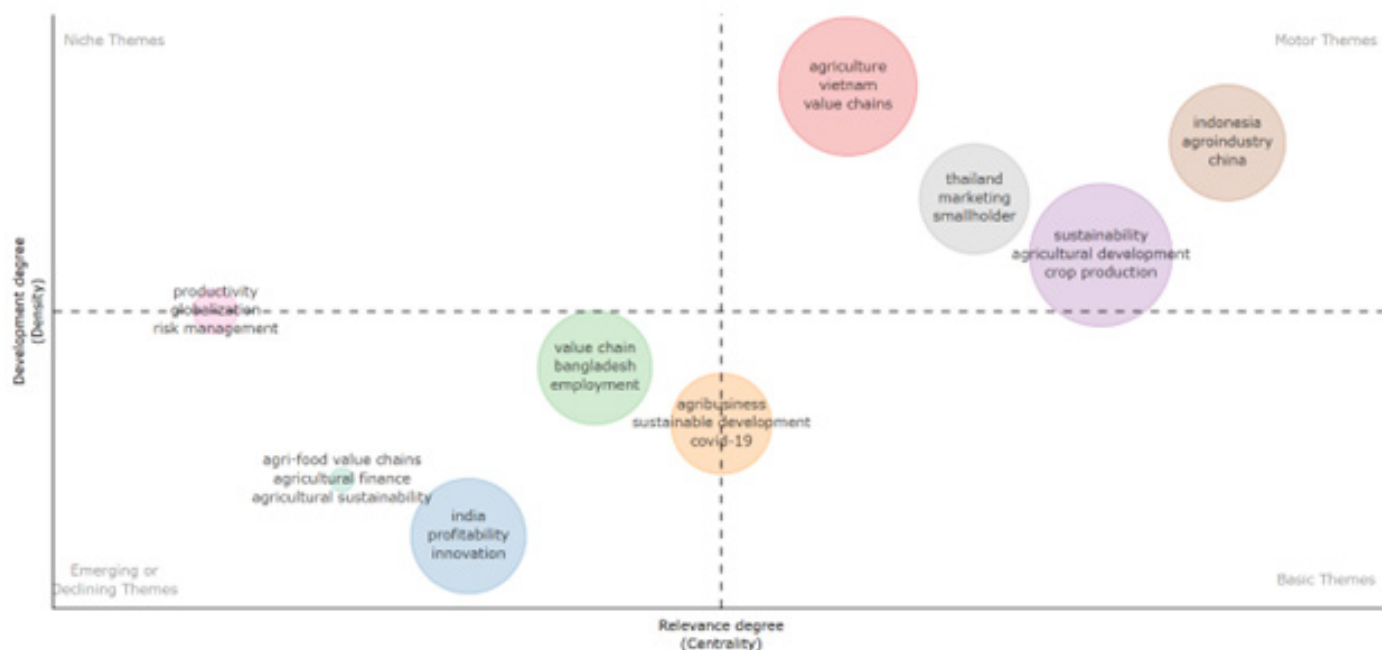


Figure 13: *Thematic evolution*

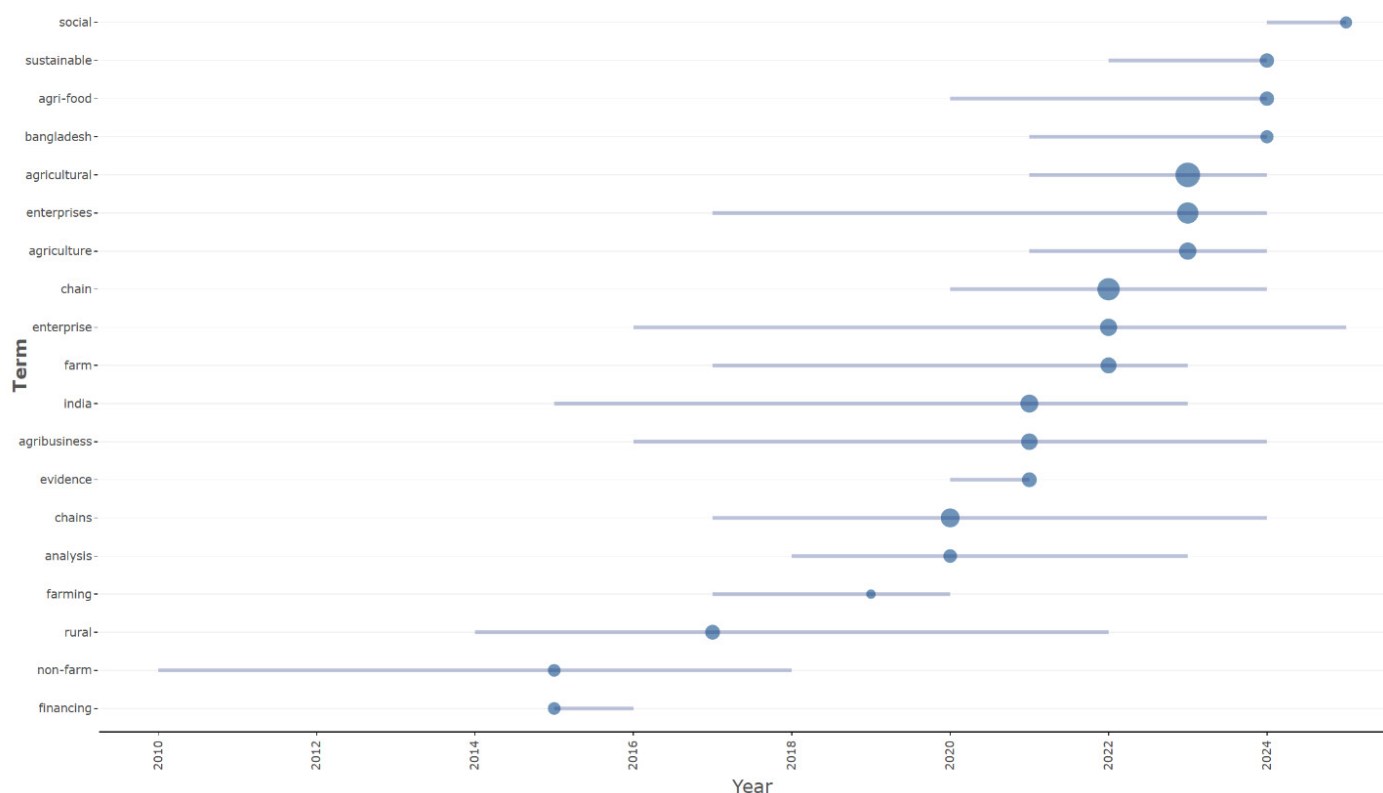


Figure 14: *Trending topics over time*

foundation of the literature but are less specialized. Emerging or declining themes (low centrality and low density), such as agricultural finance and agri-food value chains, indicate research areas that are either gaining attention or losing significance. Finally, niche themes (low centrality but high density), such as productivity and risk management, represent specialized topics with limited integration into the broader research networks.

Trending topics

The trending topic analysis shows that the research on agricultural enterprises has moved significantly over the years to the themes of sustainability and system level (Figure 14). In the early years before 2015, keywords such as non-farm, financing, rural, farming, and analysis were part of the fundamental research on the livelihoods of the rural population, farm economics, and enterprise diversification. Since

2016, there has been an increasing prevalence of sector-specific and enterprise-cantered terms like agribusiness, enterprise, farm, chains, and agriculture, which means that value chains, Agri-SMEs, and structural change are gaining more importance in the agri-food sector. Because of their more recent publication dates, 2020-2024, keywords such as Bangladesh, agri-food, sustainable, and social stand out, as there is increasing interest in the topic of sustainability transitions, inclusive agri-food systems, and country-specific case studies.



Figure 15: Word cloud

Keyword frequency (Word Cloud)

The word cloud (Figures 15) reinforces the centrality of agriculture, value chains, and sustainability in the literature. The prevalence of agriculture, value chain, agribusiness, and agricultural development indicates primary attention to the systems of production, performance of enterprises, and integration into the market. Subregions such as India, Bangladesh, Vietnam, and Indonesia are large and imply that these nations are significant providers of literature and important backgrounds for study. The frequent use of the terms sustainability, sustainable development, and agroindustry indicates a growing trend that favours agricultural models that are both environmentally friendly and value-added. Other repetitive terms, such as profitability, employment, marketing, productivity, and smallholder, also show that there is still much concern about the economic and social aspects of agricultural businesses.

Discussion

The results of the bibliometric research indicate that the literature on the topic of agricultural enterprises in South and Southeast Asia has grown significantly

over the last 25 years, with an even faster pace since 2015. The fact that the growth rate of 13.16% is annual and the average age of documents is quite new means that this is a developing but rapidly maturing field of research. The discipline has obviously left behind the early preoccupations with the livelihood of households, subsistence agriculture, and rural work and adopted more advanced themes such as agripreneurship, modernization of value chains, sustainability transitions, digital innovation, and enterprise resilience. This change reflects the structural transformations in the agri-food systems in the region, whereby smallholder farming is increasingly becoming part of market-based development, technological development, and climate change adaptation programs.

The prevalence of India and Indonesia is based on their large agricultural economies, extensive research infrastructure, and long history of policy orientation toward the modernization of agribusiness and value chain development. Some Southeast Asian countries' relatively low contributions must be interpreted considering that such a trend does not always indicate research inactivity and can be conditioned by disparities in research capacity, the presence of funding, and international access to publications. Moreover, the use of Scopus-based literature might not be representative of national-based studies published in local or regional journals, especially those articles that were not indexed in international databases or those in local languages. This imbalance could also be caused by publication bias in favor of English-language journals and international visibility sources. Such results highlight the necessity of enhancing the capacity to conduct research, international cooperation, and publication in the sight of a more balanced portrayal of knowledge production in Southeast Asia. Although publication volumes were the greatest in South and Southeast Asia, the most influential publications in terms of citations were associated with international collaborations with the United States, the Netherlands, Australia, and New Zealand. This trend is in line with the strong co-authorship groups driven by internationally known researchers such as Minten, Reardon, Ragasa, and de Brauw, whose contributions to the value chain, market transformation, gender inclusion, and governance of enterprises continue to contribute to conceptual debates. The close network connectivity found is indicative of a research context in which general

methodological knowledge interacts with region-specific empirical realities, which is a self-enhancing system of knowledge. From a policy perspective, the centrality of value chain governance in the literature highlights the importance of coordinated enterprise policies that extend beyond farm-level interventions. Governments in South and Southeast Asia should prioritize policies that strengthen midstream and downstream actors, including processing, logistics, and marketing enterprises.

One of the main disclosures that can be made after the thematic evolution analysis is that the research agenda has shifted between 2000 and 2015 and the system-oriented themes have emerged after 2016. Previous studies concentrated on entrepreneurship, revenue generation, job creation, and support programs in rural areas, which were the priorities of development at that time. While the recent literature focuses on sustainability, agroindustry, climate resilience, and nation-specific structural change, reflecting a new stage in which agribusiness is seen not as an economic entity but rather as part of a multifaceted and multidimensional agri-food system. This change is consistent with the empirical evidence of recent research: in the case of community-based enterprises in the Philippines ([Miano et al., 2025](#)), the development of a circular economy in Indonesia ([Sumarsono et al., 2025](#)), and dividend policy and financial governance in Vietnamese agricultural companies ([Linh and Van Hai, 2025](#)), an increased integration of enterprise development into the wider framework of sustainability and governance can be observed. The fact that sustainability as a motor theme comes out prominently indicates that environmental performance has become inseparable from the development of agricultural enterprises. Policymakers must incorporate sustainability criteria into enterprise support programs, such as incentives for climate-smart technologies, the circular economy, and resource-efficient production.

Our analysis also shows that value chain research is the cornerstone of this area. Among the patterns of keyword frequency, thematic maps, and citation, the most central and powerful theme is the modernization of the value chain. Modern literature supports this prevalence: the adaptive behaviour of maize traders in Myanmar ([Goeb et al., 2025](#)), the role of cold chain outsourcing in Vietnam ([Tang et al., 2024](#)), and transparency whose implementation

with the help of blockchain in the agri-food chains of Bangladesh ([Rashid et al., 2024](#)). They all emphasize the importance of midstream actors, the adoption of technologies, and the innovation of governance in determining enterprise resilience and competitiveness. These empirical trends represent the structural change of our bibliometric dataset as value chain concepts are becoming more inclined toward sustainability, digital transformation, and inclusive development views. Agripreneurship and SME innovation are new pillars of research. The sudden increase in these topics since 2020 is in line with the regional policy focus on youth entrepreneurship, digital agriculture, and start-up ecosystems. As discussed in the literature, e.g., [Sharma et al. \(2025\)](#), which investigates the motivations and abilities of Indian agri start-ups, and [Amaran et al. \(2025\)](#), which researches the intent to become an agripreneur within agricultural students, the issue of the growing role of new actors, technological competencies, and networks of innovations in the process of enterprise formation emerges as a highlight. This tendency suits our bibliometric results, according to which agripreneurship is becoming an increasingly central issue associated with structural change and value chain modernization.

Although a fairly new theme within the dataset, digital transformation is currently on a steep incline and seems to become a prominent research area in the future. The keywords blockchain, IoT, mobile applications, and digital platforms have become prominent since 2020. Empirical evidence indicates that digitalization is transforming enterprise competitiveness and governance, such as the use of mobile applications in Farmer Producer Companies in India ([Sudha et al., 2024](#)) and the incorporation of geospatial data in community enterprises in Thailand ([Phoksawat et al., 2025](#)). We find that digitalization is a simplistic but fast-evolving theme, and the methodology can be expanded significantly to allow cross-country comparison.

The ubiquitous nature of sustainability in our maps and keyword analysis is indicative of its status as a cross-cutting issue that can be found in virtually all modern studies. The rising popularity of the concepts of climate resilience, environmental governance, and circular economy models is evidence of a shift in the way agricultural enterprises are supposed to contribute to the national sustainability agenda. Recent research, including enterprise resilience

during COVID-19 in Thailand (Chumpanya and Panpakdee, 2025), climate risks in Vietnam (Do *et al.*, 2021), and the adoption of the Sufficiency Economy Philosophy of Thailand (Onbuddha and Ogata, 2025), supports the conclusion that sustainability issues are the key concerns of academic research and the policymaking process. The fact that sustainability has been concentrated in the motor-theme quadrant of our thematic map further indicates that the concept has become central to the conceptual development of the field.

Despite these advances have been made, significant gaps remain. Although the issues of gender and social inclusion are found in the literature, they seem underdeveloped in comparison with other issues, such as value chains and sustainability. However, the works of power by experts such as Quisumbing *et al.* (2021) and Songsermsawas *et al.* (2023) indicate that the dynamics of gender and endowment significantly influence participation in agricultural businesses and their benefits. According to our bibliometric results, these areas need to be theorized further and expanded in geographical scope. Similarly, the disintegration of institutional partnerships indicates the possibility of enhancing cross-country learning, especially between Southeast Asian countries with fast-growing enterprise ecosystems but less research performance.

The findings show that the role of agricultural enterprise research in South and Southeast Asia is undergoing a radical transformation, not on the side of micro-level household and livelihood factors, but of the steep, technology-driven, sustainability-oriented value chain systems. This is an active and fast-growing field that is highly policy relevant. Nevertheless, the next steps will be developed based on the need to fill gaps concerning inclusion, digital governance, enterprise financing, institutional capacity, and the establishment of more balanced cooperation in research throughout the region.

Limitations of the study

This study has made several contributions; however, it has a number of limitations that ought to be mentioned. First, the bibliometric analysis was based only on the Scopus database, which, despite being exhaustive, might not cover all the relevant studies published in local and regional journals that are not indexed worldwide. Second, by only analyzing English-language publications, it might be possible to

have a language bias that disproportionately represents the national languages of research publications from South and Southeast Asia. These limitations need to be considered when interpreting the findings and point to opportunities for future research, where more databases and multilingual sources could be involved to better represent the field.

Conclusions and Recommendations

The bibliometric review demonstrates that the study of agricultural enterprises in South and Southeast Asia has grown rapidly, particularly since 2015, with agripreneurship, the development of value chains, sustainability, and digital transformation gaining popularity. India and Indonesia dominate the academic output of publications, and good international partnerships with the United States, Europe and Australia continue to drive conceptual and methodological development. The thematic analysis indicates a stark change in the initial studies aimed at understanding livelihoods and income generation into more intricate issues of value chain governance, agroindustry, climate resilience, and innovation ecosystems. The prevailing intellectual pillars of the discipline are value chains and sustainability, which underscores the growing extent of the integration of the market, environmental, and social aspects of agricultural enterprise research. Digitalization is also a rapidly developing area. Although this has been done, there are still some crucial gaps. Gender, social inclusion, and equitable participation issues are not represented. Digital transformation and enterprise finance require more empirical exploration, and institutional cooperation in Southeast Asia has not yet been thoroughly practiced. These gaps must be filled to reinforce the field. Overall, the analysis indicates that research in the field of agricultural enterprises is becoming more systemic and focuses on innovation, sustainability, and resilience. Future research should advance empirical research into understudied topics related to agricultural enterprises, including gender, SME finance, and digital governance. Moreover, comparative and cross-country analyses would be helpful in the future to gain better insight into how institutional, cultural, and policy situations influence the development of agricultural enterprises in South and Southeast Asia.

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Novelty Statement

This study provides one of the first region-wide, longitudinal bibliometric assessments of research on agricultural enterprises in South and Southeast Asia with explicit relevance for policy and development planning.

Generative AI and AI-assisted technology statement

The author confirms that no generative AI tools were used to generate or analyze data or to draw scientific conclusions. Any AI-assisted tools, if used, were limited to language refinement, and the author takes full responsibility for the content of the manuscript.

Conflict of interest

The authors have declared no conflict of interest.

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