

LEADING INCLUSIVE GROWTH: COMPARING BUSINESS MODELS IN THE COFFEE VALUE CHAIN, WEST JAVA PROVINCE

Heti Mulyati^{*)1}, Dikky Indrawan^{**)2}, Asaduddin Abdullah^{**)3}, Doni Yusri^{****)4}

^{*)}Department of Management, Faculty of Economics and Management IPB University
Jl. Agatis, IPB Dramaga Campus, Bogor 16680, Indonesia

^{**)}School of Business, IPB University
Jl. Pajajaran, Bogor 16151, Indonesia

^{****)}Vocational School, IPB University
SV IPB Building, Jl. Padjajaran, Bogor 16151 Indonesia

Article history:

Received
8 October 2024

Revised
5 November 2024

Accepted
29 November 2024

Available online
30 November 2024

This is an open access
article under the CC BY
license



Abstract

Background: Smallholders play a critical role in the coffee value chain within West Java Province, with the majority of coffee production originating from their plantations. However, the initiative and involvement of coffee farmers in the value chain remain limited. Consequently, it is imperative to implement an inclusive business model that ensures the participation of all stakeholders.

Purposes: This study examines the diversity of inclusive business models in West Java's coffee value chains, focusing on collectors in Pangalengan and Lembang, coffee shops with roasteries in Bogor, and farmers' cooperatives in Garut.

Design/Methodology/Approach: Using value chain mapping, business model canvas analysis, and semi-structured interviews with key stakeholders, it explores how these lead firms integrate smallholder farmers into their business models while balancing profit and social impact. The analysis revealed distinct inclusivity approaches across the models, underscoring the significance of adapting strategies to specific regional contexts.

Findings/Result: The collector model in Pangalengan and Lembang prioritizes efficiency and market access but may overlook the nuanced needs of farmers. Conversely, the Bogor coffee shop and roastery model fosters direct farmer relationships, promoting quality and shared decision-making. The cooperative in Garut emphasizes collective action and farmer empowerment, although it faces challenges related to governance and market access.

Conclusion: This study identifies the key factors for successful inclusive business practices in coffee value chains. Enhancing coffee value chain inclusivity requires robust stakeholder engagement, particularly with smallholders, empowering training, knowledge sharing, and rigorous monitoring and evaluation.

Originality/Value/state of the art: These insights include the need for context-specific business models, external actor collaboration, a holistic value-creation perspective, and continuous learning and adaptation.

Keywords: business models canvas, coffee value chain, inclusive business, West Java Province, value chain mapping

How to Cite:

Mulyati H, Indrawan D, Abdullah A, Yusri D. 2024. Leading inclusive growth: comparing business models in the coffee value chain, West Java Province. *Jurnal Manajemen & Agribisnis* 21(3): 420–436. <https://doi.org/10.17358/jma.21.3.420>

¹ Corresponding author:
Email: heti@apps.ipb.ac.id

INTRODUCTION

Coffee is a multi-billion-dollar global business that sustains millions of jobs worldwide through a complex network of farmers, processors, and marketers (Fair Trade Foundation, 2023). This complexity was mirrored in Indonesia, the world's fourth-largest coffee exporter in 2017, with a significant export market for its specialty Arabica and Robusta beans (Belachew et al. 2015). However, this industry faces numerous challenges, including overproduction, price volatility, and sustainability concerns (Voorra et al. 2022). These issues are particularly acute for smallholder farmers in regions such as West Java Province, which often lack the resources and market access needed to thrive.

West Java Province contributed to coffee production of 22.6 thousand tons, comprising Robusta (8,127 tons) and Arabica (14,474 tons) in 2023. In this Province, the unique cultivation and processing techniques employed by farmers contribute to the distinct flavors and aromas that characterize Indonesian coffee (Aknesia et al. 2015; Sedana and Astawa, 2019). However, these farmers often operate inefficient and ineffective cultivation management systems, resulting in low-profit margins (Dowdall, 2012; Gathura, 2013). This is because of a combination of factors, including low productivity, inconsistent product quality, limited access to technology and market information, and weak connections with commercial actors (Minh et al. 2016; Mapiemfu-Lamaré et al. 2017).

Recognizing these challenges, the Indonesian government, alongside international organizations and NGOs, has embraced the concept of inclusive business as a pathway to sustainable development (Chamberlain and Anseeuw, 2019; German et al. 2018). Inclusive business models aim to integrate smallholder farmers into the value chain, providing them with opportunities for market participation, increased income, and improved livelihoods (SNV and WBCSD, 2008; Vorley and Proctor, 2008). This approach aligns with the United Nations Sustainable Development Goals (SDGs), promoting economic growth, reducing poverty, and fostering sustainable agricultural practices (Woodhill, 2016).

Within the West Java Province coffee sector, various inclusive business models have emerged, each with unique characteristics and strategies. These models range from direct partnerships between farmers and

coffee shops to cooperative structures that empower farmers through collective action and resource sharing (Sedana and Astawa, 2019). The effectiveness of these models often depends on factors such as contract terms, ownership structures, leadership, household characteristics, land-use patterns, and livelihood strategies (Scoones et al. 2018; Vicol et al. 2018).

Our focus on lead firms as a starting point for understanding inclusive business models in West Java Province's coffee value chain is rooted in market governance. As key players in the market, collectors, coffee shops with roasteries, and cooperatives exert a significant influence on the value chain's dynamics. Their decisions regarding sourcing, pricing, quality standards, and marketing strategies directly affect the livelihoods of smallholder farmers and the overall sustainability of the industry. This is particularly crucial in the context of West Java's burgeoning specialty coffee sector, which offers significant economic advantages and potential for export growth (Clay et al. 2018). Regions in West Java Province have ideal coffee-growing conditions (Ramadhani et al. 2024), and are well-positioned to capitalize on this trend. However, the complexities of the specialty coffee market, including access to finance, knowledge, and technology, often pose challenges for smallholder farmers (Peluso 2023; Suryana et al. 2023). Therefore, lead firms have a critical role to play in facilitating inclusive business models that support smallholders in overcoming these obstacles and participating in the specialty coffee market. This includes providing access to resources, training, and market information, as well as ensuring fair prices and equitable trading practices.

By examining how lead firms approach inclusiveness, we can gain valuable insights into the potential of different business models to create shared value for all stakeholders. We analyzed how their value propositions, key activities, and resource allocations contribute to the integration and empowerment of smallholder farmers (Mulyati and Indrawan 2021). Thus, this focus on market governance allows us to identify the best practices and potential areas for improvement, ultimately informing strategies for fostering a more inclusive and equitable coffee sector in West Java.

In Pangalengan and Lembang, the collector-centric model demonstrated a simpler and more linear structure. While this model can lead to lower farmer prices, some collectors are beginning to adopt more inclusive

practices, such as training and quality improvement initiatives, aligning with research suggesting the potential positive role that collectors can play in supporting farmers (Minten et al. 2010). Bogor's coffee shop and roastery model showcases a more integrated approach, often sourcing directly from farmers, which can foster closer relationships and potentially higher prices (Barham and Weber, 2012). This aligns with the "third-wave" coffee movement's emphasis on direct trade and quality, promoting transparency and traceability (Daviron & Ponte, 2005).

The cooperative model in Garut emphasizes shared decision-making, empowering farmers but facing potential challenges in governance and market access, consistent with findings from other studies on cooperatives in the agricultural sector (Bacon, 2005). Across all three models, the external environment government policies, farmer associations, and NGO influence plays a crucial role in shaping inclusive practices, as highlighted by the literature on institutional frameworks for inclusive businesses (Michelson et al. 2013). Therefore, the expected results of the inclusive business models in West Java's coffee value chain exhibited diverse approaches to integrating smallholder farmers, with varying levels of success in balancing economic and social objectives.

This study investigated inclusive business practices in West Java's coffee industry, focusing on how profit-driven investments by collectors, coffee shops, and cooperatives impacted smallholder farmers. Drawing on previous research like Mulyati and Indrawan (2021), which examined inclusive models in other Indonesian regions, this study aimed to identify the structural factors that promoted equitable participation in the coffee value chain. It utilized tools such as value chain mapping (Fantashir & Yulia, 2023) and the "LINK methodology" (Lundy et al. 2014) to analyze existing business models and identify opportunities for enhancing inclusivity. By comparing different approaches to inclusivity, this research aimed to provide valuable insights for policymakers, practitioners, and businesses seeking to foster a more equitable and sustainable coffee sector in West Java. The findings contributed to a deeper understanding of how to effectively bridge the gap between smallholder farmers and modern markets, ensuring that the benefits of economic growth were shared more equitably and sustainably.

METHODS

The current study builds upon previous research conducted by Lubis (2017), Permatasari (2018), and Mulyati and Indrawan (2021), which explored inclusive business models in the Arabica coffee sector of East Java and North Sumatra. Adapting their mixed-methods approach, this study employs a similar framework to investigate distinct coffee value chains in the West Java Province. Specifically, we focus on four key regions: Pangalengan and Lembang, for lead private collectors; Bogor, home to coffee shops with integrated roasteries; and Garut, characterized by its cooperative model.

In each region, we conducted in-depth semi-structured interviews with key stakeholders across the value chain. These included farmers, collectors, coffee shop owners, cooperative leaders, and other relevant actors. Our interview questions were adapted from the comprehensive frameworks developed by Gereffi et al. (2005) for value chain analysis and by Lundy et al. (2014) for inclusiveness capabilities. By drawing upon established methodologies, we ensured the rigor and comparability of our findings with those of previous research (Williamson, 2002; Kaplinsky and Morris, 2000; Indrawan et al. 2018). The research framework is presented in Figure 1.

Our sample size was determined based on the farmer population in each region, resulting in a total of 112 farmers, 9 collectors, and 3 coffee shops being included in the study. We employed a qualitative approach to analyze the collected data, adhering to the "link methodology." This iterative process, involving design, testing, checking, and acting, allows us to identify gaps between farmers and modern markets, develop strategies to bridge these gaps and create innovative solutions that enhance smallholder farmers' inclusivity and market access (Lundy et al. 2014; Kelly et al. 2015; Sopov et al. 2014).

The analysis was conducted in three stages. First, we map the lead firm of the coffee value chain in each region, illustrating the flow of activities, actors, and resources. This graphical representation provides a comprehensive overview of the industry structure and highlights potential areas for improvement (Kaplinsky and Morris, 2000). Second, we utilized a business model canvas adapted from Osterwalder's (2004) approach to visualize the key components of each business model, such as value propositions, customer segments, and

revenue streams (Figure 2). This allowed us to identify the strengths, weaknesses, and areas of innovation.

Third, we developed new business model principles based on the identified gaps. These principles serve as guidelines for enhancing inclusivity and promoting sustainable growth in the coffee value chains. While the “triple layer business model canvas” (Joyce and Paquin, 2016) exists as a potential tool for analyzing sustainability considerations, we opted for the standard canvas in this study to maintain a focused analysis of the core elements of each business model and their direct impact on inclusivity. The triple-layer canvas, while valuable, may have introduced unnecessary complexity to this stage of the analysis by incorporating environmental and social aspects.

By combining these methods and analytical approaches, this study provided a nuanced understanding of inclusive business models in West Java Province coffee value chains. The findings offer valuable insights for stakeholders seeking to promote equitable growth, enhance farmers’ livelihoods, and create a more sustainable and resilient coffee industry.

RESULTS

Comparing the Coffee Value Chains

The study was conducted in three distinct locations across West Java Province, Indonesia: Pangalengan in Bandung Regency, Lembang in West Bandung Regency, Garut Regency, and Bogor Regency. Every location exhibits distinct features regarding the participants involved, their functions, and the overall organization of the coffee supply chain. Inclusive business models, as highlighted in the literature, are not monolithic structures. They vary significantly depending on the specific context, industry dynamics, and strategic priorities of the actors involved (Goldsmith et al. 2018). In the West Java Provincial coffee sector, our findings mirror this diversity, revealing distinct characteristics and outcomes across the four regions. Each region, shaped by its unique socioeconomic conditions, cultural practices, and market structures, has fostered distinct approaches to inclusive businesses, highlighting the importance of tailoring strategies to local contexts.

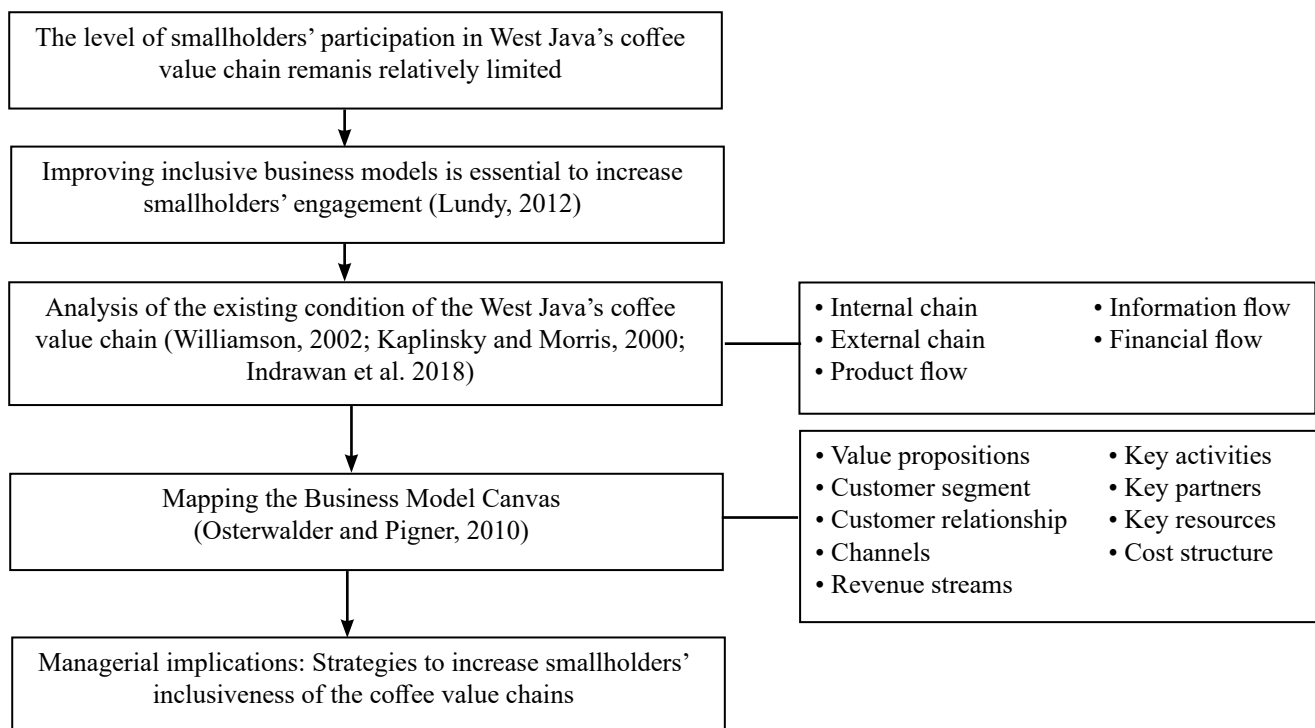


Figure 1. The research framework

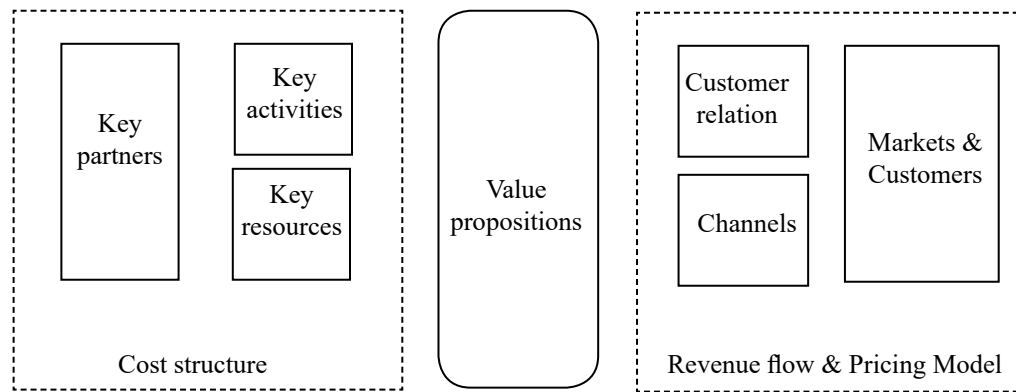


Figure 2. Business Model Canvas (BMC) adapted from Osterwalder's (2004)

Pangalengan focuses on CV Frinsa Agrolestari, a specialty coffee company operating under the trade name *Java Frinsa Estate*. The company plays a central role in the value chain by engaging with both modern and traditional farmers. Modern farmers, who are partners with the company, receive training and guidance on specialty coffee production, while traditional farmers, although not directly partnered, can still sell their harvest to the company. The value chain also includes collectors who gather coffee from farmers and Perum Perhutani, a state-owned forestry company that provides land for coffee cultivation.

The study in Lembang centers on the Mekar Rahayu Farmers' Group, a collective of Arabica coffee farmers. The group manager acts as the lead firm, coordinating the collection, processing, and distribution of coffee. The value chain involves both traditional farmers, who are members of the group, and managers, who own private coffee plantations. Processed coffee is sold to various actors, including exporters, green coffee bean processors, and a local coffee shop.

Garut's study focused on the Mandalagiri Cooperative, a coffee cooperative that works with both traditional and semi-modern farmers. The cooperative plays a crucial role in collecting, processing, and selling coffee, as well as providing training and support to farmers. The value chain also includes external actors, such as the Garut Regency Agriculture Office, Perum Perhutani (a state-owned forestry company), and Indofarma (a pharmaceutical company with a CSR program).

In Bogor, the Ki Demang coffee shop operates as a vertically integrated lead firm, controlling the entire coffee production process from beans to cups. While ensuring quality and potentially higher profit margins, this relational model presents challenges in terms

of inclusivity. The shop sources coffee from its own plantation and from local farmers, categorized as traditional, semi-modern, or modern, based on their production capacity. While Ki Demang engages in all farmer categories, the level of inclusivity varies. Traditional farmers, often constrained by limited resources and knowledge, primarily supply lower-quality coffee beans and are less involved in value-added processing. In contrast, modern and semi-modern farmers who have received training and support are more integrated into the value chain, contributing higher-quality beans and participating in processing activities. This model, while inclusive to some extent, highlights the need for further interventions to enhance participation and benefits for traditional farmers.

Our analysis additionally reveals disparities in the fundamental business model components across these chains, encompassing target markets, product focus, and comprehensive value propositions. This supports the notion that inclusive business models are not one-size-fits-all but must be tailored to the specific context, industry dynamics, and stakeholder priorities (Goldsmith et al. 2018). The diversity of inclusive business models in West Java's coffee sector necessitates tailored approaches that address each region's unique characteristics. By thoroughly understanding the unique challenges and opportunities in each context, stakeholders can devise more effective strategies to foster inclusivity, ensuring the coffee industry's benefits are more equitably shared among all participants. This study contributes to the growing body of knowledge on inclusive business models, emphasizing the importance of context-specific solutions and the need for continuous learning and adaptation in the pursuit of sustainable and inclusive development.

Mapping the Coffee Value Chain

The analysis identified two primary marketing channels for coffee in West Java Province: modern and traditional channels. These distribution channels accommodate diverse consumer preferences. The modern channel predominantly supplies specialty coffee beans, which are frequently sold to larger roasters or exported, whereas the traditional channel focuses on locally consumed coffee, often unbranded or minimally processed.

The value chain framework adopted from the study by Indrawan et al. (2018) illustrates the production and financial flows within these chains, highlighting the key actors and their roles. Key stakeholders, classified as either internal (directly involved in production and distribution) or external (indirectly influencing transactions), play diverse roles in shaping the West Java Province coffee value chain. Internal actors include farmers, collectors, processors, roasters, and retailers. These actors vary in terms of their size, production methods, and relationships with other stakeholders. For example, farmers in the Estate chain may have access to resources and technology not available to smallholder farmers in the Cooperative or Collector chains. External factors such as government agencies, NGOs, and financial institutions play an essential role in influencing policy, providing support services, and shaping market conditions. Understanding the complex interactions between these actors is crucial for developing effective strategies to promote inclusive growth and sustainability in the West Java Province coffee industry. Our study revealed varying levels of complexity and interaction among stakeholders within different coffee value chains in West Java Province.

In the Pangalengan area, the collector-dominated chain is linear, with farmers mainly depending on collectors for market access, potentially leading to lower prices and limited control over their beans' destinations. Some collectors now offer training and invest in quality improvements, suggesting a shift towards inclusivity. Figure 3 shows the Pangalengan coffee value chain map, featuring a streamlined, lead-firm model centered on Java Frinsa Estate. This estate, with a processing capacity of 200 tons per season, sources directly from 11 partner farmers, eliminating the need

for intermediaries. Most of the processed coffee (70%) is exported to high-value markets in the US, Europe, and Japan, emphasizing quality and international standards, while 30% is supplied to local cafés and roasteries, balancing export with domestic specialty coffee demand. This model, while efficient and quality-focused, also underscores farmers' vulnerability due to reliance on a single buyer. Additionally, the relatively small portion allocated to the domestic market suggests untapped potential for further developing local consumption and creating more value for farmers within the region.

In the Lembang area, there is a coffee farmers' group namely Mekar Rahayu established in 2014. This group has 25 members. The farmers are categorized as traditional farmers who maintain an average tree density of 1,600 per hectare. The internal actors consist of farmers, collectors, processors, coffee shops, exporters, and consumers. Meanwhile, the external actors are the Food Security and Agriculture Office of West Bandung Regency, Perum Perhutani, and the Plantation Office of West Bandung Regency. Mekar Rahayu serves as the lead firm in the value chain, overseeing agricultural producers and maintaining connections with various stakeholders in the coffee value chain. The types of processed coffee are 70% sold to exporters, 20% sold to green coffee processors, and 10% of processed roasted coffee beans sold to coffee shops (Figure 4.)

Conversely, the coffee shop and roastery model prevalent in Bogor demonstrated greater vertical integration. Coffee shops often source beans directly from local farmers, fostering closer relationships and potentially higher prices for farmers (Figure 5). This model also allows for greater control over quality and branding, appealing to a more discernible consumer base.

The cooperative model in Garut emphasizes collective action and shared decision-making among farmers. This approach fosters greater farmer empowerment and participation in the value chain, potentially leading to a more equitable distribution of profits and resources (Figure 6). However, cooperatives face challenges related to governance, management, and market access that can hinder their effectiveness.

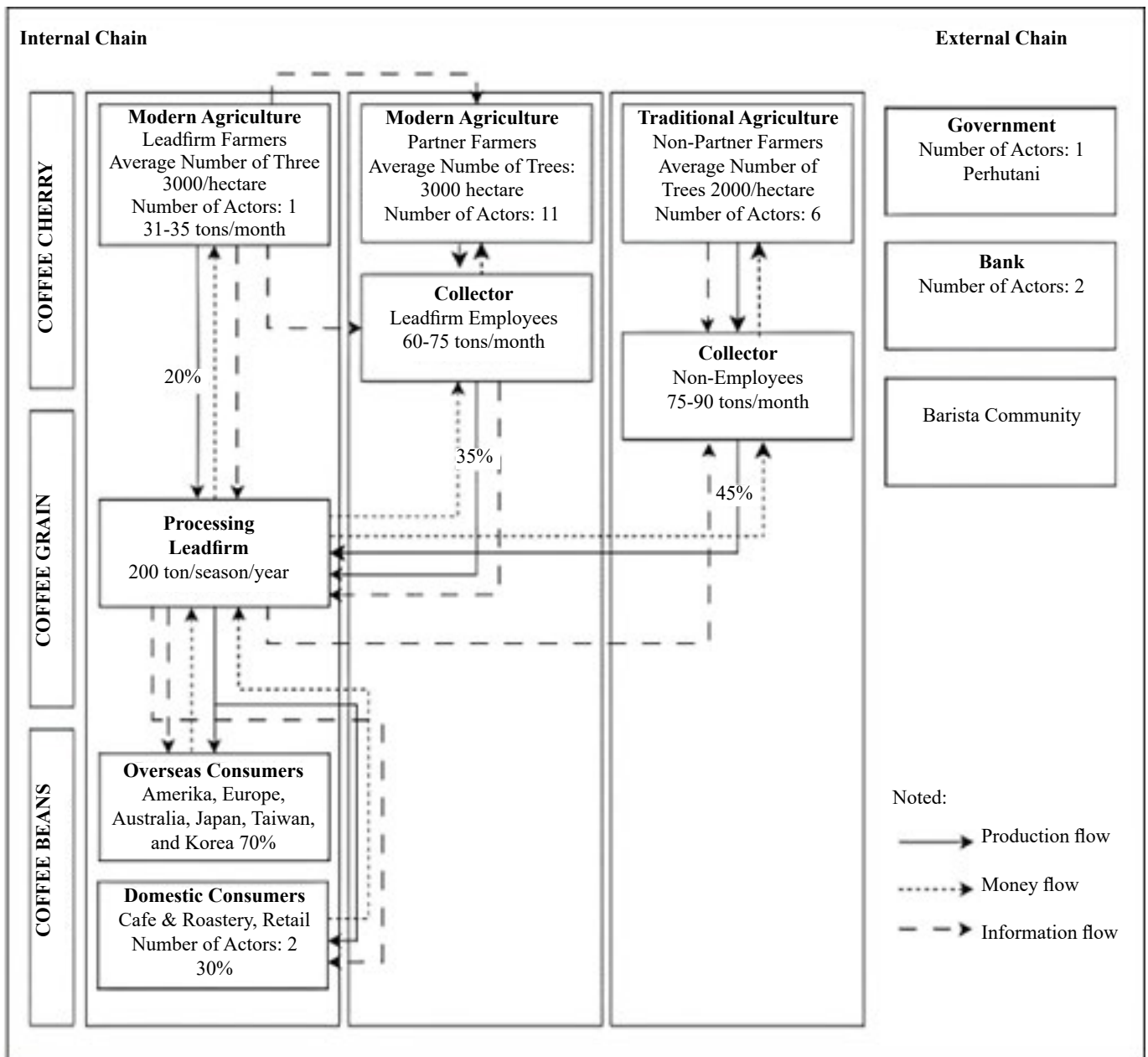


Figure 3. Pangalengan Coffee Value Chain (adapted from Apriyani, 2024)

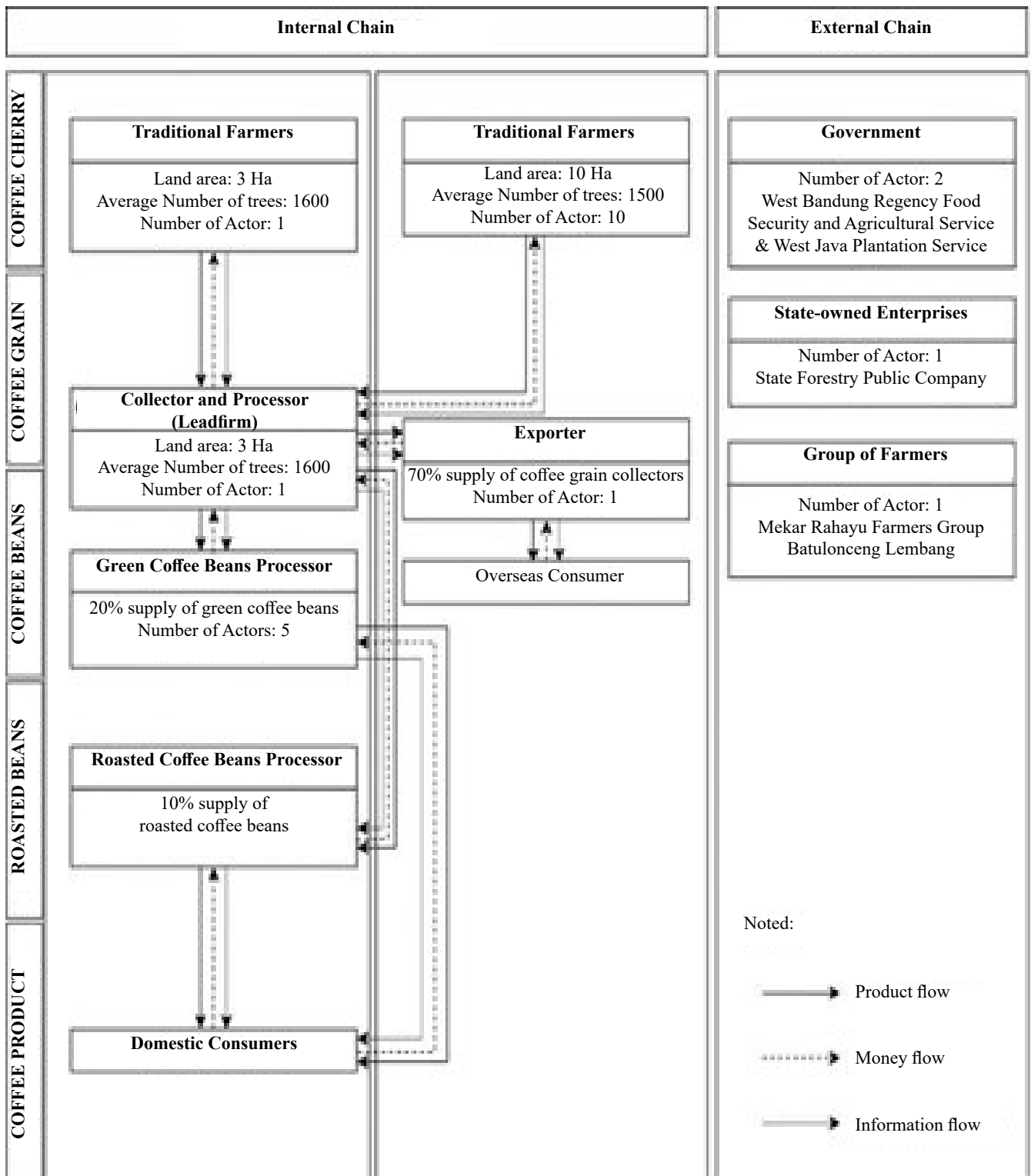


Figure 4. Lembang Coffee Value Chain (adapted from Safitri, 2024)

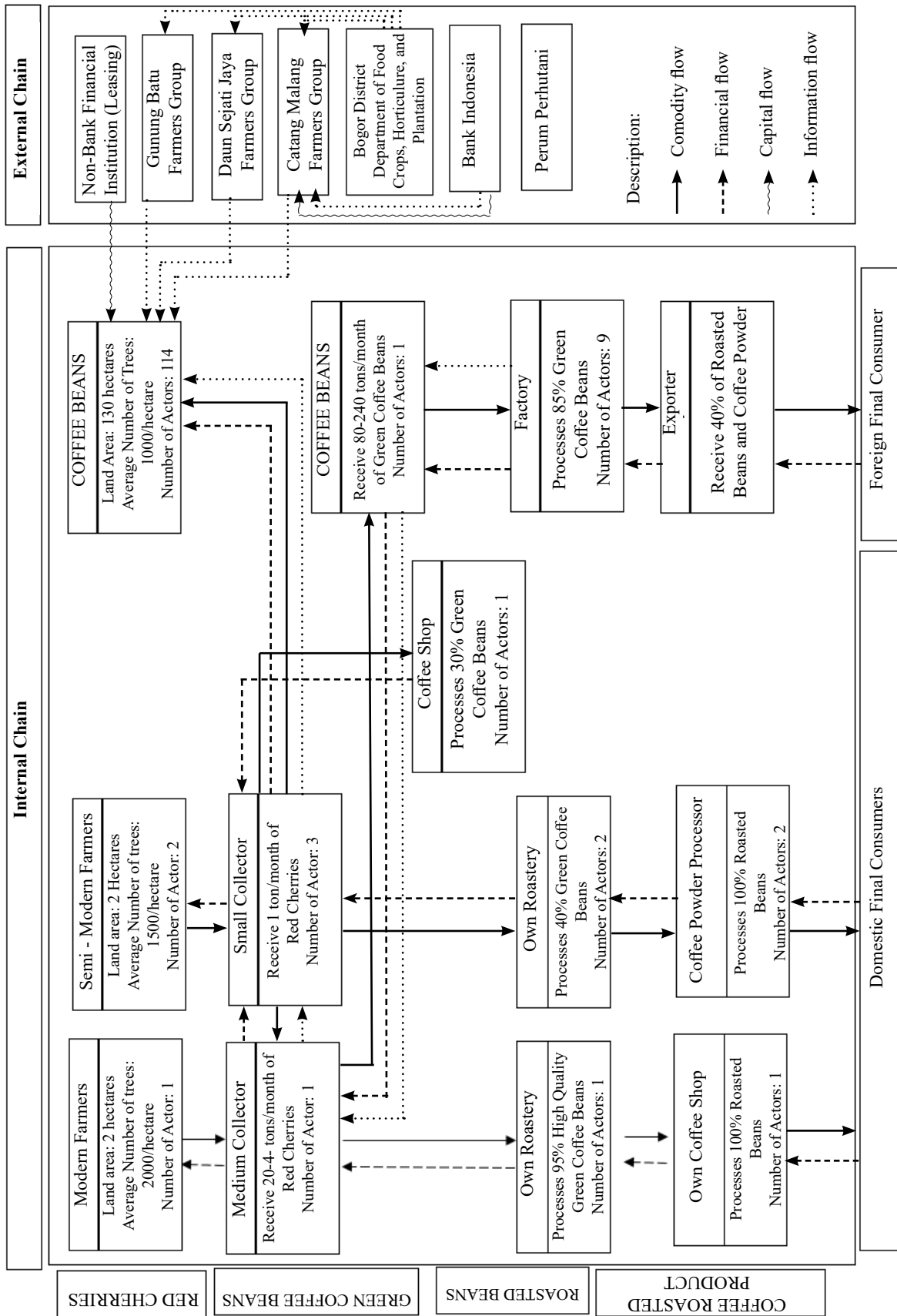


Figure 5. Bogor Coffee Value Chain (adapted from Ardenis, 2024)

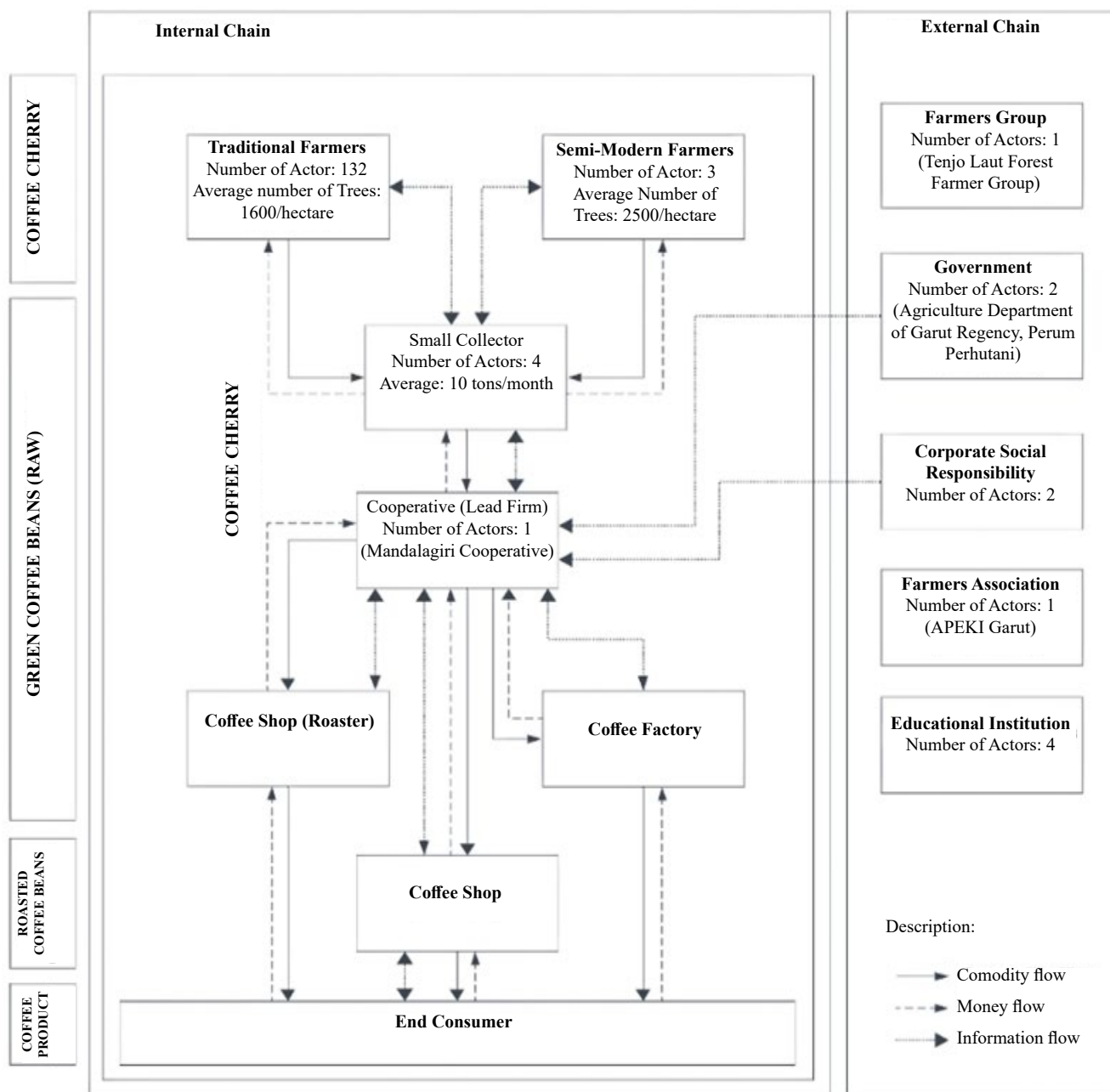


Figure 6. Garut Coffee Value Chain (adapted from Sundari, 2024)

Across all four chains, the external environment plays a crucial role in shaping inclusive business practices. Government policies, the influence of farmer associations, and the presence of NGOs can significantly affect the level of support and resources available to smallholder farmers. For instance, in regions with strong cooperative networks and an NGO presence, farmers may have greater access to training, financing, and market information, facilitating their integration into the value chain.

Coffee's Business Model Canvas

Business models, as categorized by Osterwalder and Pigneur (2010), offer a framework for understanding how businesses create, deliver, and capture value. Our study of inclusive business models in West Java Province's coffee industry uses an offer-driven approach, emphasizing innovative value propositions that benefit smallholder farmers and other stakeholders across the nine segments of the business model canvas. Pangalengan and Lembang as collector models are described in Figure 7 and Figure 8. The Business Model Canvas (BMC) highlights a coffee business in Lembang, West Java Province, likely associated

with the Mekar Rahayu Farmer Group. Their core business involves sourcing coffee cherries from local farmers, processing them in various forms, and selling them to exporters, processors, and local coffee shops. Their value proposition lies in offering single-origin Lembang coffee beans and aiming to boost farmers' income. Direct sales and social media are their primary

channels. Revenue is generated by the sale of various coffee products, with costs mainly attributed to operations, harvesting, and equipment maintenance. This model, mirroring findings from studies in other coffee-producing regions, often prioritizes efficiency and scale, aggregating diverse coffee qualities, and selling primarily through cooperatives (Kolk, 2016).

Key Partners	Key Activities	Value propositions	Customer relationship	Customer Segment
Internal <ul style="list-style-type: none"> • Farmers: Partners & non partners • Collectors External <ul style="list-style-type: none"> • Perum Perhutani • Barista community • Financial institutions 	<ul style="list-style-type: none"> • Cultivation • Processing coffess cherries into green beans • Marketing of green beans • Coffess waste production into compost Key resources <ul style="list-style-type: none"> • Human resources • Land • Tools and machines (pulper, huller, sorting machine) 	<ul style="list-style-type: none"> • Awardwinning specialty coffee • Hand picking • Sun dried 	Visit to the coffeee plantation directly Channels <ul style="list-style-type: none"> • Website • Social media: Instagram, facebook • E-commerece: Tokopedia shops 	Overseas and Domestic customers
Cost structure		Revenue streams		
<ul style="list-style-type: none"> • Operational cost (human resoures, production, distribution) • Maintenance costs 		Selling the green beans		

Figure 7. Pangalengan Lead-Firm Business Model

Key Partners	Key Activities	Value Propositions	Customer Relationship	Customer Segments
<ul style="list-style-type: none"> • Government • Agriculture and Food Security • Agency, Bandung Barat District • West Java Provincial Agriculture Service • State-Owned Forestry Company (Perhutani) • Purchasing partner • Mekar Rahayu Farmers Group 	<ul style="list-style-type: none"> • Collecting, processing, and selling coffee cherries to exporters • Processing coffee cherries into green coffee beans for coffee processors • Processing green coffee beans into roasted coffee beans for coffee shops Key Resources <ul style="list-style-type: none"> • Human resources (training for farmers) • Physical resources (coffee processing machines and specialty coffee origin Batulonceng (certification)) 	<ul style="list-style-type: none"> • The coffee beans sold are single origin from Batulonceng, Lembang. • The coffee supply comes from the Mekar Rahayu Farmers Group, which consists of farmers around Batulonceng to increase their income. 	<ul style="list-style-type: none"> • Maintaining communication with exporters and green coffee bean processors via telephone. • Direct meetings with coffee shops. Channel <ul style="list-style-type: none"> • Direct sales to exporters • Direct sales to green coffee bean processors • Direct sales to coffee shops • Marketing through social media 	<ul style="list-style-type: none"> • Exporters in Ciparay, West Java • Green coffee bean processors in Bandung, Jakarta, Yogyakarta, and Bali • Roasted coffee bean processors in Lembang
Cost Structure		Revenue Structure		
<ul style="list-style-type: none"> • Cost of maintaining coffee plantations (human resources) • Cost of harvesting and hulling (sacks, labor, and human resources) • Cost of maintaining equipment (sickle, pulper, tarpaulin, huller, roaster, mixer, and grinder) • Cost of packaging materials (sacks and raffia) 		<ul style="list-style-type: none"> • Sales of coffee cherries to exporters • Sales of green coffee beans to processors • Sales of roasted coffee beans to coffee shops 		

Figure 8. Lembang Lead-firm Business Model

Bogor’s lead-firm business model is shown in Figure 9. This model, similar to the “third wave” coffee movement, emphasizes direct trade, quality control, and a unique brand experience (Daviron & Ponte, 2005). Research suggests that direct relationships between farmers and roasters can lead to fairer prices, knowledge sharing, and community development (Barham & Weber, 2012).

Garut (Cooperative Model), as shown in Figure 10, this model, with its focus on collective action and shared decision-making, resonates with the principles of the Fair Trade movement (Reed, 2009). Studies have shown that cooperatives can empower farmers and improve their livelihoods; however, their success

depends on effective governance and strong market linkages (Bacon, 2005). Our comparative analysis of these models, using the Business Model Canvas as a framework, reveals a spectrum of approaches to integrating economic and social objectives. The collector model in Pangalengan and Lembang often prioritizes volume and efficiency, whereas the Bogor model focuses on quality and direct relationships. Garut’s cooperative model strives for a balance between economic viability and social impact. This aligns with global research suggesting that inclusive business models can take various forms, depending on the local context, industry dynamics, and stakeholder priorities (Goldsmith et al. 2018).

Key Partners	Key Activities	Value Propositions	Customer Relationship	Customer Segments
<p>Internal</p> <ul style="list-style-type: none"> • Gunung Batu Farmers Group • Bogor District Department of Food Crops, Horticulture, and Plantation <p>External</p> <ul style="list-style-type: none"> • Non-bank financial institutions (Leasing) • State-Owned Forestry Company (Perum Perhutani) • Central Bank of Indonesia • Daun Sejati Farmers Group • Catang Malang Farmers Group 	<ul style="list-style-type: none"> • Planting, maintaining, and harvesting red coffee cherries • Processing red coffee cherries into green coffee beans • Processing green coffee beans into roasted beans • Processing roasted beans into coffee powder • Processing coffee powder into coffee drinks 	<ul style="list-style-type: none"> • Maintaining good relationships with traditional farmers and small collectors • Using natural processing methods to preserve the original taste and aroma of coffee beans • Coffee that is single origin because it comes from their own coffee gardens • Providing coffee with a strong bitter flavor • Direct service to customers at the own coffee shop • Providing detailed information about the origin and production process of the coffee on the packaging • Ensuring the welfare of farmers and fair prices • Involving local residents as labor in the coffee production process • Knowledge about coffee based on the experience of other farmers 	<ul style="list-style-type: none"> • Maintaining good relationships with traditional farmers and small collectors • Providing loans and cooperating with traditional farmers • Maintaining communication between modern farmers and collectors • Direct visits from customers • Serving customers directly at the own coffee shop 	<ul style="list-style-type: none"> • Collectors • Own Roastery • Own coffee shop • Domestic end consumers • Coffee shops
<p>Cost Structure</p> <ul style="list-style-type: none"> • Cost of planting coffee • cost of maintaining coffee plantations • cost of labor for own coffee shop • Cost of packaging coffee products • Cost of labor for farm workers • Cost of processing coffee beand • Cost of distribution and transportation • Cost of packaging green coffee beans 		<p>Revenue Structure</p> <ul style="list-style-type: none"> • Sales of low-quality green coffee beans • Sales of high-quality green coffee beans • Sales of roasted beans • Sales of coffee powder • Sales of coffee drinks 		

Figure 9. Bogor Lead-Firm Business Model

Key Partners	Key Activities	Value Propositions	Customer Relationship	Customer Segments
<p>Internal</p> <ul style="list-style-type: none"> • Farmers • Tenjo Laut Forest • Farmer Group • Collector <p>External</p> <ul style="list-style-type: none"> • Garut District Agriculture Agency • Perum Perhutani • Indofarma CSR • APEKI Garut • Education Institution 	<ul style="list-style-type: none"> • Coffee cultivation • Coffee cherry harvest • Processing coffee cherries into green beans • Processing green beans into roasted beans 	<ul style="list-style-type: none"> • Sales of quality green beans and roasted beans • Using natural methods in processing • Efforts to utilise bioethanol as flack for processing equipment 	<ul style="list-style-type: none"> • Maintain good relations with all actors involved • Lending capital to co-operative members 	<ul style="list-style-type: none"> • Farmer member • Collectors • Coffee shop (roastery) • Coffee shop • Coffee factory
	Key Resources		Channel	
	<ul style="list-style-type: none"> • Human resources • Land • Production machine (pulper, huller, sorting machine, roastery) 		<ul style="list-style-type: none"> • Direct sales to coffee factories and coffee shops • Purchase from collectors 	
Cost Structure		Revenue Structure		
<ul style="list-style-type: none"> • Cost of coffee cultivation • Equipment/facility maintenance costs • Distribution and transport costs • Cooperative operational costs • Labour costs 		<ul style="list-style-type: none"> • Sales of coffee green beans • Roasted coffee bean sales 		

Figure 10. Garut Lead-Firm Business Model

These findings underscored the diverse approaches to inclusivity within West Java’s coffee industry. While the cooperative model in Garut, with its emphasis on shared decision-making and equitable distribution of benefits, aligned with the principles of Fair Trade (Reed, 2009), other models, such as those observed in Pangalengan, Lembang, and Bogor, prioritized different aspects of the value chain. This variation reflected the complex interplay of factors that shaped inclusive business models, including local context, industry dynamics, and stakeholder priorities, as highlighted by Goldsmith et al. (2018). Our research contributed to this body of knowledge by providing empirical evidence from the coffee sector in West Java, demonstrating how different models emerged in response to specific challenges and opportunities. Furthermore, it reinforced the importance of recognizing the heterogeneity of inclusive business models and tailoring interventions to support the unique needs and aspirations of different communities and value chains.

Our findings highlighted the trade-offs inherent in various business models within West Java’s coffee industry. While economic profit was undeniably crucial

for all actors, the levels of social and environmental integration differed significantly. This echoed the findings of Mulyati and Indrawan (2021), who observed a similar prioritization of economic profit in coffee value chains in East Java and North Sumatra. Their research revealed that even when cooperatives were involved, often perceived as a social initiative, their inherent profit-driven nature could unintentionally limit the inclusion of smallholder farmers.

This disparity underscored the critical need to identify and promote factors that encouraged a more holistic and inclusive approach to business model development. Such an approach would need to integrate social and environmental considerations alongside economic goals. As demonstrated by Fantashir and Yulia (2023) in their study of Central Aceh Regency’s coffee value chain, inclusive business models could generate significant benefits for farmers, including premium prices, infrastructure development, and access to training and capital. However, realizing these benefits necessitates a concerted effort to foster collaboration and establish fair and transparent governance throughout the value chain.

Crucially, inclusiveness in this context extended beyond mere participation in the value chain. It required actively involving smallholder farmers in decision-making processes and ensuring equitable distribution of benefits. This resonated with Lei et al. (2023) and Hinde et al. (2023), who emphasized the importance of farmer participation in shaping benefit-sharing arrangements and fostering a sense of ownership. By empowering smallholder farmers and promoting sustainable practices, the coffee industry in West Java could contribute to improved livelihoods and a more equitable and resilient value chain. This research not only advanced the academic discussion on inclusive business models but also offered practical guidance for policymakers, businesses, and development practitioners striving for inclusive agricultural growth. It highlighted the importance of interventions that went beyond facilitating market access to strengthen the capacity of smallholder farmers and ensure their meaningful participation in shaping their own futures.

Managerial Implications

The findings of this study provide several key managerial implications for actors in the West Java Province coffee value chain, aligning with the broader concept of inclusive business models as defined by the UNDP (centered on the inclusion of the poor) and the strategic intent of utilizing wasted human resources. First, our findings emphasize that inclusivity is not a one-size-fits-all concept. This necessitates tailoring business models to the specific context and needs of smallholder farmers, acknowledging their diverse capabilities, competencies, and aspirations. For collectors in Pangalengan and Lembang, this could mean moving beyond mere aggregation and market access to invest in quality improvement programs and offer fairer prices to farmers, as suggested by Minten et al. (2010). Coffee shops and roasteries in Bogor can further enhance their inclusivity by not only strengthening direct relationships with farmers but also by co-creating value-added products, ensuring that farmers benefit from the brand value they help create. Cooperatives in Garut can focus on improving governance structures and transparency, creating a more equitable platform for farmer participation and decision-making (Bacon, 2005). Second, our research underscores the importance of collaboration between businesses and external actors, such as government agencies and NGOs, to foster inclusivity. These partnerships can provide crucial training, financial

support, and market access to smallholder farmers, who often lack the resources and networks to effectively compete in the market (Michelson et al. 2013). By leveraging the expertise and resources of these external partners, businesses can create more sustainable and impactful inclusive business models. Third, the findings of this study highlight the need for a shift in mindset among businesses towards a more holistic understanding of value creation. While economic profit remains a core driver, integrating social and environmental considerations into business models is essential for long-term sustainability (Hart & Milstein, 2003; London et al. 2010; Porter & Kramer, 2011). This could involve adopting sustainable sourcing practices, supporting community development initiatives, or promoting fair labor practices. By recognizing and valuing the contributions of smallholder farmers, businesses can create a more equitable and resilient coffee value chain. Fourth, the study underscores the need for a more nuanced understanding of the concept of “value” in inclusive business models. While economic value remains a primary driver, social and environmental values are increasingly recognized as essential components of sustainable business practices. By incorporating these broader dimensions of value into their decision-making, businesses can create a more positive impact on both farmers and the environment (Farahani et al. 2021). This could involve adopting sustainable sourcing practices, supporting community development initiatives, and investing in environmental conservation projects.

Finally, this study underscores the importance of continuous learning and adaptation in the design and implementation of inclusive business models. As the coffee industry in West Java Province evolves, so too must strategies for integrating and empowering smallholder farmers. By staying attuned to the changing needs and aspirations of farmers, as well as the broader socioeconomic and environmental context, businesses can ensure that their inclusive business models remain relevant and effective in the long run.

CONCLUSIONS AND RECOMMENDATIONS

Conclusions

In conclusion, an examination of inclusive business models in West Java Province’s coffee industry reveals a diverse landscape with varying degrees of social and

environmental integration. While all models seek to generate economic profits, the collector-driven model in Pangalengan prioritizes efficiency over direct farmer empowerment. On the other hand, the coffee shop and roastery model in Bogor demonstrates greater potential for social impact through direct relationships and collaboration. Garut's cooperative model highlights the possibilities and challenges of collective action. These findings underscore the importance of tailoring inclusive business strategies to the specific context and needs of each region, considering the unique characteristics of each model. By understanding these nuances, stakeholders can develop effective interventions to promote a more equitable, sustainable, and resilient coffee sector in West Java Province. This study's findings highlight the diverse landscape of inclusive business models in West Java Province's coffee industry and their varying impacts on smallholder farmers. To build upon this research and further advance our understanding of inclusivity in the coffee sector, we recommend several avenues for future research.

Recommendations

This study's findings highlight the diverse landscape of inclusive business models in West Java Province's coffee industry and their varying impacts on smallholder farmers. Building upon this research and further advancing our understanding of inclusivity in the coffee sector. Further research should also delve deeper into the perspectives of farmers themselves through in-depth interviews and surveys. Understanding their needs, challenges, and aspirations is crucial for designing truly inclusive business models. Finally, the role of technology, such as blockchain for traceability and digital platforms for market access, should be investigated to assess their potential to enhance transparency, efficiency, and, ultimately, the well-being of all stakeholders in the coffee value chain. By addressing these research gaps, we can contribute to a more comprehensive understanding of inclusive businesses in the coffee sector, paving the way for a more equitable, sustainable, and resilient industry.

ACKNOWLEDGMENT

The authors express their gratitude to the Directorate of Research and Innovation (DRI) at IPB University for funding this research through a Fundamental Research Grant for 2023-2024, with funding provided by LPDP.

Additionally, the authors extend their appreciation to the Bachelor Students from the Department of Management, Faculty of Economics and Management (Dwi Muharni Ardenis, Diajeng Siti Aqiilah Sundari, and Safira Aprilia Safitri) and School of Business (Argya Yokka Apriani and Raihan Nurhadi).

FUNDING STATEMENT: This research was funded by the Indonesian Endowment Fund for Education Agency (LPDP), through the Fundamental Research Grant of IPB University 2023-2024.

CONFLICTS OF INTEREST: The author declares no conflict of interest.

REFERENCES

- Aknesia L, Sedana M, Astawa IK. 2015. The influence of traditional coffee processing on the quality of green beans. *International Journal of Engineering Research and Technology* 4(05): 908-911.
- Apriyani AY, Indarawan D, Abdullah A. 2024. Analisis model bisnis inklusif pada rantai nilai kopi arabika di Java Frinsa Estate Pangalengan [Skripsi]. Bogor: Sekolah Bisnis, Institut Pertanian Bogor.
- Ardenis DM, Mulyati H, Sembiring IR. 2024. Analisis bisnis inklusif rantai nilai kopi robusta di Kabupaten Bogor [Skripsi]. Bogor: Departemen Manajemen Fakultas Ekonomi dan Manajemen, Institut Pertanian Bogor.
- Bacon CM. 2005. Confronting the coffee crisis: Fair trade, sustainable livelihoods and ecosystems in Mexico and Central America. *World Development* 33(3): 497-511. <https://doi.org/10.1016/j.worlddev.2004.10.002>
- Barham E, Weber J. 2012. The economic sustainability of coffee production: Recent evidence from the field and implications for farmers. *Annual Review of Resource Economics* 4(1): 137-161.
- Belachew T, Ersado L, Gunn G. 2015. Impacts of cooperative membership on technology adoption: Empirical evidence from Ethiopia. *Food Policy* 50: 80-91.
- Clay D, Bro A, Church R, Ortega D, Bizoza A. 2018. Farmer incentives and value chain governance: Critical elements to sustainable growth in Rwanda's coffee sector. *Journal of Rural Studies* 63. <https://doi.org/10.1016/j>

jrurstud.2018.06.007

- Daviron B, Ponte S. 2005. *The Coffee Paradox: Global Markets, Commodity Trade and The Elusive Promise of Development*. Ponte London and New York: Zed Books. <https://doi.org/10.5040/9781350222984>
- Dowdall G. 2012. The role of cooperatives in poverty reduction: A comparative perspective. *Journal of Rural Studies* 28(4): 420-431.
- Fadhil H, Sedana M, Astawa IK. 2018. Value chain analysis of coffee beans: A case study of Kintamani Coffee, Bali, Indonesia. *International Journal of Supply Chain Management* 7(5): 326-333.
- Fadhil H, Sedana M, Astawa IK. 2019. The influence of cooperative membership on farmers' income: A case study of coffee farmers in Kintamani, Bali, Indonesia. *International Journal of Cooperative Management* 12(1): 1-10.
- Fafchamps M, Minten B. 2001. Property rights in a flea market economy. *Economic Development and Cultural Change* 49(2): 229-267. <https://doi.org/10.1086/452501>
- Fairtrade Foundation. 2023. The coffee industry. <https://www.fairtrade.org.uk/media-centre/news/be-fair-with-your-next-cup-of-coffee/>
- Fantashir F, Yulia T. 2023. Value chain map of coffee commodities in Central Aceh regency in the implementation of inclusive business model. *Buletin Penelitian Sosial Ekonomi Pertanian Fakultas Pertanian Universitas Haluoleo* 25. 133-142. <https://doi.org/10.37149/bpsosek.v25i2.931>
- Farahani A, de Faria MT, Rehman KMA. 2021. Inclusive business models in agricultural value chains: A systematic review and research agenda. *Journal of Cleaner Production* 293: 126102. <https://doi.org/10.1016/j.jclepro.2021.126102>
- Gathura M. 2013. Smallholder farmers' access to markets: Lessons from Kenya. *International Journal of Agricultural Sustainability* 11(1): 58-70.
- Goldsmith PD, Gunawan D, Hidayat A. 2018. Inclusive agribusiness in Indonesia: Linking smallholders to modern value chains. *Journal of Agribusiness in Developing and Emerging Economies* 8(1): 20-40.
- Hinde O, Beyera G, Hailu H, Limenih, Ayana A. 2023. Socio-economic Characteristics and Their effect on smallholder farmers' decisions to participate in a communal land restoration project in Central Ethiopia. *TERRA: Journal of Land Restoration* 6(1): 1-11. <https://doi.org/10.31186/terra.6.1.1-11>
- ICO. 2023. Coffee market report. <https://www.ico.org/>
- Indrawan D, Rich KM, van Horne P, Daryanto A, Hogeveen H. 2018. Linking supply chain governance and biosecurity in the context of HPAI control in Western Java: a value chain perspective. *Frontiers in Veterinary Science* 5:94. <https://doi.org/10.3389/fvets.2018.00094>
- Joyce A, Paquin RL. 2016. The triple layered business model canvas: a tool to design more sustainable business models. *Journal Of Cleaner Production* 135(127): 1474-1486. <https://doi.org/10.1016/j.jclepro.2016.06.067>
- Kaplinsky R, Morris M. 2000. *A Handbook For Value Chain Research*. UK: Institute of Development Studies, University of Sussex.
- Kolk A. 2016. The social responsibility of international business: From ethics and the environment to CSR and sustainable development. *Journal of World Business* 51(1): 23-34. <https://doi.org/10.1016/j.jwb.2015.08.010>
- Lei H, Li F, Liu C, Liu Y. 2023. Cognitive load and economic decision making of smallholder farmers in China: an experimental study. *Current Psychology* 43: 465-480. <https://doi.org/10.1007/s12144-023-04288-8>
- Lubis AH. 2017. Inclusive business models in the Arabica coffee sector: A case study of Bondowoso District, East Java. (Unpublished master's thesis). Bogor: Bogor Agricultural University.
- Lundy M, Gottret V, Cifuentes W, Ostertag CF, Best R. 2014. The Link Methodology: A participatory guide to business model innovation. International Center for Tropical Agriculture (CIAT).
- Lundy M, Becx G, Zamierowski N, Amrein A, Hurtado J, Mosquera E, Erika E, Rodriguez-Camayo, F. 2014. LINK methodology: A participatory guide to business models that link smallholders to markets.
- Mair J, Marti I, Ventresca M. 2012. Building inclusive markets in rural Bangladesh: How intermediaries work institutional voids. *Academy of Management Journal* 55(4): 819-850. <https://doi.org/10.5465/amj.2010.0627>
- Mapiemfu-Lamaré F, van Wijk MT, Smeets E. 2017. The role of farmers' organizations in agricultural innovation systems: Evidence from Cameroon. *NJAS - Wageningen Journal of Life Sciences*

- 83: 33-43.
- Michelson HC, Rehman KMA, Jaffee S. 2013. Smallholder coffee farmers and inclusive value chains: Pathways out of poverty in Chiapas, Mexico. *World Development* 44: 185-196.
- Minh TTT, van Wijk MT, Oosting SJ. 2016. Determinants of collective action among smallholder farmers: Evidence from Vietnam. *Land Use Policy* 50: 429-438.
- Minten B, Reardon T, Sutradhar R. 2010. Food prices and modern retail: The case of Delhi. *World Development* 38(12): 1775-1787. <https://doi.org/10.1016/j.worlddev.2010.04.002>
- Mulyati H, Indrawan D. 2021. Inclusive business models in coffee value chain: Comparing practical evidence between East Java and North Sumatera. *Jurnal Manajemen dan Agribisnis* 18(2): 122–130. <https://doi.org/10.17358/jma.18.2.122>
- Osterwalder A, Pigneur Y. 2010. *Business Model Generation: A Handbook For Visionaries, Game Changers, and Challengers*. New Jersey: John Wiley & Sons.
- Peluso, Mariano. 2023. Navigating the Coffee Business Landscape: Challenges and Adaptation Strategies in a Changing World. *Proceedings* 89(1): 22. <https://doi.org/10.3390/ICC2023-14825>
- Permatasari DA. 2018. Inclusive business models in the Arabica coffee sector: A case study of Mandailing Natal District, North Sumatra. (Unpublished master's thesis). Bogor Agricultural University, Indonesia.
- Ramadhani W, Rahmat A, Mutolib A, Astuti RN, Sutrisno E, Amilia E, Indriyani I. 2024. Soil chemical status under natural forest, coffee agroforestry and coffee monoculture at Air Hitam Subdistrict, West Lampung, Indonesia. *E3S Web of Conferences* 482. <https://doi.org/10.1051/e3sconf/202448201007>
- Reed D. 2009. What do corporations have to do with Fair Trade? Positive and normative analysis from a value chain perspective. *Journal of Business Ethics* 86: 3-26. <https://doi.org/10.1007/s10551-008-9757-5>
- Safitri SA, Mulyati H, Sembiring IR. 2024. Analisis bisnis inklusif rantai nilai kopi arabika di Lembang, Kabupaten Bandung Barat [Skripsi]. Bogor: Departemen Manajemen Fakultas Ekonomi dan Manajemen, Institut Pertanian Bogor.
- Sundari DSA, Mulyati H, Wijaya NH. 2024. Analisis inklusivitas petani pada rantai nilai kopi arabika di Kabupaten Garut [Skripsi]. Bogor: Departemen Manajemen Fakultas Ekonomi dan Manajemen, Institut Pertanian Bogor.
- Scoones I et al. 2018. Sustainable intensification in Africa: What is the evidence? *Environment and Development Economics* 23(3): 232-254.
- Sedana M, Astawa IKR. 2016. The potential of coffee agribusiness for rural development in Bali, Indonesia. *International Journal of Economics and Financial Issues* 6(S7):118-124.
- Sedana MC, Astawa IKR. 2019. The role of farmer organizations in improving the livelihoods of smallholder coffee farmers in Bali, Indonesia. *Journal of Rural Studies* 68: 124-133.
- Sopov M, Sopova E, Kljajić M. 2014. Business model canvas—a tool for business model innovation. *Industrija* 42(3): 109-124.
- Suryana A, Harianto H, Syaukat Y, Harmini H. 2023. The value chain governance of robusta coffee in Bogor Regency. *Jurnal Manajemen & Agribisnis* 20(2): 175-187. <https://doi.org/10.17358/jma.20.2.175>
- Vicol M, Zainal AMS, Rusli RM, Shaffril HAM, Mohd. Salleh MU. 2018. The potential of inclusive business models in enhancing sustainability of palm oil production in Malaysia. *Journal of Cleaner Production* 172: 4274-4288.
- Williamson OE. 2002. The theory of the firm as governance structure: From choice to contract. *Journal of Economic Perspectives* 16(3):171-195. <https://doi.org/10.1257/089533002760278776>
- Woodhill J. 2016. *Inclusive Business And The Sustainable Development Goals: Building Mutually Beneficial Partnerships For Poverty Reduction*. UK: Business Fights Poverty.