

COOPERATIVES FOR CHANGE: MAPPING THREE DECADES OF SUSTAINABLE DEVELOPMENT IN INDONESIA

Emir Surya Rahmajati¹⁾, Icuk Rangga Bawono²⁾*, Suhaila Abdul Hamid³⁾

¹⁾Accounting Department, Universitas Jenderal Soedirman, Indonesia

²⁾Accounting Department, Universitas Jenderal Soedirman, Indonesia

³⁾ Faculty of Economics and Muamalat, Universiti Sains Islam Malaysia

Corresponding author: cukycutes@yahoo.com

Abstract

This study explores the role of cooperatives in supporting sustainable development in Indonesia through a bibliometric and thematic analysis of 84 scholarly articles published between 1992 and 2025. The findings are categorized into four main clusters: (1) collective action and local participation, (2) community empowerment and inclusive economy, (3) financial inclusion, MSMEs, and socio-environmental issues, and (4) smallholder cooperatives and sustainable agricultural value chains. Each cluster reflects the multifaceted functions of cooperatives as not only economic entities but also social institutions that promote community participation, social justice, and ecological sustainability. The analysis identifies key research gaps, including limited longitudinal studies, a lack of quantitative impact evaluations, underexplored digital innovations, and internal governance challenges. Future research is recommended to focus on cooperative governance, digital transformation, inclusion of marginalized groups, and policy effectiveness. Overall, this study highlights the strategic potential of cooperatives as grassroots agents of sustainable and inclusive development in Indonesia

Keywords: Cooperatives, Sustainability Community, Empowerment, Inclusive Economy, Bibliometric Analysis

Introduction

The persistent economic crisis and the failure of existing systems to reduce poverty, income inequality, wealth disparity, and social tensions have reinforced the global shift toward solidarity-based economies and social cooperatives. The International Labour Organization (ILO) (ILO, 2024) recognizes cooperation as a significant driver for improving people's quality of life and working conditions, while simultaneously providing essential infrastructure and services to underserved areas. Furthermore, social cooperatives can enhance living standards and well-being for disadvantaged and marginalized groups such as persons with disabilities, refugees, former prisoners, and homemakers by integrating them into the workforce and offering social support (CICOPA, 2015; Bastida et al., 2020; Picciaia, 2020). Essentially, social cooperatives hold the prerogative to assume public responsibilities and deliver products and services without prioritizing profit maximization (Defourny & Nyssens, 2008).

Cooperatives are among the oldest forms of business organizations in the world, with substantial contributions to both economic development and social welfare (Kyazze et al., 2017). They enable their members to access various necessities, including goods and services, at more affordable prices (McKillip et al., 2020). In the global economic arena, numerous studies have demonstrated that cooperatives can function as both corporate entities and organizations capable of fostering socio-economic development and eradicating poverty, as acknowledged by the United Nations (Borda-Rodriguez & Vicari, 2014).

In recent decades, cooperatives have expanded into large-scale enterprises in countries such as China (Zhong et al., 2018). The Mondragon Corporation, headquartered in Spain, stands as the largest worker cooperative in the world (Flecha & Ngai, 2014). The wave of liberalization in Africa during the 1990s created opportunities for cooperatives to grow as member-controlled, business-oriented organizations, which significantly improved the welfare of low-income communities (Borda-Rodriguez & Vicari, 2014). With an annual turnover of approximately €210 billion, agricultural cooperatives account for more than 60% of the harvesting, processing, and marketing of agricultural products in the European Union (Feng & Hendrikse, 2007).

According to the International Cooperative Alliance (ICA), in 2023, the world's top 300 cooperatives were spread across various countries. Based on 2021 financial data, these 300 cooperatives generated a total turnover of USD 2.409 trillion equivalent to approximately IDR 30,000 trillion (ICA, 2024). Of these, 105 cooperatives operated in the agricultural sector, 96 in insurance, and 57 in wholesale and retail trade. Two financial sector cooperatives topped the list by turnover: Groupe Crédit Agricole from France, with USD 117.01 billion in 2021, and REWE Group from Germany, with USD 82.03 billion in the same year. Most of the 300 largest cooperatives are located in developed countries, including the United States (73 cooperatives), France (40), Germany (31), and Japan (21). Notably, no cooperative from Indonesia was included in the list (ICA, 2024).

In Indonesia, cooperatives play a pivotal role in supporting the national economy, particularly in empowering the grassroots economy. Since their inception, cooperatives have served as vital institutions enabling communities to access more affordable financial services, such as microfinance and savings, which in turn support small-scale enterprises. Cooperatives also contribute to optimizing local economic potential by providing assistance to farmers and micro, small, and medium enterprises (MSMEs) to improve their productivity. This aligns with the cooperative movement's overarching goal of enhancing member welfare through fundamental principles such as mutual cooperation and economic democracy (Rini & Agung, 2018).

Cooperatives are expected to become a cornerstone of Indonesia's economy in the coming years. To play a role in realizing a just, prosperous, advanced, and equitable society, cooperatives must function both as a people's economic movement and as business entities (Kusmiati et al., 2023). Cooperatives have contributed to the economic and social development of communities through their operations across various economic sectors (Shafii et al., 2019).

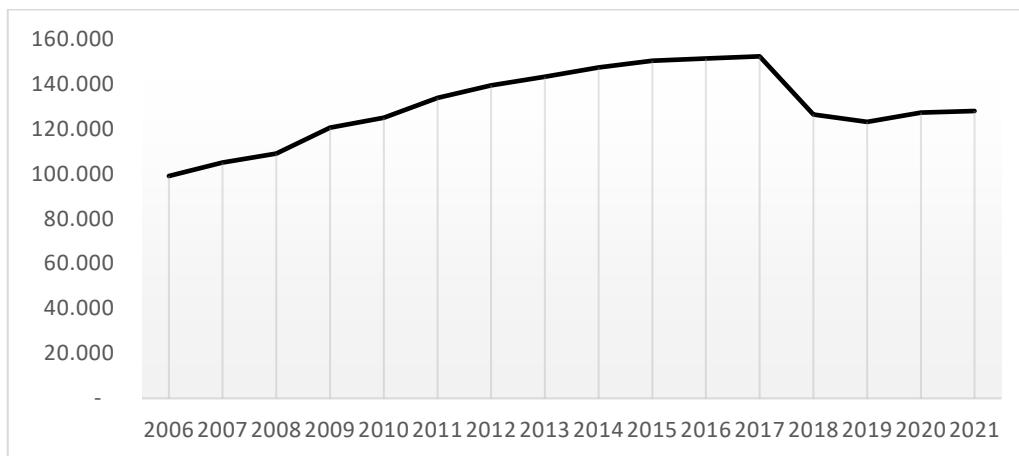


Figure 1. The Growth of Cooperatives in Indonesia

According to data from Statistics Indonesia (BPS), the number of cooperatives has fluctuated over time. Data from the Ministry of Cooperatives and Small and Medium Enterprises (2020) indicate that only 25.03% of cooperatives are classified as active. As illustrated in Figure 1, the number of cooperatives in Indonesia increased steadily from 2006 to 2017. However, within the subsequent two years (2018–2019), approximately 81,686 cooperatives in Indonesia were dissolved. This raises a critical question: what factors have contributed to the high dissolution rate of cooperatives in the country?

To address this challenge, bibliometric analysis is employed as a strategic approach to quantitatively and visually assess publication trends, inter-topic linkages, and thematic clusters. Unfortunately, this method remains underutilized in Indonesia, particularly in mapping the relationship between cooperatives and sustainability, thereby creating a significant literature gap. This study aims to map the development of cooperative and sustainability research in Indonesia through a bibliometric and thematic analysis of 84 scholarly articles published between 1992 and 2025. The findings are expected to provide a comprehensive overview of research trajectories and offer strategic recommendations for more contextually relevant and evidence-based study and policy development.

Literature Review

According to Law No. 25 of 1992, a cooperative is a business entity whose membership consists of individuals or legal entities, founded on the principle of kinship. The International Cooperative Alliance

(ICA) (1995) further defines cooperatives as autonomous organizations formed voluntarily to meet members' economic, social, and cultural needs through a democratically governed structure. Cooperatives serve a strategic function in strengthening the people's economy by upholding principles of open membership, democratic management, and equitable distribution of benefits.

In Indonesia, cooperatives are categorized into primary cooperatives comprising individual members and secondary cooperatives comprising other cooperatives with business activities spanning savings and loans, consumer goods, production, services, and multi-purpose operations. Cooperatives are considered capable of promoting sustainable development through their contributions to economic, social, and environmental dimensions. Sustainability itself, as defined by Crane and Matten (2010), entails maintaining long-term balance across three core dimensions: economic, social, and environmental.

Nevertheless, cooperatives in Indonesia continue to face challenges such as weak governance, low levels of innovation, and limited human resource capacity (Nugroho, 2019). Amid regulatory dynamics such as the enactment of the Financial Sector Development and Strengthening Law (UU P2SK), which places financial services cooperatives under the supervision of the Financial Services Authority (OJK) the role of cooperatives is becoming increasingly strategic, yet remains insufficiently examined in a comprehensive manner. Therefore, a bibliometric analysis is needed to map research trends and contributions of cooperatives to sustainability, as well as to identify existing research gaps.

Research Method

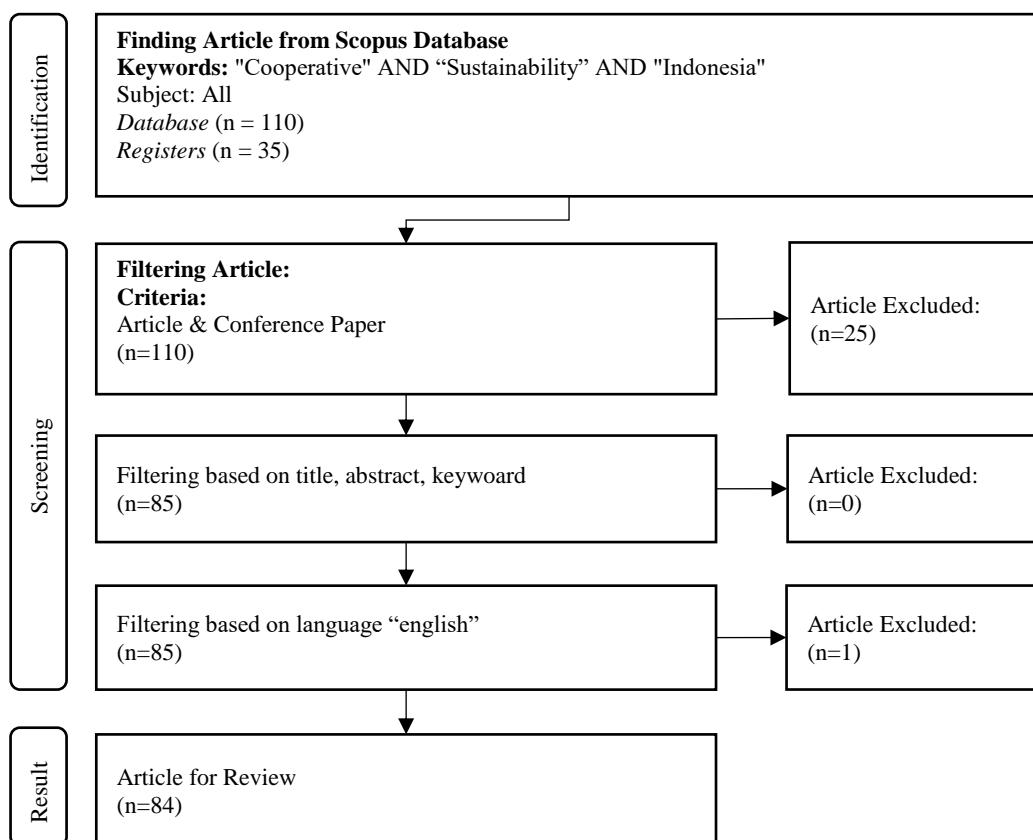


Figure 2. Article Identification Process
Source: Created by authors, 2025

This process followed a structured approach consisting of three main stages: identification, screening, and final selection. In the identification stage, a search was conducted through the Scopus database using the keywords: "Cooperative" AND "Sustainability" AND "Indonesia." This initial search yielded 110 documents from various fields of study. The screening phase involved a three-step filtering process. First, records were filtered by document type, retaining only peer-reviewed journal articles and conference papers. This step excluded 25 records, resulting in 85 remaining articles. Second, titles, abstracts, and keywords were assessed for topical relevance; no records were excluded at this stage, as all met the

relevance criteria. Third, records were screened based on publication language, restricting the selection to English-language articles. One non-English record was removed. Following the full screening process, 84 articles met all inclusion criteria and were deemed eligible for bibliometric and thematic analysis.

Result

Bibliometrix

The following figure presents the results of a bibliometric analysis of 84 articles on cooperatives and sustainability in Indonesia over the period 1992–2025. These articles were sourced from 64 publications, with an average annual growth rate of 6.5%, indicating a stable upward trend. A total of 324 authors contributed to this body of work, averaging four authors per article, reflecting a high degree of collaboration, including 23.81% involving international co-authorship. In total, 346 keywords were identified, illustrating the diversity of topics addressed. The average document age was 3.58 years, and the mean citation rate was 7.29 citations per article, suggesting a relatively high level of recency and scholarly impact. Overall, this topic has shown active development and has garnered attention across national boundaries.



Figure 3. Bibliometrix Overview

Publication Trend

The figure illustrates the annual publication trends on the topic of cooperatives and sustainability in Indonesia from 2013 to 2025. The data reveal a fluctuating yet generally upward trajectory, with a marked increase in recent years. During the period from 2013 to 2017, the number of publications remained relatively low and stable, with only 0–1 article per year, indicating that scholarly attention to this topic was still limited in the early part of the decade. From 2018 to 2020, a gradual increase was observed, rising from 4 articles in 2018 to a peak of 7 in 2019, followed by a slight decline to 5 articles in 2020. A further drop occurred in 2021, with only 2 articles published likely influenced by disruptions related to the COVID-19 pandemic. However, the years 2022 to 2024 saw a significant surge in publications. In 2023, the number of articles rose to 17, reaching an all-time high of 29 in 2024. This sharp increase reflects growing academic and policy interest in cooperative and sustainability issues, particularly in the context of post-pandemic recovery and the strengthening of local economies. For 2025, the data show 8 articles, a figure that is likely to increase as the year progresses and more publications become available.

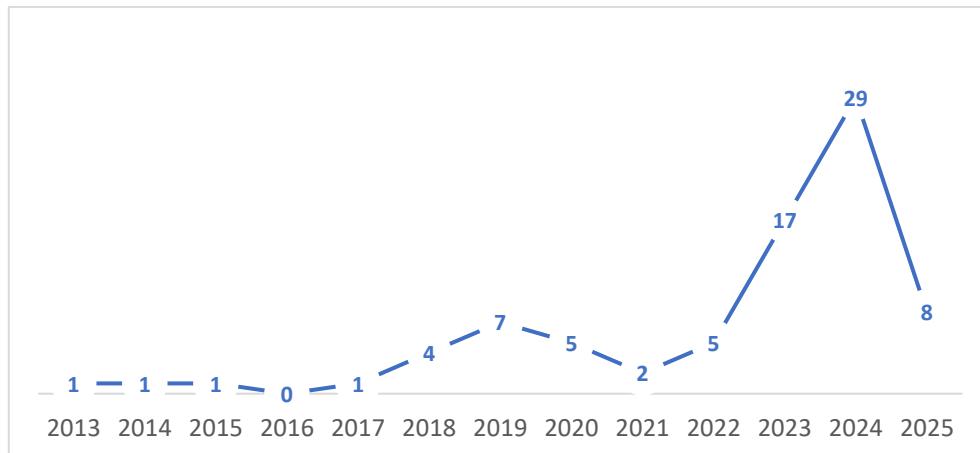


Figure 4. Publication Trend

Most Relevant Source

The figure below shows that Sustainability (Switzerland) is the most productive source for publications on cooperatives and sustainability in Indonesia, with a total of nine articles. This is followed by the Journal of Infrastructure, Policy and Development (four articles) and AACL Bioflux (three articles). Meanwhile, seven other journals each published two articles, covering fields such as agriculture, forestry, social economy, and Islamic accounting. These findings indicate that the topic of cooperatives and sustainability is inherently interdisciplinary and holds global relevance, with publications distributed across a wide range of scientific disciplines.

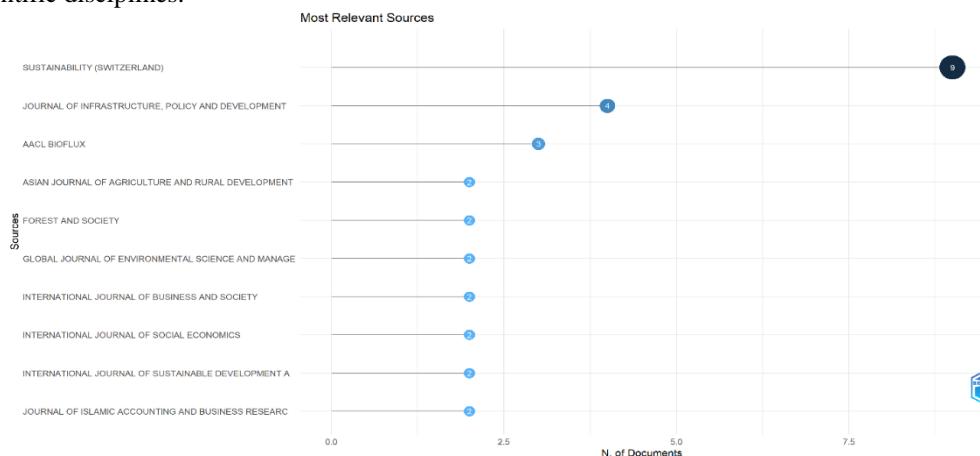


Figure 5. Most Relevant Source

Most Cited Document

The figure below presents the list of the most globally cited documents in the field of cooperatives and sustainability in Indonesia. The document with the highest citation count is Ovenden JR (2009), published in BMC Evolutionary Biology, which has received 106 global citations, ranking first in academic influence. This is followed by articles from Yuana SL (2019) in the Journal of Cleaner Production and Bager SL (2021) in One Earth, each with 50 citations, and Witbooi E (2020) in Nature with 44 citations. These works demonstrate strong international relevance in the areas of sustainability, governance, and sustainable economics.

Notable contributions from Indonesian authors include Permatasari P (2023) in Clean and Responsible Consumption with 24 citations, and Wijayanto HW (2022) in Sustainability with 22 citations, reflecting a growing recognition of national scholarship at the international level. Overall, the figure highlights that the topic of cooperatives and sustainability has not only expanded quantitatively but has also produced globally influential works, representing a combination of both international and national contributions to the development of the literature.

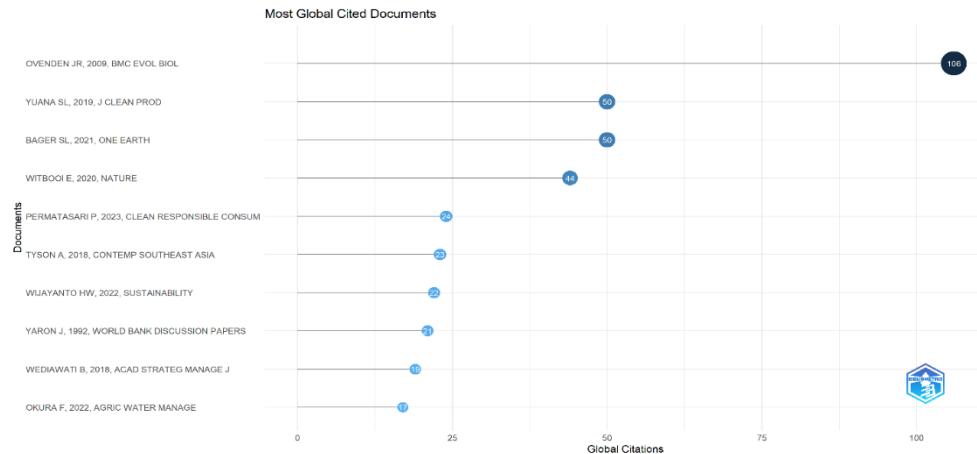


Figure 6. Most Cited Documents

Co Occurrence Network

The analysis conducted using VOSviewer on literature containing the keywords (“Cooperatives” OR “Cooperative”) AND (“Sustainability”) AND (“Indonesia”) reveals that sustainability constitutes a central theme in cooperative studies in Indonesia. The terms “sustainability” and “cooperatives” emerge as primary nodes in the network, interconnected with various other terms related to social, economic, and environmental dimensions. The resulting co-occurrence map visualizes four main thematic clusters, each reflecting the prevailing directions and focal points of the literature.

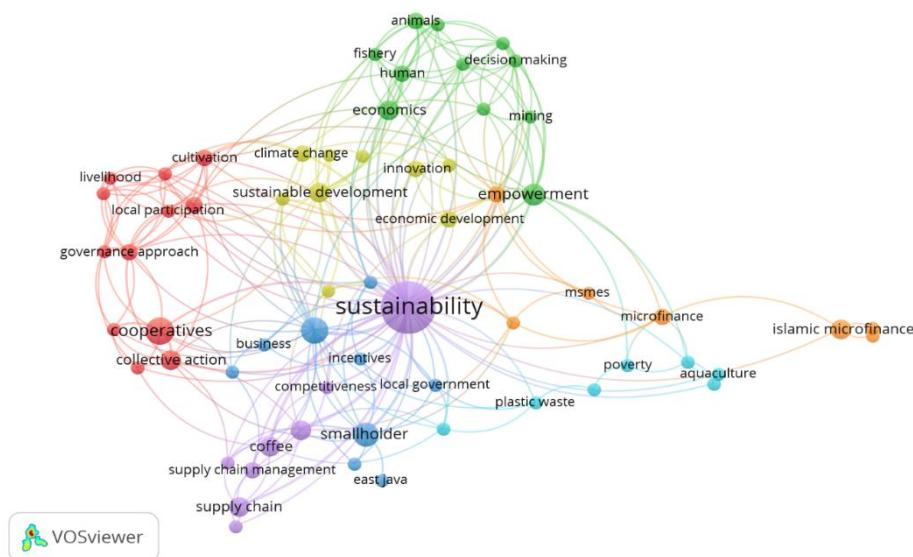


Figure 7. Cooccurrence Network

The first cluster centers on the role of cooperatives in fostering local participation and collective action, particularly in the context of community-based development and institutional strengthening at the village level. The second cluster emphasizes community empowerment and local economic development, portraying cooperatives as a vehicle for promoting economic self-reliance and reducing social inequality. The third cluster associates cooperatives with strategic roles in supporting MSMEs, advancing financial inclusion, and addressing both social and environmental issues, including adaptation to climate change risks and the fulfillment of social responsibility. Meanwhile, the fourth cluster highlights the role of smallholder farmer cooperatives in advancing sustainable agricultural value chains such as in the coffee and organic

farming sectors which have become increasingly relevant in the context of export markets and sustainability certification. Overall, this analysis positions cooperatives not merely as alternative economic entities but as transformative actors driving social change and fostering local sustainability. The reviewed literature demonstrates that cooperatives hold a strategic capacity to bridge economic and social objectives within the framework of sustainable development in Indonesia.

Discussion

Cluster 1: Collective Strength and Local Participation for Sustainability

This cluster positions cooperatives as socio-economic institutions that play a crucial role in strengthening community participation and local governance to achieve sustainable development. In most of the reviewed literature, cooperatives are framed not merely as economic entities but as platforms for collective community action to manage resources equitably and sustainably (Darmawan et al., 2023). The most prominent topic in this cluster concerns the role of cooperatives in fostering participatory governance (Haryanto et al., 2022; Kurniasih et al., 2021; Kusmiati et al., 2023). Cooperatives are seen as mechanisms that enable communities to take an active role in decision-making whether in managing local assets, distributing economic benefits, or strengthening institutional capacity (Toiba et al., 2024). Many studies highlight how cooperatives serve as intermediaries that bridge community needs with public policy or market access (Taniu et al., 2024; Hariance et al., 2024).

In addition, value-based and faith-based cooperative models such as pesantren cooperatives, sharia cooperatives, and Baitul Maal wat Tamwil (BMT) are frequently examined in this body of literature (Ascarya et al., 2023; Sari et al., 2025). These models are perceived as capable of integrating economic principles with social justice and solidarity values (Fitriasari & Dalimunthe, 2019). Several studies emphasize that cooperative success often depends on the extent to which they align with the cultural and spiritual values of their communities (Wediawati et al., 2018). Other works explore partnership models between cooperatives and the private sector, such as nucleus–plasma schemes in the palm oil and rubber plantation sectors. In such contexts, cooperatives act as intermediaries between smallholders and large companies (Anwar et al., 2023; Ardana et al., 2024). Nevertheless, some studies critique power imbalances within these partnerships and the challenges cooperatives face in securing equitable member rights (Utomo et al., 2025).

The cluster also discusses the revitalization of inactive traditional cooperatives (Setiadjatnika, 2020). This process often involves training, institutional mentoring, and improvements to internal management, all aimed at enhancing long-term sustainability (Aripranata et al., 2025; Chaniago et al., 2024; Nuraisyah et al., 2025). Contributions to sustainability in this cluster are reflected across multiple dimensions. Socially, cooperatives strengthen community cohesion and provide inclusive participation spaces (Koesrianti & Tanega, 2024). Economically, they expand access to capital and markets for marginalized groups (Rahayu et al., 2024; Sembada et al., 2019). Institutionally, they reinforce more accountable local governance structures (Wicaksono et al., 2024).

In certain contexts, cooperatives also promote cultural values and local wisdom as integral elements of sustainable development (Bainus et al., 2025; Koesrianti & Tanega, 2024). Geographically, the literature in this cluster often draws on case studies from East Java (Erwin et al., 2024; Makmun et al., 2024; Toiba et al., 2024; Wasiaturrahma & Ajija, 2017; Wijayanto et al., 2024), Central Java (Riptanti et al., 2024), Sumatra (Hariance et al., 2024; Ulya et al., 2024), Kalimantan (Wibowo et al., 2023; Sintani et al., 2024), and coastal areas. Sectorally, the focus is predominantly on agriculture, traditional fisheries, sharia-based financial cooperatives, and community-based ecotourism (Manlosa et al., 2023; Sutrisno et al., 2024; Puspitasari et al., 2023). However, this cluster also reveals several challenges. Cooperatives often face low managerial capacity, dependency on external assistance, internal member conflicts, and suboptimal business models (Ascarya et al., 2023; Erwin et al., 2024; Hadi et al., 2024). This underscores the need to reinforce the social strengths of cooperatives with professional governance and continuous innovation (Asmara et al., 2024).

Overall, Cluster 1 demonstrates that cooperatives have significant potential as transformative social actors at the local level. Sustainability is determined not only by economic factors or macro-level policy but also by collective community strength, social legitimacy, and commitment to local values consistently practiced through cooperative institutions. Future research should adopt longitudinal approaches to better understand the long-term impacts of community participation. Quantitative methods are needed to objectively measure the relationship between participation, governance, and cooperative performance. Cross-regional and cross-type cooperative studies are also important, including in disadvantaged, frontier, and outermost (3T) areas. Furthermore, research should explore social inclusion, particularly the roles of women and vulnerable groups within cooperatives. Digitalization is another relevant topic, given the

potential of technology to expand participation. Finally, policy evaluations are necessary to assess the effectiveness of government support for community-based cooperatives.

Cluster 2: Community Empowerment and Locally Based Inclusive Economy

The articles in this cluster generally position empowerment as the central theme defined as the process of strengthening the capacity of communities to actively participate in decision-making, manage resources, and collectively enhance economic well-being (Harinurdin et al., 2025; Hutomo et al., 2018). Several studies highlight how cooperatives serve as strategic platforms for local communities to break free from dependence on external aid through economic activities grounded in local resources and indigenous knowledge (Idawati et al., 2024). In the fisheries sector, cooperatives play a role in improving the distribution of catch, expanding market access, and fostering environmental awareness (Sangadji et al., 2024; Taniu et al., 2024). In the context of small-scale mining or agrarian communities, cooperatives are utilized to strengthen the bargaining power of communities vis-à-vis large industries, as well as to manage environmental and social impacts (Wardhiani et al., 2023; Yanuar & Hoebink, 2023; Jansing et al., 2020).

In this cluster, cooperatives are also positioned as mediators between communities and government, particularly in managing regional development programs. With adequate training and facilitation, cooperatives can serve as platforms for communities to develop productive enterprises, access capital, and create local employment opportunities (Harinurdin et al., 2025). These studies indicate that cooperatives contribute to more inclusive development, especially in regions with limited infrastructure and economic access (Hertati et al., 2024). Furthermore, the transfer of knowledge and entrepreneurship training is emphasized as an integral component of the empowerment process (Idawati et al., 2024). From an institutional perspective, these articles reveal that cooperatives most successful in empowerment are those that implement principles of openness, transparency, and member participation. A culture of dialogue, inclusive leadership, and social trust emerges as key to the success of cooperatives as agents of social transformation (Zahrah et al., 2024).

Overall, this cluster underscores that social and economic sustainability depends not only on capital and infrastructure but also on the extent to which communities are empowered as active agents of development. Future research should explore in greater depth the internal mechanisms of cooperative-led empowerment, including leadership dynamics and local value systems, as well as employ quantitative or mixed-method approaches to systematically measure empowerment impacts. Special attention should also be given to vulnerable groups such as women and youth, alongside evaluations of government and NGO interventions in strengthening cooperatives as instruments of empowerment.

Cluster 3: Financial Inclusion, MSMEs, and Cooperative Solutions to Socio-Environmental Issues

The articles in this cluster reveal a strong interconnection between financial access, the strengthening of micro-enterprises, and the management of environmental impacts particularly in the Indonesian context, where economic inequality and ecological pressures are experienced simultaneously (Sari et al., 2019; Purwanto et al., 2020). One of the primary foci of this cluster is the role of cooperatives, especially those operating under sharia principles, such as Baitul Maal wat Tamwil (BMT), in providing financing access to micro and small enterprises that remain underserved by formal financial institutions (Ascarya et al., 2023). These cooperatives not only offer loan schemes that are more flexible and grounded in principles of social justice, but also act as business facilitators, providing training, enterprise development assistance, and network strengthening for MSME actors (Syaiful-Haq et al., 2024).

Beyond the economic dimension, the articles also underscore the involvement of cooperatives in addressing social and environmental issues, including poverty alleviation, plastic waste management, and aquatic ecosystem protection (Fitriasari & Dalimunthe, 2019; Manlosa et al., 2023; Tyson et al., 2018; Hutomo et al., 2018). Several studies demonstrate that cooperatives can initiate community-based collective projects that simultaneously address environmental challenges and deliver direct economic benefits to local populations (Baka et al., 2024). Examples include cooperatives that promote household waste processing into marketable recycled products, or fisher cooperatives that regulate sustainable fishing practices (Hertati et al., 2024; Witbooi et al., 2020; Sangadji et al., 2024).

The studies in this cluster also highlight the importance of circular economy approaches and inclusive finance in advancing sustainable development. In this regard, cooperatives function as a bridge between economic objectives (micro-enterprise profitability), social objectives (reducing inequality), and environmental objectives (waste reduction and conservation) (Hidayat et al., 2025). Such an approach is relevant not only to national policy contexts but also serves as an alternative local development model that is more equitable and resilient to crises (Baka et al., 2024). Nevertheless, this cluster also reflects the structural constraints that cooperatives face in performing their roles optimally (Darmawan et al., 2023).

Challenges identified include limited managerial capacity, low community financial literacy, and the absence of targeted policy support for cooperatives engaged in environmental sectors (Erwin et al., 2024; Maulidina et al., 2024).

Overall, Cluster 3 demonstrates that cooperatives and microfinance institutions are not only vital for driving the people's economy but also hold substantial potential as catalysts for inclusive and sustainable socio-environmental development particularly at the grassroots level. The role of cooperatives in integrating social, economic, and environmental missions illustrates that sustainability approaches need not be exclusively top-down, but can also emerge bottom-up through collective initiatives. Future research should assess the effectiveness of cooperative financing models, particularly in supporting MSMEs and their environmental impacts. Studies should also deepen the understanding of cooperatives' role in implementing circular economy practices, such as waste management and environmentally friendly production. Additionally, research is needed on cooperative partnerships with government and industry in building sustainable inclusive financial ecosystems. Finally, the development and application of cooperative financial technologies to advance inclusion and green financing present a critical area for further inquiry.

Cluster 4: Smallholder Farmer Cooperatives and Sustainable Agricultural Value Chains

The articles in this cluster position cooperatives as key actors in addressing the structural inequalities between smallholder farmers and large-scale agribusinesses, as well as serving as strategic intermediaries linking local producers with both national and global consumers. One major issue discussed is the dependency of smallholder farmers on middlemen, which often results in farmers receiving low and unfair selling prices (Makmun et al., 2024). In this context, cooperatives function as intermediary institutions that provide direct market access, streamline distribution chains, and strengthen farmers' bargaining power (Hariance et al., 2024). Several articles also indicate that cooperatives can assist farmers in meeting quality and certification standards such as fair trade, organic, or other environmental certifications that are prerequisites for entering export markets (Wibowo et al., 2023; Sedana et al., 2019).

The literature in this cluster further discusses the role of cooperatives in improving logistics efficiency, storage capacity, and access to capital (Iskandar et al., 2024). Through cooperative schemes, farmers can join collective purchasing groups for agricultural inputs, thereby reducing production costs and optimizing harvest distribution. Additionally, cooperatives serve as primary channels for technical training, agronomic assistance, and the dissemination of sustainable farming practices (Jaya et al., 2024). From an environmental perspective, this cluster underscores the significant potential of cooperatives to promote more eco-friendly agricultural practices, such as the use of organic fertilizers, soil and water conservation, and agroecological farming systems (Idawati et al., 2024; Laili et al., 2024). Cooperatives can act as agents of behavioral change among farmers through collective education and internal regulations grounded in sustainability values.

Overall, this cluster demonstrates that cooperatives play a pivotal role in transforming smallholder farmers from subsistence producers into resilient and competitive economic actors (Okura et al., 2022). By facilitating access to markets, capital, technology, and training, cooperatives can enhance farmers' economic sustainability while supporting a transition toward more inclusive and environmentally friendly agricultural systems. Future research should quantitatively assess the effectiveness of cooperatives in improving farmers' bargaining positions and overall welfare. Studies should also explore the role of cooperatives in fostering the adoption of sustainable agricultural technologies and addressing environmental challenges. Furthermore, research is needed on cooperative strategies for penetrating global markets, including certification processes and export facilitation. Finally, internal governance aspects such as leadership and member participation warrant examination to strengthen organizational sustainability and maximize impacts for smallholder farmers.

Conclusion

Based on the analysis of the four main clusters, it can be concluded that cooperatives play a strategic role in advancing sustainable development in Indonesia across social, economic, and environmental dimensions. The first cluster underscores the importance of collective strength and local participation in building community-based governance. The second cluster demonstrates how cooperatives serve as instruments of community empowerment, particularly in strengthening local economic capacity. The third cluster highlights the role of cooperatives in supporting financial inclusion, micro, small, and medium-sized enterprises (MSMEs), and addressing socio-environmental issues. Meanwhile, the fourth cluster emphasizes cooperatives' contribution to enhancing the position of smallholder farmers within sustainable agricultural value chains. Collectively, these clusters illustrate that cooperatives are not merely economic

entities, but also social change agents capable of integrating the values of equity, solidarity, and sustainability into grassroots institutional practices.

Future research should be directed toward exploring in greater depth the effectiveness of cooperatives across diverse local contexts through quantitative, longitudinal, and cross-regional comparative approaches. Key issues such as internal governance, social inclusion, digitalization, and adaptation to global markets should be prioritized to enable cooperatives to evolve as adaptive, transparent, and highly competitive institutions. In addition, a comprehensive evaluation of policy interventions and institutional support for cooperatives is essential to ensure that existing programs genuinely strengthen their function as agents of sustainable development. The future development of cooperatives should take into account the synergy between local values, technological innovation, and institutional networks in addressing increasingly complex socio-economic challenges.

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