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Value Chain Analysis and Strategies for Increasing the Competitiveness of Local Agricultural Products in West Lombok Through a Sustainable Agribusiness Approach

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ABSTRACT

The agricultural sector plays a strategic role in regional economic development through food provision, job creation, and increasing rural incomes. West Lombok Regency is a region in West Nusa Tenggara Province with significant agricultural potential, boasting a variety of superior commodities, including food crops, horticulture, and plantation commodities. However, this potential still faces various challenges in developing the competitiveness of local agricultural products, particularly in the value chain, which encompasses production, post-harvest, processing, distribution, and marketing. Limited technology, low product added value, lengthy marketing channels, and farmers' weak bargaining power are factors that can hinder the improvement of agricultural business actors' welfare. This study aims to analyze the value chain of local agricultural products in West Lombok and formulate strategies for increasing competitiveness through a sustainable agribusiness approach. The research method used is a literature review with a qualitative descriptive approach. Research data were obtained from various scientific sources, such as national and international journal articles, reports from the Central Statistics Agency (BPS), publications from the Ministry of Agriculture, and literature related to agribusiness development and the agricultural value chain. The analysis was conducted by identifying primary and supporting activities within the value chain, then assessing them based on aspects of efficiency, added value, and opportunities for developing local agricultural products. The study results indicate that increasing the competitiveness of local agricultural products is not only determined by increased production productivity, but also influenced by the ability of business actors to create added value through processing, packaging, branding, and expanding market access. Strengthening farmer institutions, utilizing digital technology, developing local-scale agro-industries, and enhancing partnerships between farmers, the government, and the private sector are important strategies in strengthening the agricultural value chain. A sustainable agribusiness approach is needed so that the development of local agricultural products can increase farmer incomes while supporting regional food security.

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INTRODUCTION

The agricultural sector plays a strategic role in regional economic development, particularly in rural areas where the majority of the population still relies on agriculture for their livelihoods. Agriculture serves not only as a food supplier but also as a source of income, employment, and a driver of local economic activity. From a sustainable development perspective, the agricultural sector is strongly linked to economic, social, and environmental aspects, so its development is directed not only at increasing production but also at improving efficiency, creating added value, and strengthening the competitiveness of agricultural products (Pretty et al., 2018). The

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transformation of modern agricultural systems requires a shift in approach from a production-oriented approach to a value chain-based approach that can increase economic benefits for all agricultural business actors.

Indonesia, as an agricultural country, possesses a variety of agricultural resources with the potential to be developed into superior regional products. The diversity of agro-ecosystems, geographical conditions, and the richness of local commodities provide significant opportunities for region-based agribusiness development. However, this potential still faces various obstacles, particularly the limited ability of farmers to derive greater economic value from their products. Most farmers still sell their products as raw materials with a low level of processing, so that added value is primarily obtained by business actors at the processing, distribution, and marketing stages (Kaplinsky & Morris, 2001). This situation indicates that improving farmer welfare depends not only on increased productivity but also on the ability to strengthen their position within the value chain.

The value chain concept explains the entire series of economic activities that occur from the provision of inputs, through the production process, post-harvest processing, distribution, until the product is received by the end consumer. The value chain approach allows for analysis of how economic value is created and how profits are distributed among the actors involved in a production system (Porter, 1985). In the agricultural sector, this approach is important due to the perishable nature of agricultural products, their dependence on seasons, and the involvement of many actors in the marketing process. Value chain efficiency can increase competitiveness by reducing transaction costs, improving product quality, and creating stronger market relationships between producers and consumers (Trienekens, 2011).

West Lombok Regency is one of the most promising agricultural regions in West Nusa Tenggara Province, boasting a diverse range of commodities, including food crops, horticulture, fruits, and plantation commodities. These resource potentials offer opportunities for the development of local agribusinesses based on superior regional commodities. However, the development of the agricultural sector at the local level still faces challenges such as limited market access, low product processing capacity, weak farmer institutions, and limited information on market needs. These challenges prevent most farmers from achieving optimal economic benefits from their production activities.

One factor contributing to the low competitiveness of local agricultural products is weak integration between actors in the value chain. Farmers, as primary producers, often have a weak bargaining position due to limited capital, technology, access to information, and marketing networks. Dependence on intermediaries results in product prices being largely determined by market mechanisms, which do not fully benefit farmers. Studies on the agricultural value chain indicate that strengthening relationships between farmers, processors, distributors, and markets is a crucial factor in increasing efficiency and equitable distribution of economic benefits within the agribusiness system (Webber & Labaste, 2010).

In addition to strengthening the marketing chain, increasing the competitiveness of agricultural products also requires developing added value through agricultural processing activities. Processed agricultural products have a greater opportunity to increase economic value, extend shelf life, reduce yield losses, and reach a wider market segment. Developing a local commodity-based agro-industry is a crucial strategy because it connects the primary agricultural sector with the processing industry, creating new business opportunities in rural areas (Reardon et al., 2009).

The development of digital technology also provides opportunities to strengthen the agribusiness system by increasing access to information, e-marketing, and streamlining supply chain coordination. Agricultural digitalization enables farmers and small businesses to obtain price information, expand marketing networks, and reduce dependence on traditional distribution

channels. The use of digital technology in the agricultural sector has become a crucial strategy for increasing farmer economic inclusion and strengthening producer-market relationships (Klerkx et al., 2019).

In facing the challenges of modern agricultural development, a sustainable agribusiness approach is becoming increasingly important. A sustainable agribusiness system not only considers increasing economic profits but also takes into account environmental sustainability and the social well-being of communities. This approach emphasizes that increased productivity must go hand in hand with responsible natural resource management and strengthening the capacity of local communities (FAO, 2018). Therefore, strategies for developing local agricultural products need to be directed at strengthening the entire value chain, from production to marketing.

Value chain analysis is a crucial tool for identifying the various stages that generate the greatest economic value and the factors that hinder agricultural product development. This approach reveals patterns of relationships between actors, the distribution of profit margins, the efficiency level of each stage, and opportunities for strategic intervention. The results of this analysis can serve as the basis for formulating strategies to increase the competitiveness of agricultural products based on local potential.

Based on this description, research on value chain analysis and strategies to improve the competitiveness of local agricultural products in West Lombok Regency is crucial. This research is expected to provide an overview of the value chain structure of local agricultural commodities, identify various obstacles affecting product competitiveness, and formulate sustainable agribusiness development strategies that can increase farmer incomes, strengthen the regional economy, and support regional food security.

METHODS

This research employed a literature review with a qualitative descriptive approach. This method was chosen because the research aimed to analyze various concepts, research findings, and empirical information regarding the agricultural value chain and strategies for increasing the competitiveness of local agricultural products. Through this literature review, the research can obtain a more comprehensive picture of the factors influencing regional agribusiness development.

The data used in this study is secondary data obtained from various scientific sources and trusted institutions. These sources include national and international journal articles discussing agricultural value chains, agribusiness competitiveness, local product development, and sustainable agricultural development. Furthermore, this study utilizes supporting data from publications by the Central Statistics Agency (BPS), the Ministry of Agriculture of the Republic of Indonesia, local government reports, and international literature from organizations such as the Food and Agriculture Organization (FAO).

The literature collection process was conducted through several scientific databases, including Scopus, ScienceDirect, SpringerLink, and Google Scholar. Keywords used in the literature search included agricultural value chain, local agricultural product competitiveness, agribusiness development, sustainable agriculture, farmer income improvement, and agricultural marketing strategy. The obtained literature was then selected based on topic suitability, source quality, and information recency.

The research was conducted through several systematic processes. The first stage identified issues related to the low competitiveness of local agricultural products and the need to strengthen the value chain. The second stage collected literature relevant to the research topic. The third stage selected sources based on inclusion criteria, namely literature discussing the agricultural value chain, marketing strategies, value-added enhancement, and sustainable agribusiness development .

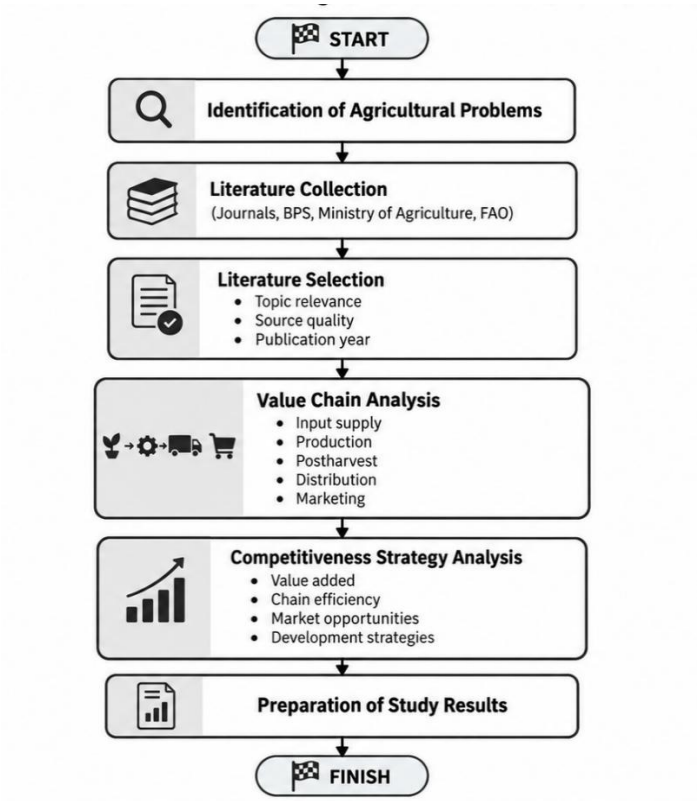


Figure 1. Flowchart of Local Agricultural Product Value Chain Analysis Research

Data analysis was conducted using content analysis, identifying key themes from the various literature reviewed. The analysis focused on several key aspects: the structure of the agricultural product value chain, factors inhibiting competitiveness, opportunities for increasing added value, and strategies for developing sustainable agribusiness. The study results were then synthesized to generate recommendations for strategies to improve the competitiveness of local agricultural products in West Lombok.

Through this approach, this research is expected to provide an academic overview of the condition of the local agricultural value chain and provide strategic recommendations for the development of more competitive, high-value-added, and sustainable regional agricultural products.

RESULTS AND DISCUSSION

The Potential of West Lombok's Local Agricultural Products in Supporting the Regional Economy

West Lombok Regency has significant agricultural potential as a driver of the regional economy. The diversity of agro-ecological conditions allows for the development of various agricultural commodities, such as food crops, horticulture, and plantations. This potential presents opportunities for the development of local agricultural products with high economic value when managed through an integrated agribusiness system.

However, the magnitude of production potential does not always translate directly into improved farmer welfare. Most farmers still carry out production activities at the upstream level, while other business actors still handle value-added processes such as processing, packaging, and marketing. This situation results in suboptimal profit distribution within the value chain.

Developing local agricultural products requires an approach that connects all agribusiness activities, from providing production inputs to marketing to end consumers. The value chain approach is a crucial strategy because it identifies the stages that contribute to improving product quality and economic value .

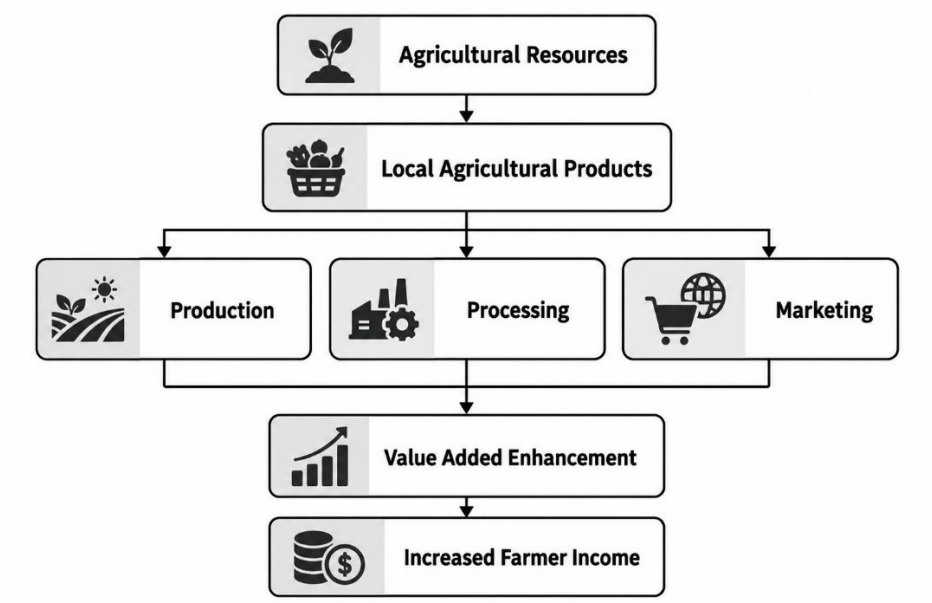


Figure 1. Local Agricultural Product Development Model Based on Value Chain
Source: Adapted from Porter's Value Chain concept (1985)

Figure 1 shows that the development of local agricultural products does not solely depend on production activities at the farmer level, but rather is a system consisting of several interrelated stages. The production stage produces basic agricultural materials, while the processing stage plays a role in increasing economic value by transforming the product into a more valuable form. Furthermore, marketing activities determine the product's ability to reach consumers and expand the market.

In the context of West Lombok, strengthening each stage of the value chain is a crucial factor in increasing the competitiveness of local agricultural products. If farmers only act as raw material producers, the greatest economic value tends to reside with distribution and processing actors. Conversely, if farmers and business groups are able to participate in the processing and marketing process, the added value achieved will increase.

Value Chain Analysis of Local Agricultural Products in West Lombok

The agricultural value chain describes the relationships between activities, from input provision through production, post-harvest processing, distribution, and marketing. Value chain analysis is used to understand how an agricultural product creates economic value at each stage.

At the production level, farmers play a key role in producing agricultural commodities. Factors such as seed quality, use of cultivation technology, fertilizer availability, and farm management skills significantly determine the quality of the produce. However, weaknesses at the production stage can impact the competitiveness of products at later stages.

The post-harvest stage is crucial because yield losses and quality degradation often occur during this phase. Using appropriate storage and processing technologies can reduce product loss and increase sales value.

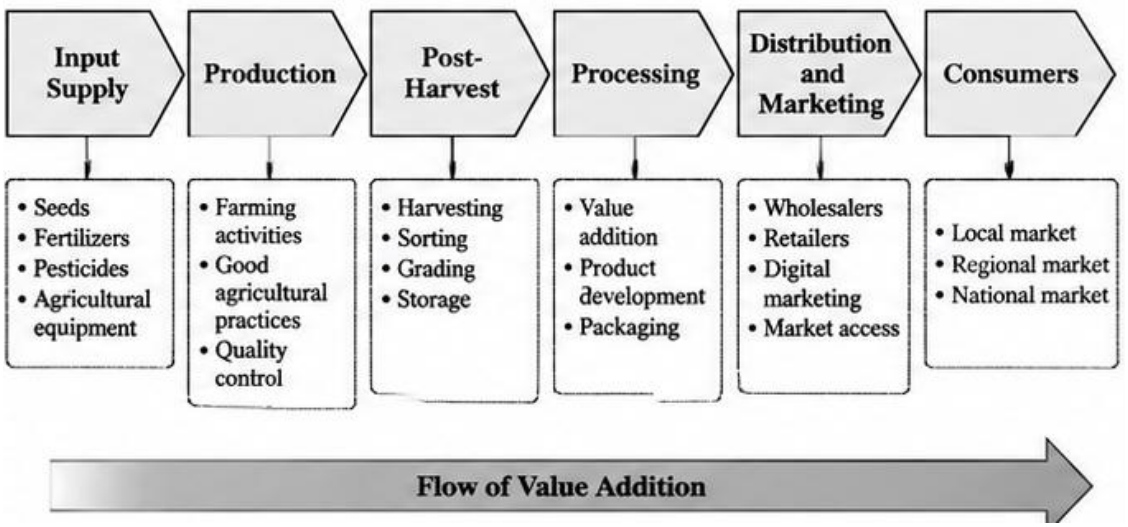


Figure 2. Structure of the Local Agricultural Product Value Chain
Source: Adapted from Kaplinsky and Morris (2001)

Figure 2 illustrates that the agricultural value chain is an interconnected process from upstream to downstream. Each actor has a distinct role in creating product value. Input providers play a role in meeting production needs, farmers produce primary commodities, and processing and distribution actors play a role in increasing economic value and expanding market access.

In the local agricultural system of West Lombok, the success of the value chain is heavily influenced by coordination between actors. Weak relationships between farmers, processors, and markets result in less efficient distribution processes. Therefore, institutional strengthening is needed to ensure that each actor in the value chain receives a more proportional share of economic benefits.

Problems and Obstacles to the Competitiveness of Local Agricultural Products

Developing the competitiveness of local agricultural products still faces various structural obstacles. The main problems include technological limitations, low processing capacity, limited market access, and weak farmer institutions.

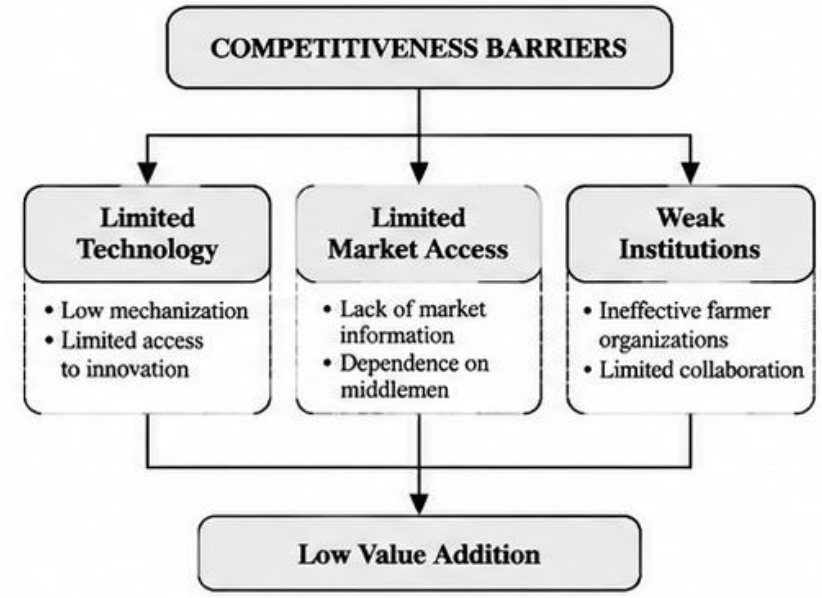


Figure 3. Factors Inhibiting the Competitiveness of Local Agricultural Products

Figure 3 explains that the low competitiveness of local agricultural products is caused by several interrelated factors. Limited technology leads to suboptimal production and processing processes. Meanwhile, limited market access makes it difficult for farmers to obtain price information and marketing opportunities.

Weak institutions also contribute to farmers' low bargaining power, as most still market individually. Therefore, strategies to increase competitiveness must be comprehensive, addressing every component that acts as a barrier in the value chain.

Strategy to Increase Competitiveness of Local Agricultural Products through a Sustainable Agribusiness Approach

Improving the competitiveness of local agricultural products in West Lombok can be achieved not only through increased production but also through strengthening the comprehensive agribusiness system. Agricultural product competitiveness is greatly influenced by the ability of business actors to produce quality products, create added value, expand market access, and build strong relationships between actors in the value chain.

A sustainable agribusiness approach is a crucial strategy because it integrates economic, social, and environmental aspects into agricultural sector development. Economically, this strategy aims to increase farmer incomes through increased productivity and product added value. Socially, agribusiness development requires strengthening farmer institutions and enhancing human resource capacity. Meanwhile, environmental aspects relate to the implementation of agricultural practices that maintain the sustainability of natural resources.

One of the main strategies for increasing competitiveness is the development of processed agricultural products. Agricultural products sold only as fresh produce have relatively low economic value and are vulnerable to price fluctuations. Through processing, products can have a longer shelf life, better quality, and a higher sales value. The development of household-scale agro-industries and micro-enterprises can provide opportunities for local communities to increase income.

In addition to product processing, marketing strategy is also a crucial factor in strengthening competitiveness. Advances in digital technology provide opportunities for local agricultural businesses to expand their markets through various digital platforms. Social media-based marketing, e *-commerce* , and market information systems can help local products reach a wider consumer base.

Strengthening farmer institutions is also a crucial part of the strategy to increase competitiveness. Farmer groups, cooperatives, and farmer economic institutions can serve as platforms to increase production capacity, strengthen bargaining power, and facilitate access to technology and markets. Farmers who are members of strong institutions have a greater opportunity to achieve better profits than those operating individually.



Figure 4. Strategy to Increase the Competitiveness of Local Agricultural Products
Source: Adapted from the concept of agribusiness value chain development (Kaplinsky & Morris, 2001; FAO, 2014)

Figure 4 shows that increasing the competitiveness of local agricultural products is a process consisting of several interrelated stages. Improving product quality is the primary foundation

because consumers increasingly consider aspects of quality, food safety, and product consistency. Products with good quality are easier to develop through processing and product identification.

Processing and value-added processes are crucial for transforming primary agricultural products into products with higher economic value. For example, agricultural commodities can be developed into regionally processed products with unique characteristics. This strategy can reduce farmers' dependence on raw material sales.

Furthermore, digital marketing offers opportunities to expand market reach. Local agricultural products from West Lombok can be marketed not only locally but also have the potential to enter regional and national markets through digital marketing strategies. Therefore, the integration of quality improvement, processing, and marketing is a key factor in building the competitiveness of local agricultural products.

Sustainable Agribusiness Development Model for Local Agricultural Products in West Lombok

Sustainable agribusiness development requires a model that connects all actors in the agricultural system. Farmers cannot stand alone in facing the challenges of an increasingly competitive market, necessitating collaboration between the government, research institutions, the private sector, and communities.

Local governments play a crucial role in creating a supportive environment for the development of local agricultural products through policies, infrastructure provision, and farmer empowerment programs. Government support can include the development of post-harvest facilities, strengthening farmer institutions, entrepreneurship training, and promoting superior regional products.

Universities and research institutions play a role in providing technological innovation and knowledge-based support. Technology transfer is a crucial factor in enabling farmers to increase production efficiency and produce products that meet market needs.

The private sector also plays a strategic role in opening market access and building partnerships with farmers. Collaboration between farmers and processing industries can create more stable supply chains and provide market certainty for local agricultural products.

In addition to economic aspects, sustainable agribusiness development must consider environmental aspects. The use of environmentally friendly technologies, efficient use of resources, and agricultural waste management are crucial for maintaining the sustainability of the agricultural sector.

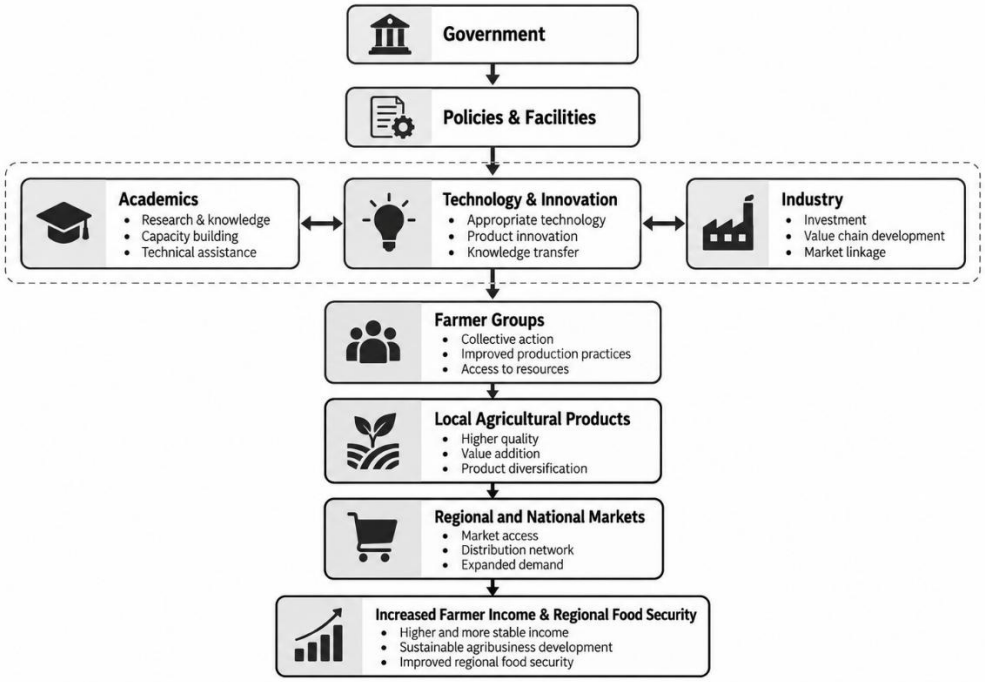


Figure 5. Collaborative Model for Sustainable Agribusiness Development in West Lombok
Source: Adaptation of the concept of sustainable agribusiness systems (FAO, 2022)

Figure 5 illustrates that sustainable agribusiness development requires collaborative relationships between stakeholders. The government plays a role in providing regulations and supporting facilities, while academics play a role in generating technological innovation and improving human resource capacity. Industry plays a role in processing and providing market access, while farmer groups are the primary actors in producing agricultural products.

This collaborative model demonstrates that improving the competitiveness of local agricultural products cannot be achieved solely by increasing production at the farm level. A system is needed that integrates production, technology, processing, and marketing.

In the context of West Lombok, implementing this model can be a strategy for developing local agricultural products into superior regional commodities. Through collaboration between stakeholders, farmers have greater opportunities to gain added value, increase income, and strengthen their position in the agricultural value chain.

CONCLUSION

Value chain analysis shows that local agricultural products in West Lombok have significant potential to be developed as drivers of the regional economy. However, this potential still faces various obstacles, particularly in processing, marketing, technology, and farmer institutions. The low added value of products means that farmers receive less than optimal economic benefits.

Improving the competitiveness of local agricultural products requires not only increased productivity but also strengthening all stages of the value chain, from input provision and production to post-harvest, processing, distribution, and marketing. Processed product development, quality improvement, marketing digitalization, and institutional strengthening are key strategies for enhancing the market position of local products.

A sustainable agribusiness approach is a relevant strategy to support agricultural development in West Lombok. Through collaboration between the government, academics, the private sector, and farmers, local agricultural systems can become more productive, competitive, and sustainable. This strategy not only increases product competitiveness but also contributes to increasing farmer incomes and strengthening regional food security.

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