

A Study on the Competitiveness of Group-Based Enterprises in “Desa Mandiri Anggur Merah” on Sumba Island, East Nusa Tenggara Province

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ABSTRACT

This study examines the competitiveness of group-based enterprises in Desa Mandiri Anggur Merah in the Sumba Region, East Nusa Tenggara Province, Indonesia. Shift Share Analysis and the Location Quotient (LQ) method were applied to identify leading commodities among group enterprises. The findings indicate that the Sumba region has comparative advantages primarily in the livestock sector and food crop production. Livestock enterprise groups are predominantly concentrated in East Sumba, where cattle farming demonstrates high competitiveness, and Southwest Sumba, where pig farming emerges as the leading commodity. In 2012, East Sumba recorded the highest number of livestock groups (203 groups), followed by Southwest Sumba (94 groups), West Sumba (44 groups), and Central Sumba (22 groups). Based on empirical evidence and analytical results, a cluster-based development approach is proposed.

INTRODUCTION

Small and medium-sized enterprises (SMEs) play a strategic role in regional economic development; however, they commonly face structural weaknesses, particularly in administrative management and organizational governance. One of the most persistent constraints is limited access to capital, although capital alone does not fully determine SME growth. Data from the Central Statistics Agency of Indonesia (Badan Pusat Statistik – BPS) indicate that SMEs encounter multiple challenges, including inadequate capital, marketing constraints, intense business competition, limited access to raw materials, insufficient production technology and technical skills, weak managerial capacity, limited knowledge of financial and accounting management, and mismatches between business location allocation and regional characteristics.

The Desa Mandiri Anggur Merah (Independent Anggur Merah Village) Program represents a policy instrument designed to accelerate the achievement of the Regional Medium-Term Development Plan (RPJMD) of East Nusa Tenggara Province for the 2009–2013 period. The program adopts an integrated territorial development approach and is strategically aimed at: (1) supporting the implementation of the province's four development commitments to increase per capita income, reduce poverty – which remained at 20.48% as of September 2011 – and enhance labor productivity in the agricultural sector; (2) operationalizing the eight regional development agendas and four core development commitments of East Nusa Tenggara Province; and (3) strengthening rural development, given that the majority of the workforce is employed in agriculture.

The implementation of the Desa Mandiri Anggur Merah Program involves the allocation of fresh funds amounting to IDR 250 million per village, intended to promote productive and self-reliant rural communities through increased income and improved living standards. To ensure effectiveness, the program emphasizes participatory, transparent, and integrated development processes as a manifestation of economic democracy and community empowerment.

The program has been implemented progressively. In 2011, it covered 287 villages/sub-districts involving 3,222 business groups; in 2012, it expanded to 298 villages/sub-districts with 3,058 business groups; and in 2013, implementation was planned for 306 villages/sub-districts. The supported business activities were classified into seven categories: livestock, agriculture, cooperatives and savings-and-loan enterprises, fisheries, plantations, small-scale industries, and trade and services.

Despite its broad coverage, the selection of business activities by community groups has largely been driven by individual preferences rather than systematic assessments of local resource potential or regional comparative advantages. Moreover, limited consideration of market demand has resulted in suboptimal performance among several business groups. This condition contradicts one of the program's core objectives, namely the development of region-specific leading commodities.

Based on this empirical gap, a comprehensive study on the competitiveness of group-based enterprises in Desa/Kelurahan Mandiri Anggur Merah on Sumba Island is required.

LITERATURE REVIEW

Competitiveness of Group-Based Enterprises

The competitiveness of group-based enterprises refers to the collective capacity of organized business groups—such as micro, small, and medium enterprises (MSMEs), cooperatives, or business clusters—to produce goods or services that are able to compete sustainably in the market through efficiency, innovation, quality enhancement, and effective marketing strategies. Competitiveness is not solely determined by individual entrepreneurial capability but is also shaped by inter-member synergy, role specialization, and the efficient management of shared resources.

Langoday (2011), drawing on Porter (1985), argues that competitiveness emerges from competitive advantages achieved through cost leadership, product differentiation, or a focused market strategy. Within group-based enterprises, such competitive advantages can be reinforced through collaborative production processes, joint procurement of inputs, and collective marketing mechanisms. Rudianto (2009) conceptualizes competitiveness across three analytical levels: micro (firms or business groups), meso (industries or clusters), and macro (regions or nations). In this framework, the competitiveness of group-based enterprises operates primarily at the micro-meso level, where collaboration and institutional support play a critical role in performance enhancement.

Concept of Leading Commodities

Leading commodities are defined as products or economic sectors that possess relative advantages over other commodities, based on resource availability, productivity, value addition, and market potential. Such commodities often function as key drivers of regional economic growth and development. According to Tarigan (2014), the determination of leading commodities is influenced by both comparative advantages such as the availability of natural resources and labor and competitive advantages, including efficiency, technological capability, and market access. Commodities that rely solely on comparative advantages may fail to achieve high competitiveness if they are not processed efficiently or do not generate sufficient value added. The competitiveness of leading commodities reflects their capacity to survive and expand amid interregional and global competition, as indicated by product quality, competitive pricing, supply continuity, and compliance with quality standards (Porter, 1990).

Economic Base Theory

Export-based regional economic growth theory explains that a region is considered a base in the sense that its growth generates and determines the overall development of the region, while other activities (non-base activities) are consequences of this overall development (Hoover, 1984, cited in Prasetyo Soepono, 2001). According to this theory, all regional growth is determined by the base sector, whereas non-base sectors primarily serve industries within the base sector as well as the workers and their families employed in the base sector (Benvindal-Val, 1991, cited in Prasetyo Soepono, 2001). Export-based growth theory, or the economic base model, is grounded in the idea that a local economy must increase inflows of money in order to grow, and that the most effective way to increase such inflows is by expanding exports (Blair, 1991; Hoover, 1984, cited in Prasetyo Soepono, 2001).

The central concept of economic base theory is that export activities function as the engine of growth. Whether a region grows or stagnates, and the speed of its growth, are determined by its performance as an exporter to other regions and/or international markets (Benvindal-Val, 1991, cited in Prasetyo Soepono, 2001). Lincoln Arsyad (1999) also emphasizes that economic base theory identifies external demand for goods and services as the primary determinant of regional economic growth. The expansion of industries that utilize local resources including labor and raw materials for export purposes generates regional wealth and employment opportunities (job creation).

Therefore, development planning must be conducted carefully, as each region possesses distinct characteristics in terms of economic potential sectors, economic growth rates, population dynamics, and socio-cultural conditions. The distribution of resource potential across regions is neither uniform nor evenly distributed; consequently, regional growth trajectories also differ. To achieve rapid growth, a region must identify and develop one or more regional growth centers that possess the strongest potential. When such regions become economically strong, growth spillover effects may occur, benefiting weaker regions. These spillover effects (trickle-down effects) may take the form of stronger regions absorbing resources from weaker ones or weaker regions producing complementary goods to those of stronger regions (Sihotang, 1991).

Economic sectors can also be classified based on their relative advantages into base and non-base sectors. According to Glasson (1977), base activities are those that export goods and services to consumers outside the boundaries of the local economy. Non-base activities, in contrast, provide goods and services to residents within the local economic boundaries. These activities do not engage in exports; therefore, their market scope is primarily local in nature.

Competitiveness and Competitive Strategies

A firm is considered to possess a competitive advantage when it has attributes that exceed those of its competitors in attracting customers and defending itself against competitive pressures. Sources of competitive advantage may include superior products, excellent service quality, lower prices, strategic location, appropriate technology, product attributes aligned with consumer preferences, faster introduction of new products, well-established brands and reputations, and the ability to deliver greater value relative to the price paid by consumers (Bambang Hariadi, 2003).

One strategic approach that remains underutilized at the regional level is the enhancement of competitiveness. In business economics, competitiveness refers to the strategic position of a firm relative to other firms competing for the same market or customer base. Firms continuously compete for market share by employing various strategies. To achieve competitiveness, Michael E. Porter (1985) proposes three generic strategies: cost leadership, differentiation, and focus collectively referred to as competitive strategies.

The first strategy emphasizes capturing market share through lower prices by reducing production costs; the second focuses on offering unique features or superior quality not available from competitors, thereby attracting buyers; and the third concentrates on serving specific market segments through a combination of cost leadership and differentiation strategies. Although Porter's framework has been criticized for its emphasis on supply-side factors (Dobson, Starkey, & Richards, 2004), it remains relevant and useful in accelerating development in less-developed regions of Indonesia. While Porter originally formulated his ideas within a profit-oriented business context, his framework can be adapted to pursue public gains, particularly in improving regional welfare.

Porter's concepts can be translated into strategies aimed at reducing costs, improving the quality of products and services, and maintaining existing market segments. This perspective assumes that a lagging region must adopt an active and proactive stance, while other regions are considered passive and not dominant forces in determining competitiveness. Consequently, interregional cooperation (Thompson & Perry, 2006; Agranoff, 1966) should be considered an alternative source of strength in enhancing competitiveness. Despite facing criticism, interregional cooperation has delivered tangible benefits for collaborating local governments, particularly in cost reduction – one of the strategies emphasized by Porter. Recognizing the importance of competitiveness, Michael E. Porter (1990) further developed this concept into a framework of national and regional competitiveness. Porter defines competitiveness as a nation's ability to create sustainable value through its firms while maintaining a high standard of living for its citizens. National or regional competitiveness can only be achieved when it is preceded by firm-level competitiveness, which in turn is determined by the competitiveness of the products produced (Langoday, T. O., 2011).

METHODOLOGY

Study Area

The study was conducted in group-based enterprises located in Independent Anggur Merah Villages/Sub-districts across the Sumba region, comprising East Sumba Regency, Central Sumba Regency, West Sumba Regency, and Southwest Sumba Regency. The research activities were carried out from March to August 2013.

Study Target

The target of this study was group-based enterprises operating under the Independent Anggur Merah Village/Sub-district Program. Considering that by 2013 the program had been implemented for three (3) consecutive years, this study focuses specifically on Independent Anggur Merah Villages/Sub-districts established in 2011. The rationale for selecting the 2011 implementation year is that a three-year implementation period allows for the observation of tangible outputs and measurable enterprise development outcomes.

Data Collection

The study population consisted of all Independent Anggur Merah Villages/Sub-districts on Sumba Island that received fresh funding in 2011. The analysis focused on seven (7) types of group-based enterprises, namely: livestock, agriculture, cooperatives and savings-and-loans, fisheries, plantations, small-scale industries, and trade and services.

Given that the Anggur Merah Village Independence Program was implemented over a three-year period (2011–2013), comparative analysis was conducted for selected aspects relevant to product competitiveness and regional competitiveness, in accordance with the objectives of the study.

Primary data were obtained from periodic reports submitted by Anggur Merah community groups. To ensure data accuracy and validity, direct field observations were conducted at the group, village, and regional levels, with particular emphasis on the seven types of productive economic activities developed by community groups in each study area.

Secondary data required for analytical purposes were collected from publications issued by various government agencies as well as from other relevant institutional sources aligned with the objectives of this study.

RESEARCH RESULT

Analysis of Leading Commodities

Regional leading products reflect a region's capacity to produce goods, create value, utilize resources effectively, generate employment opportunities, and provide income for both communities and local governments, while also offering prospects for increased productivity and investment. A product is considered leading if it possesses competitiveness, enabling it to withstand competing products in domestic markets and/or penetrate export markets. Leading regional products are characterized by uniqueness and distinctiveness that are not found in other regions, strong competitiveness, and the ability to generate employment opportunities for local communities. Moreover, leading

regional products are environmentally friendly and market-oriented, serving local, national, and regional markets.

Analysis of Leading Commodities in the Sumba Region

Administratively, Sumba Island consists of four regencies: East Sumba Regency, Central Sumba Regency, West Sumba Regency, and Southwest Sumba Regency (SBD). For the purpose of analyzing leading commodities, the discussion is conducted by regency, which subsequently allows for a generalization of regional competitiveness at the level of Sumba Island as a whole.

Analysis of Leading Commodities in East Sumba Regency

The success of regional economic development is measured using the Location Quotient (LQ) coefficient, defined as the ratio of sectoral Gross Regional Domestic Product (GRDP) of a regency to total regency GRDP, compared with the ratio of sectoral GRDP of the province to total provincial GRDP. The results of the LQ analysis indicate that during 2010–2011, the basic sectors in East Sumba Regency were mining and quarrying, construction, trade–hotel–restaurant services, and other services. The manufacturing sector qualified as a leading sector only in 2010. Based on the analysis, the agricultural sector shows potential to become a leading sector, as its LQ coefficient continued to increase and nearly reached a value of 1 in 2011. Although agriculture had not yet become a leading sector at the aggregate level, the livestock sub-sector emerged as a leading sub-sector, while the food crop sub-sector demonstrated strong potential to become a leading sub-sector.

In accordance with the Location Quotient (LQ) analysis, sectors that should be prioritized in regional development and economic growth enhancement in East Sumba Regency are those with LQ values greater than 1. The basic sectors and sub-sectors in East Sumba include livestock, mining and quarrying, construction, trade–hotel–restaurant services, other services, and manufacturing. Although agriculture is not yet classified as a leading sector, the livestock sub-sector already plays a dominant role. In addition, the food crop sub-sector has significant potential to be developed into a leading sub-sector, given its positive growth trend. With greater policy priority, this sub-sector could evolve into a major driver of regional economic growth.

In addition to the Location Quotient (LQ) analysis, the Shift-Share analysis modified by Esteban-Marquillas is employed to identify sectors that function as basic sectors with competitive advantage and specialization. The modified Shift-Share analysis indicates that the agricultural sector possesses a competitive advantage but does not constitute a specialized sector. Economic sectors classified as having competitive advantages include livestock, mining, manufacturing, construction, trade, and services. Other economic sectors neither qualify as specialized sectors nor exhibit competitive advantages.

Analysis of Leading Commodities in West Sumba Regency

The results of the Location Quotient (LQ) analysis show that during 2010–2011, the basic sectors in West Sumba Regency were agriculture, manufacturing, trade–hotel–restaurant services, financial leasing and business services, and other services. The competitive advantage of the agricultural sector is primarily supported by the food crop sub-sector. Other agricultural sub-sectors with strong potential to become leading sub-sectors include plantations and livestock, as their LQ coefficients continued to increase and nearly reached a value of 1 in 2011.

In the trade–hotel–restaurant sector, competitiveness is supported by the trade, hotel, and restaurant sub-sectors. Within the transportation and communication sector, transportation emerged as the leading sub-sector. In the financial leasing and business services sector, banking services constitute the leading sub-sector, while in the services sector, general government services as well as personal and household services represent the dominant sub-sectors.

Based on the Location Quotient (LQ) analysis, sectors that should be promoted in regional development and economic growth acceleration in West Sumba Regency are those with LQ values greater than 1. Accordingly, the basic sectors include agriculture, manufacturing, trade–hotel–restaurant services, financial leasing and business services, and other services. In addition to existing leading sectors and sub-sectors, local government should also encourage potentially leading sub-sectors such as plantations and livestock, given their increasing LQ coefficients that approached unity in 2011.

Furthermore, the modified Shift–Share analysis (Esteban-Marquillas) indicates that agriculture and trade are sectors that function both as specialized sectors and as sectors with competitive advantage. Other economic sectors namely manufacturing, finance, and services are identified as specialized sectors but lack competitive advantage. Conversely, the mining sector exhibits competitive advantage but does not function as a specialized sector. The remaining economic sectors are neither specialized nor competitive.

Analysis of Leading Commodities in Central Sumba Regency

The results of the Location Quotient (LQ) analysis indicate that during 2010–2011, the basic sectors and sub-sectors in Central Sumba Regency were the agricultural sector, particularly the food crop, plantation, and livestock sub-sectors. Other basic sectors and sub-sectors included mining and quarrying as well as construction. Additional sectors with the potential to become leading sectors were building rental services and general government services, as their LQ coefficients showed a continuous upward trend and nearly reached a value of 1 in 2011.

Based on the Location Quotient (LQ) analysis, sectors that should be prioritized in regional development and economic growth acceleration in Central Sumba Regency are those with LQ values greater than 1. These basic sectors include agriculture, mining and quarrying, and construction. The competitive strength of the agricultural sector is supported by its food crop, livestock, and plantation sub-sectors.

In addition to the Location Quotient (LQ) analysis, the Shift-Share analysis modified by Esteban-Marquillas was employed to identify sectors that function as basic sectors with both competitive advantage and specialization. The results indicate that the sectors that are both specialized and competitively advantaged in Central Sumba Regency are agriculture, mining, and construction. Meanwhile, economic sectors that are not specialized but demonstrate competitive advantages include manufacturing, trade, and transportation. Other economic sectors are neither specialized nor competitively advantaged.

Analysis of Leading Commodities in Southwest Sumba Regency

The analysis of leading commodities using the Location Quotient (LQ) method shows that during 2010–2011, the basic sectors and sub-sectors in Southwest Sumba Regency consisted primarily of the agricultural sector, supported by the food crop, plantation, and livestock sub-sectors. Another identified basic sector was air transportation. Other sectors with the potential to become basic sectors include wholesale and retail trade, which exhibited a consistently positive growth trend over time.

Based on the Location Quotient (LQ) analysis, sectors that should be promoted in regional development and economic growth enhancement in Southwest Sumba Regency are those with LQ values greater than 1. These basic sectors include agriculture, which is supported by the food crop, livestock, and plantation sub-sectors.

Furthermore, the Shift-Share analysis modified by Esteban-Marquillas reveals that the only sector that functions simultaneously as a specialized sector and possesses a competitive advantage in Southwest Sumba Regency is agriculture. The trade sector, while not specialized, demonstrates a competitive advantage. Other economic sectors are neither specialized nor competitively advantaged.

Competitiveness Analysis of DEMAM Community Business Groups in the Sumba Region

The results of the competitiveness analysis of leading commodities by region indicate that the Sumba region as a whole possesses leading commodities in livestock products and food crops. Data illustrate that livestock business groups in the Sumba region are predominantly concentrated in East Sumba and Southwest Sumba. The average number of livestock business groups in these two regencies exceeds 100 groups, with the highest concentration found in East Sumba, totaling 203 groups in 2012. In the same year, Central Sumba recorded 22 livestock business groups, while West Sumba had 44 groups, and Southwest Sumba accounted for 94 groups.

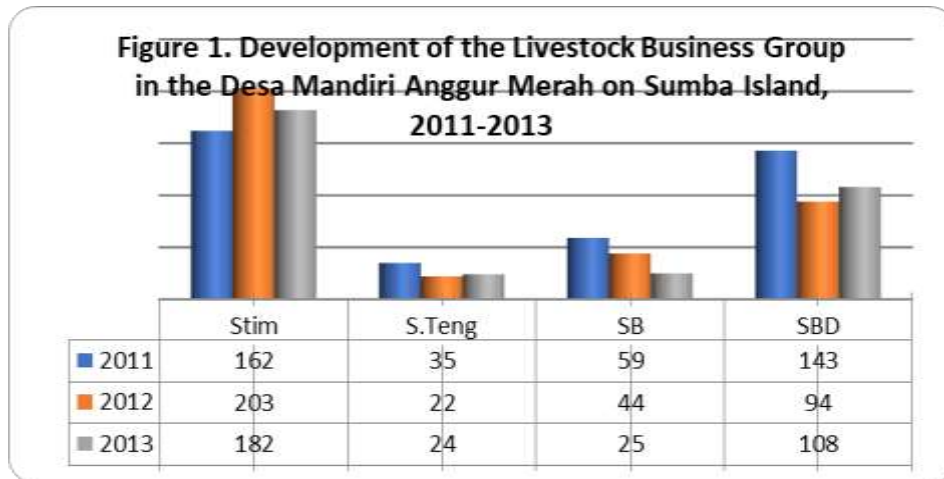


Figure 1. Development of the Livestock Business Group in the Desa Mandiri Anggur Merah on Sumba Island, 2011-2013

Source: Research Result Processing, 2013

Pig Farming Group Enterprises

The distribution of DEMAM pig farming enterprises across the Sumba region is most concentrated in Southwest Sumba (SBD). In this regency, the number of DEMAM pigs ranged from 1,565 to 1,852 heads annually. In East Sumba, the number of DEMAM pigs consistently ranged between 725 and 857 heads per year. In West Sumba, the highest number of DEMAM pigs was recorded in 2012, totaling 658 heads. In the same year, Central Sumba recorded 176 heads, while in 2013 no pig farming groups operated in Central Sumba.

Cattle Farming Group Enterprises

At the macro level, the Sumba region is widely recognized for its cattle production. However, the number of DEMAM business groups engaged in cattle farming as a leading commodity remains limited. While pig farming is relatively evenly distributed across the Sumba region, cattle farming is concentrated in only two regencies, namely East Sumba and Central Sumba. At the initial stage of the DEMAM program, 377 groups were engaged in cattle farming. This number declined to 309 groups in 2012 and further decreased to 293 groups in 2013. The primary reason for this decline is that communities in East Sumba traditionally raise cattle through open grazing systems, rather than stall-based management. Most households own cattle ranging from several dozen to hundreds of heads.

In contrast, no DEMAM cattle farming groups were found in West Sumba and Southwest Sumba. This condition is largely attributable to the long production cycle of cattle farming, which requires several years from rearing to market sale, whereas pig farming requires only a few months, making it more attractive for short-term income generation.

Goat Farming Group Enterprises

The distribution of DEMAM goat farming enterprises is relatively even across the Sumba region. Over the past three years, the highest number of DEMAM goats was recorded in East Sumba, with the lowest figure being 705 heads in 2013 and the highest reaching 2,695 heads in 2012. In 2011, the number of goats in East Sumba totaled 1,504 heads. In Southwest Sumba (SBD), goat farming was also substantial, with 1,295 heads in 2012, and 881 and 584 heads in 2011 and 2013, respectively. In West Sumba, the highest number was observed in 2011 (245 heads), declining to 105 heads in 2013. Meanwhile, Central Sumba recorded 245 heads in 2011 and only 16 heads in 2012.

Based on these empirical findings and applying a leading-commodity cluster development approach, it can be concluded that East Sumba is best positioned as a livestock industry cluster focusing on cattle, horses, buffaloes, and goats, with Southwest Sumba, West Sumba, and Central Sumba serving as supporting regions. Conversely, Southwest Sumba (SBD) is proposed as the pig livestock industry cluster, supported by East Sumba, Central Sumba, and West Sumba. This proposal does not imply that other regencies in the Sumba region cannot function as industrial clusters. Instead, they may serve as supporting clusters, such as animal feed processing industries, transportation services, skilled labor supply, and livestock waste-processing industries.

Crop Farming Groups

Several business groups are also engaged in food crop production, including vegetables, chili, and shallot farming. In 2011, the number of crop farming groups was 23 in East Sumba, 24 in Southwest Sumba, 20 in West Sumba, and 18 in Central Sumba.

Fisheries Business Groups

The fisheries sector in the Sumba region remains relatively small. Although a seaweed processing factory currently operates in East Sumba, no DEMAM groups were involved in seaweed farming. Over the three-year implementation period of the DEMAM program, East Sumba recorded 12 fisheries business groups, Central Sumba 5 groups, West Sumba 13 groups, and Southwest Sumba only 1 group.

Agro-processing Industry Groups

Agro-processing industries under the DEMAM program in the Sumba region are also limited in number. The highest concentration over the past three years was found in West Sumba, with 63 agro-processing business groups. The products of these industries include traditional ikat weaving, food processing, and small-scale workshops. West Sumba has been able to concentrate on agro-processing activities due to its relatively limited development in livestock farming.

Trade Business Groups

Historically, East Sumba and West Sumba have been well known as trading hubs and transit points for traders from outside the region, including Java, Sulawesi, and Flores (Ende and Solor). During the three-year implementation of the DEMAM program, the number of trade business groups was 28 in East Sumba, 29 in Southwest Sumba, 34 in West Sumba, and only 3 in Central Sumba. Most trading activities were conducted in the form of small retail kiosks.

Cooperative Business Groups

One of the business models developed by DEMAM groups in the Sumba region is cooperatives and savings-and-loan enterprises. As of 2013, East Sumba had 12 cooperatives/savings-and-loan units, Central Sumba had 7 units, and West Sumba had only 1 unit, while no cooperative or savings-and-loan enterprises were found in Southwest Sumba.

Concept and Strategy for the Development of Leading Commodities

The objectives of the Mandiri Anggur Merah Village/Sub-district Development Program in East Nusa Tenggara (NTT) Province during the 2011–2013 period were as follows:

1. Reducing poverty through the development of productive economic activities based on the comparative and competitive advantages of villages/sub-districts.
2. Strengthening rural institutions to support the implementation of the four development commitments and eight regional development agendas.
3. Creating new entrepreneurs capable of generating employment opportunities and increasing labor productivity at the village and sub-district levels.

Since 2011, the first year of the Mandiri Anggur Merah program implementation, seven types of business activities have been developed by community-based groups in Mandiri Anggur Merah villages/sub-districts. These activities include:

1. Livestock enterprises.
2. Agricultural enterprises.
3. Cooperatives and savings-and-loan enterprises.
4. Fisheries enterprises.
5. Plantation enterprises.
6. Small-scale industries.
7. Trade and service enterprises.

To achieve the objectives of the Mandiri Anggur Merah program while simultaneously realizing the four development commitments of NTT Province, as mandated in the NTT Provincial Medium-Term Development Plan (RPJMD) 2009–2014, the following section elaborates the concepts and strategies for the development of leading products/commodities.

Concept of Leading Commodity Development

Based on field findings, which indicate the existence of seven types of business activities developed by community groups, each with its respective leading commodities, it is essential to formulate clear concepts and strategies for leading commodity development. This formulation is intended to ensure that the four development commitments of NTT Province can be achieved in a measurable and sustainable manner. Fundamentally, the philosophy underlying the four provincial development commitments is to ensure that NTT Province is no longer classified as one of the poorest provinces in Indonesia. In other words, NTT is expected to transform into a developed, competitive, and high-performing province.

Michael E. Porter (1990) defines competitiveness as a country's ability to create sustainable value added through its firms while maintaining a high standard of living for its citizens. National competitiveness is achieved when it is preceded by industrial competitiveness, which in turn is determined by the competitiveness of firms at the micro level. Ultimately, firm competitiveness is determined by the competitiveness of the products they produce. In the regional context, competitiveness refers to the ability of a region to create sustainable value added through its local enterprises and to maintain a high quality of life for its population. Regional competitiveness can be achieved when it is preceded by the competitiveness of regional industries. Industrial competitiveness at the regional level is, in turn, driven by the competitiveness of firms or micro-enterprises that enhance the value added of leading commodities. Firm competitiveness ultimately depends on the competitiveness of the products produced.

By applying Porter's competitiveness framework, NTT Province can achieve high competitiveness if the process is implemented in a systematic and sustainable manner. One strategic step undertaken by the Provincial Government of NTT has been the formulation of the four development commitments, accompanied by the initiation of the Mandiri Anggur Merah Village/Sub-district Program. However, to date, there has been no shared grand design agreed upon by all stakeholders regarding the stages required to achieve these objectives.

Referring to Porter's competitiveness concept, the development of a competitive or leading region should begin with the establishment of clusters. At least three clusters are proposed:

1. The leading commodity cluster.
2. The leading enterprise cluster.
3. The leading industrial cluster.

The successful development of these three clusters is expected to collectively form a competitive and high-performing region. First, the formation of leading commodity clusters. Informally, such clusters already exist within Mandiri Anggur Merah villages, where community groups have been established to develop competitive leading commodities. Second, the formation of leading enterprise clusters. To date, no leading enterprises have been formally established to manage leading commodities. This requires a shared commitment among all stakeholders or the establishment of partnerships involving the business sector, educational institutions (academia), government/bureaucracy, and local communities, commonly referred to as the BAGS partnership model. Third, the formation of leading industrial clusters. It is widely recognized that regions producing only primary commodities capture relatively low value added compared to regions with processing industries.

Therefore, the establishment of leading industrial clusters is a necessary condition for a region aspiring to become competitive and high-performing. These industrial clusters should be developed by considering upstream and downstream regions, where upstream areas serve as growth centers and downstream areas provide input supplies managed by leading enterprise clusters that process leading commodities.

In this context, the role of a competitive region is to create a conducive business climate for investors by providing clear regulations, supportive policies, and accessible information for all stakeholders. To achieve the desired level of competitiveness, the following section illustrates the process of enhancing regional competitiveness through a cluster-based approach, beginning with the establishment of leading commodity clusters.



Figure 2. The Process of Creating Regional Competitiveness Starts with the Creation of Superior Product Cluster.

Source: Langoday, T. O. (2011).

The research findings indicate that the development of competitive leading commodities has been undertaken; however, concrete measures to achieve a “Leading Province” or a competitive province have not yet been fully realized. Referring to Porter’s competitiveness framework as cited in Langoday, T. O. (2011), the creation of a Leading Region must begin with the development of Leading Products. A Leading Product must meet at least three criteria: (1) quantitative superiority; (2) qualitative superiority; and (3) sustainability.

From a quantitative perspective, leading products developed by business groups in self-reliant villages/urban wards under the Anggur Merah program are still produced in relatively limited quantities and largely consist of purely local commodities. Only a small number of groups have been able to develop leading commodities at a scale that meets market demand. One contributing factor is that provincial government grant funds allocated to each poor village/urban ward are distributed among a relatively large number of groups, resulting in each group receiving only a small amount of capital for business development. Limited funding constrains business operations, keeping them small-scale and focused mainly on local commodities. On average, each self-reliant Anggur Merah village/urban ward consists of approximately 8–20 business groups, with around 6–10 members per group.

On the one hand, the large number of groups and members reflects an effort to ensure equitable distribution of funds. On the other hand, the relatively small amount of funding inevitably leads to low production output. Furthermore, the allocation of small amounts of funds to each group and group member is also related to financial management capacity. Limited human resource quality and risk aversion contribute to the decision to distribute funds in small portions, both at the group and individual levels.

From a quality perspective, leading products developed in self-reliant Anggur Merah villages/urban wards remain at a standard level of quality, as they are predominantly produced manually without the application of appropriate technology. Currently, the use of appropriate technology to ensure high product quality has become essential. The adoption of appropriate technology can also enhance cost efficiency and management effectiveness in production processes.

From the perspective of production sustainability, several commodities continue to face constraints due to strong seasonal dependence, making it difficult to maintain production continuity. The archipelagic nature of the region is another factor affecting the sustainable supply of commodities. Primary commodities are produced in relatively small quantities and dispersed across multiple islands, making it challenging to consolidate them into large volumes within a short period.

Product excellence can be assessed using several indicators, including: (1) attractiveness; (2) durability; and (3) competitiveness. Achieving these three indicators requires the application of appropriate technology to ensure that products are able to compete across different market levels.

The use of appropriate technology to enhance product attractiveness can be reflected in appealing packaging, attractive product forms, and diverse flavor variants that encourage consumer purchases. The use of appropriate technology to improve product durability can be demonstrated by tangible product forms, extended shelf life, and consistent taste and quality that remain distinctive to consumers. Meanwhile, the use of appropriate technology to strengthen product competitiveness can be indicated by sufficient product quantity to meet consumer demand; product quality that meets specific standards; aesthetic value that appeals to consumers; competitive pricing relative to similar products from other regions; convenient transaction services; and satisfactory after-sales services.

In general, the concept of leading product development can be illustrated as follows.

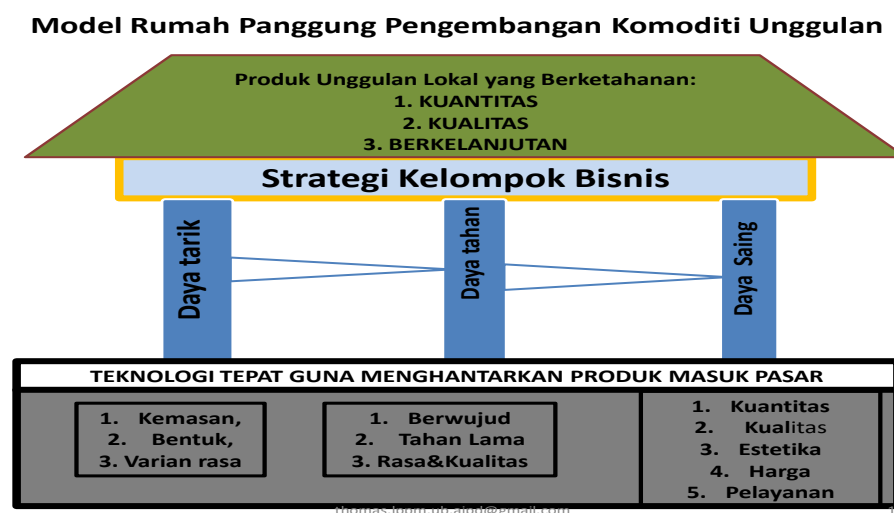


Figure 3. The Stilt-House Model for Leading Product Development

Source: Langoday, T. O., (2011)

Strategies for the Development of Leading Commodities

There are several leading commodities classified as productive economic activities developed by community groups in Demam. Therefore, strategies for developing leading commodities are closely linked to the economic sectors that generate these commodities.

Development Strategy for Livestock as a Leading Commodity

Several types of livestock cultivated by community groups in Desa/Kelurahan Mandiri Anggur Merah include cattle, buffaloes, horses, goats, pigs, and poultry. By applying a cluster-based approach to livestock development as a leading commodity, multiple clusters are established within a single livestock development area.

The livestock industrial area is designated as the Mandiri Anggur Merah Village Livestock Industrial Area (KITDEMAM), employing a Multi-Cluster System consisting of:

1. Feed and forage crop cluster.
2. Breeding cluster.
3. Input and infrastructure supplier cluster.
4. Cooperative and microfinance institution cluster.
5. Fattening cluster.
6. Processing industry cluster (livestock products and organic fertilizer).
7. Trade, information, and partnership cluster.
8. Quality control and breeding center cluster.

Through the implementation of this multi-cluster strategy, it is expected that livestock production will increase significantly and be integrated with other clusters within the community-based industrial area. Consequently, higher value-added can be created by minimizing various cost components, thereby achieving efficiency.

Development Strategy for Food Crop Commodities as Leading Products

Several food crops classified as leading commodities cultivated by community groups in Desa/Kelurahan Mandiri Anggur Merah include legumes, maize-based products, rice, and vegetables. By applying a cluster-based approach to the development of food crops as leading commodities, several clusters are established within a single development area.

This area is designated as the Mandiri Anggur Merah Village Food Crop Industrial Area (KITMADEMAM), employing a Multi-Cluster System consisting of:

1. Maize farming cluster using intercropping/rotational cropping systems with cassava and legumes.
2. Production input supplier cluster.
3. Cooperative or microfinance institution cluster.
4. Maize-based multi-product processing industry cluster.
5. Marketing cluster: market information and marketing partnerships.
6. Technology garden/field school cluster.

Development Strategy for Marine Products as Leading Commodities

Marine products developed by community groups in Desa/Kelurahan Mandiri Anggur Merah include capture fisheries, aquaculture (pond-based fisheries), and seaweed cultivation. By applying a cluster-based approach to the development of marine products as leading commodities, several clusters are established within a single development area.

This area is designated as the Mandiri Anggur Merah Village Marine Product Processing Industrial Area (KIPHALADEMAM), employing a Multi-Cluster System consisting of:

1. Marine capture fisheries and aquaculture cluster;
2. Production and processing input supplier cluster;
3. Cooperative or microfinance institution cluster;

4. Marine product processing industry cluster (fish, seaweed, and other marine products);
5. Marketing cluster: market information and marketing partnerships;
6. Field school cluster.

CONCLUSIONS AND RECOMMENDATIONS

Based on the results of the analysis using the available analytical tools, the findings of this study can be summarized as follows.

1. Overall, the Sumba Region is characterized by leading commodities in the livestock sector. In addition, other leading commodities include trade and hospitality services, food crops, plantation crops, as well as manufacturing and personal and household services. Livestock activities are distributed across three regencies: East Sumba, Central Sumba, and Southwest Sumba. Food crop production is mainly concentrated in Central Sumba, West Sumba, and Southwest Sumba. Plantation commodities are primarily found in Central Sumba and Southwest Sumba. Processing industries are only present in West Sumba Regency.
2. In Desa/Kelurahan Mandiri Anggur Merah, the productive economic activities developed by community-based business groups are generally aligned with the region's leading commodities. Cattle farming is undertaken only by business groups in Mandiri Anggur Merah villages located in East Sumba and Central Sumba. Goat farming is evenly distributed across business groups in all regencies, although it is more dominant in East Sumba and Southwest Sumba. Pig farming is practiced across all Mandiri Anggur Merah business groups in all regencies, with the highest concentration found in Southwest Sumba, East Sumba, and West Sumba.
3. Business groups engaged in processing industries are predominantly found in West Sumba Regency, reflecting the region's comparative advantage. Meanwhile, trading activities are evenly distributed across East Sumba, West Sumba, and Southwest Sumba, while their presence in Central Sumba is relatively limited.

The Sumba Region possesses strong comparative advantages in livestock production. Several types of livestock cultivated by community groups in Desa/Kelurahan Mandiri Anggur Merah include cattle, buffaloes, horses, goats, pigs, and poultry. By adopting a cluster-based approach to livestock development as a leading commodity, multiple clusters should be established within a single livestock development area.

The livestock industrial zone may be designated as the Mandiri Anggur Merah Village Livestock Industrial Area (KITDEMAM), applying a Multi-Cluster System consisting of:

1. Feed and forage crop cluster.
2. Breeding cluster.
3. Input and infrastructure supplier cluster.
4. Cooperative and microfinance institution cluster.
5. Fattening cluster.

6. Processing industry cluster (livestock products and organic fertilizer).
7. Trade, information, and partnership cluster.
8. Quality control and breeding center cluster.

ADVANCED RESEARCH

The implementation of this multi-cluster strategy is expected to significantly increase livestock production while strengthening linkages among clusters within the community-based industrial system. As a result, higher value-added can be generated, particularly within the meat processing industry.

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