

Policy Paper

Can Agropolitan Promise Prosperity and Sustainability?

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ABSTRACT

This paper aims to formulate development strategies for agribusiness and agroindustry areas in Kawasan Agropolitan Sendang (KAS) as a development priority area in Tulungagung. It provided alternative KAS development strategies to overcome some obstacles over the last 16 years. Since KAS is one of the national priority development objects, further studies are required to determine the best development planning formulation. The methodology used in this research is a case study method with three analyses, policy analysis, analysis of environmental conditions, and SWOT analysis. The results show that KAS needs to develop the hinterlands and cooperate in providing infrastructures such as banking institutions, markets, and road networks. Farmer groups need to participate in empowerment programs on skill training and improving the quality of innovative and creative agropolitan product standardization and counseling on socio-economic fluctuations that impact people's lifestyles and behavior.

Keywords: Agribusiness, Agroindustry, Agropolitan, SWOT, Tulungagung,

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1. Introduction

The agricultural sector has an important role in national economic development. The agricultural sector contributes to GDP formation, job creation, increasing people's income, and earning foreign exchange. The agricultural sector is considered capable of encouraging regional and local economic growth (Saleh et al., 2017). It can combine growth and equity (growth with equity) or quality growth by minimizing inequality in resource transfer and income between villages and cities (Iqbal & Anugrah, 2009). In addition, agriculture is also an important instrument to reduce poverty (Ahmad et al., 2014; Azril et al., 2010).

Nevertheless, it is undeniable that the agricultural sector also faces threats related to growth stagnation. In the last 10 (ten) years, the growth of the agricultural sector in Indonesia has always been slower than economic growth, except in 2020 (under the pandemic, which tends to be difficult to analyze). The highest growth in the agricultural sector was recorded in 2012 at 4.59, and the lowest growth took place in 2020 at 1.75. The average growth of the agricultural sector in that period was 3.72, below the average GDP growth of Indonesia, which was 4.59.

The classic problems that afflict the agricultural sector almost always revolve around output in raw materials with a low selling value. This happens because development policies in developing countries focus more on exploitation efforts than efforts to create added value and sustainability (Surya et al., 2021). One of the efforts to increase the added value of agricultural production is through the application of agribusiness and agroindustry.

The most relevant referenced definition of agribusiness is constructed by Davis and Goldberg (1957) (as cited in King et al., 2010), the sum of all businesses involved in the production and sale of agricultural products; the production facilities on farms; and the storage, processing, and distribution of agricultural products and items from which they are made. Agribusiness also refers to an economic enterprise that is labor-intensive (Wilson, 2000). Based on several studies, agribusiness development will run effectively if agribusiness managers can gain access to market information, create innovation (Geldes & Felzensztein, 2013), and overcome obstacles related to production costs and market demand (Lusk & Hudson, 2004). Agribusiness also has more complex risks when compared to other similar industries, mainly related to seasonality, supply spikes, and perishability (Behzadi et al., 2017). The agribusiness system is a system for developing agricultural potential based on farm management that prioritizes adding value to agricultural products. It assumes that farmers can take positions as business actors by utilizing existing economic institutions in rural areas. Globally, business activities in the agricultural sector have undergone a radical change towards agribusiness and agroindustry (Cook & Chaddad, 2000).

Agribusiness has a significant role, although mainly in developing countries, the contribution of the agribusiness sector to GDP is not too significant (Luhmann & Theuvsen, 2016). In Indonesia, the agriculture sector has made a significant contribution, but whether the sector still applies traditional agricultural principles or has transformed into agribusiness is still a big question.

Agribusiness and agroindustry are inseparable partners. Reardon and Barrett define agroindustry as the growth of processes, distribution and off-farm activities, organizational changes in the relationship between farmers and processing industries, and changes in product, technology, and market structures in agricultural activities (Cook & Chaddad, 2000). In simpler terms, agroindustry processes raw materials, and raw materials are produced from the agriculture, forestry, and fisheries sectors (Henson & Cranfield, 2009).

To reduce extreme poverty, agroindustry and agribusiness still need to pay attention to socio-economic conditions in the agro-industrial area (Barron & Rello, 2000), with the support of appropriate public policies, ease of capital, and infrastructure networks (Burkaltseva et al., 2017; Tersoo, 2012).

In various parts of the world, agroindustry and agribusiness are among the main weapons for developing countries to catch up with developed countries. This potential arises from a shift in demand for food (Reardon & Busch, 2001). In Indonesia, Chile, Brazil, and Thailand, the role of the agro-industrial sectors reaches one-third of GDP, and in sub-Saharan countries, it is between 20-25% (Wilkinson & Rocha, 2009). However, barriers related to costs, inefficient distribution channels, and market demand have yet to be resolved (Gandhi et al., 2001). In addition, agribusiness is argued to have an important role in developing food systems, especially in poor and developing countries (Wilkinson, 2009).

The development of agroindustry and agribusiness is expected to encourage regional economic growth, increase per capita income and strengthen institutions and community independence (Basuki, 2012). Nevertheless, the development of agropolitan-based agribusiness and agroindustry faces various obstacles and problems. The gap between planning and implementation has resulted in the development

of agropolitan areas unable to increase farmer exchange rates and low community involvement (Azril et al., 2010; Farhanah & Prajanti, 2015; Simanjuntak & Sirojuzilam, 2013). In addition, there are also threats related to environmental damage (Fatkhianti et al., 2015; Rajão et al., 2020; Sharma et al., 2017) and the lack of appropriate procedures applied in regional development (Ikatinasari et al., 2009), coupled with the lack of knowledge and managerial understanding of area managers (Bannikova et al., 2015).

In simple terms, agropolitan is a regional approach where agribusiness and agroindustry activities are carried out in a connected area. Agropolitan is expected to be the answer to supply chain problems in agribusiness and agroindustry processes. Agropolitan is a regional development concept based on agribusiness and agroindustry activities and is able to become a center for agricultural development activities for the surrounding area (Iqbal & Anugrah, 2009; Manik et al., 2013; Simanjuntak & Sirojuzilam, 2013). The agropolitan concept is also expected to be able to improve the socio-economic conditions of the poor through community and regional-based empowerment programs (Jusoh, 2011; Zainal et al., 2019). The effectiveness of the development of agropolitan areas can occur if the government can facilitate the various potentials as a whole, comprehensively, competitively, people-based, sustainably, decentralized, and community-driven (Basuki, 2012; Ikatinasari et al., 2009).

Agropolitan development can be realized sustainably if the development program is oriented towards productivity and aimed at natural resource conservation, agribusiness, and agroindustrial development (Pranoto et al., 2006). In addition, it is important to improve rural-urban relations to increase agribusiness productivity in agropolitan areas (Surya et al., 2021; Syarifudin & Ishak, 2020).

For areas where GRDP is dominated by the agricultural sector (Rosiadi, 2020), the development of agroindustry and agribusiness areas, in the form of agropolitan areas, is not a novel issue. The development of the Agropolitan Area in Tulungagung Regency began in 2005 with the establishment of the Sendang agropolitan area called *Kawasan Agropolitan Sendang* (KAS). In the Regional Regulation on the Spatial Planning and Territory (RTRW) of Tulungagung Regency, the agropolitan area include Sendang, Pagerwojo, Karangrejo, and Kauman sub-districts where structurally, the spatial structure of Sendang District is the center of the agropolitan. The other sub-districts are hinterland areas/buffers from agropolitan activities in Sendang District with superior commodities such as dairy farming, horticulture, and tourism.

The government of the Republic of Indonesia stipulates Presidential Regulation Number 80 of 2019 concerning the Acceleration of Economic Development in the Gresik - Bangkalan - Mojokerto - Surabaya - Sidoarjo - Lamongan area, the Bromo - Tengger - Semeru area, and the Wilis and Selingkar areas, Southern Cross. One of the directions of economic development in East Java is the development of agropolitan, minapolitan and metropolitan areas. Tulungagung Regency and other areas around Mount Wilis (Selingkar Wilis) were mandated to develop agropolitan areas.

Even though it has been designed and developed for 16 (sixteen) years, KAS still has some unresolved problems. First, few agro-industrial processes have been developed in KAS. Second, raw materials still dominate production results from KAS. Third, the number of human resources managing agriculture is declining, a classic problem in agropolitan areas and the entire agricultural sector. The use of technology to support the economic transformation of the agricultural sector is still limited. The impact of environmental damage is still neglected.

Efforts to maximize the agricultural sector's contribution to the development of the Tulungagung area were realized through the KAS policy, which was eventually adopted as one of the national priority projects and regional priorities. Several policies to develop and maximize the existing potential over the past 16 years have not resolved some of the classic problems and failed to make any meaningful developments. Therefore, it is necessary to formulate various applicable policy strategies, including physical, economic, and social analysis. The results are expected to provide a comprehensive formulation and capture every problem and policy strategy that can be used to develop this region significantly. In a broader scope, the results of this study are expected to provide practical contributions to national policies based on regional needs.

2. Methodology

2.1. Data Source

There are two types of data required for further analysis process:

a. Secondary data

Secondary data is obtained from secondary survey activities originating from local government agencies and other institutions related to agropolitan development. Secondary data is used as initial data that can provide an overview of the condition of the research object.

b. Primary data

This primary data is obtained from primary survey activities, either from the field observations or interviews with the community or local government agencies. The use of primary data is intended to obtain information that is actual and directly found at the research site while at the same time confirming the initial picture obtained from secondary data. The types of primary data required include:

1. The physical condition of the planning area which is a direct review of the topography, the quality and quantity of infrastructure, the use of existing land, and the use of technology;
2. Economic conditions in the form of dominant sectors that are the main livelihoods of the community in the planning area, including support for regional development policy programs/activities at the planning location, product marketing mechanisms, and financing;
3. Social conditions of the population, especially human resources, both internal and external partnerships in agropolitan development;

2.2. Analysis Method

The data will be analyzed in two stages: the policy and development analysis of KAS and regional environmental condition analysis, which includes analyzing physical, economic, and social conditions. The last is SWOT analysis used to determine alternative policies and strategies that can be taken in regional development.

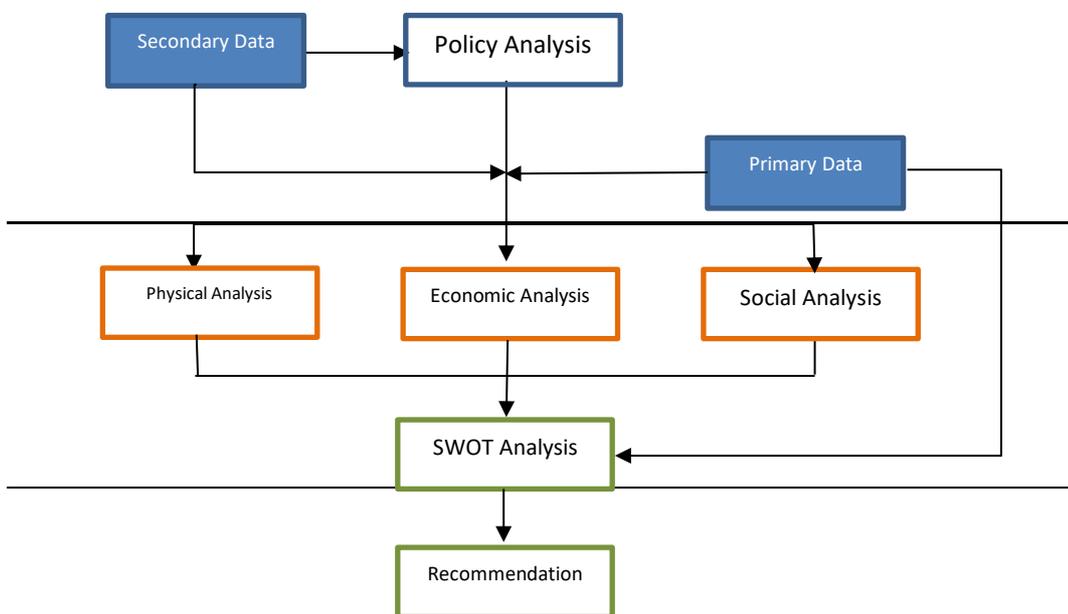


Figure 1. Analysis method framework

a. Policy Analysis

James E Anderson defines public policy as a program design developed by the government (Suwitri, 2008). Thus, policy analysis is an important method to help decision-makers obtain the right information (Safitri et al., 2021). Public policy in agriculture almost always poses a dilemma on the conflict between growth and equity and between productivity and

sustainability (Simatupang, 2003). Because this research is a policy paper, policy analysis is a fundamental analysis that will provide greater practical implications for stakeholders and practitioners. In this study, policy analysis is carried out based on the policies and regulations issued by the government related to the development of agropolitan areas in the field of spatial and development planning.

b. Environmental Condition Analysis

Analysis of environmental conditions aims to get an authentic and factual description of the physical, social, and economic conditions of KAS and the possibility of differences with the secondary data obtained previously. Environmental condition analysis was carried out in three stages, the analysis of basic physical conditions to determine the physical capabilities of the area (Basuki, 2012), the economic analysis to find out the economic activities of the regional community, and the social analysis to determine the social condition of human resources in the agropolitan area.

c. SWOT analysis

SWOT analysis is used to follow alternative strategies based on four indicators of strengths, weaknesses, opportunities, and threats (Rangkuti, 2011). In this study, a survey of these indicators was provided by distributing and filling out questionnaires to stakeholders related to the development of agropolitan areas. The sampling of the questionnaires used the purposive sampling method, where about 20-30 people consist of a) 5 government employees from related agencies and b) about 25 heads or members of farmer groups, groups of farmer groups, and farmer cooperatives in the KAS area will be the research sample. Five government officials come from the Tourism Agency, Animal Husbandry Agency, Agriculture Agency, Public Works and Spatial Planning Agency, and Regional Development Plan Agency. These people were selected as research respondents on the grounds of their close involvement as policymakers and actors in agribusiness and agroindustry activities in KAS.

The questionnaire contains statements on the four factors that form the SWOT analysis, such as "KAS has adequate resources," "KAS has a good and well-maintained supporting infrastructure," "Human resources who manage KAS have been trained, and professional," and "Policies made by the government has taken into account the aspirations of KAS stakeholders." The answer choices for the questionnaire consist of 5 scale options starting from strongly disagree to strongly agree. Data collection was carried out between October and November 2021 through online and in-person interviews. Direct interviews were prioritized for respondents from KAS managers to dig deeper and gain more detailed information about KAS management from a community perspective. Rating values were obtained from the questionnaires filled by the stakeholders. The accumulated total score of strengths (strengths) is reduced by the accumulated total score of weaknesses (weaknesses), while the accumulated total score of opportunities (opportunities) is reduced by the accumulated total score of threats (threats). The final result of the analysis is a diagram showing the position of the strategic options in four Cartesian diagram

3. Results and Discussions

3.1. Policy Analysis

The Acceleration of Economic Development in East Java Province as contained in the Master Plan for the Acceleration of Economic Development for the Gresik - Bangkalan - Mojokerto - Surabaya - Sidoarjo - Lamongan area, the Bromo - Tengger - Semeru area, and the Selingkar Wilis and Southern Cross Areas are an integrated part of the national development areas and planning. The Master Plan is not intended to replace existing development planning documents such as the National Medium-Term Development Plan (RPJMN), Regional Medium-Term Development Plan (RPJMD), East Java Provincial Spatial Planning and Territory (RTRW) 2011-2031, but to become an integrated and complementary special document to accelerate economic development in East Java Province. In the 2020-2024 RPJMN, which is the mandate of the 2005-2025 RPJPN, in efforts to optimize infrastructure connectivity and economic equity, the direction of national development has been oriented towards creating high, inclusive, and competitive economic growth; regional-based development to reduce inequality;

g. can accelerate the growth of underdeveloped areas within the district;

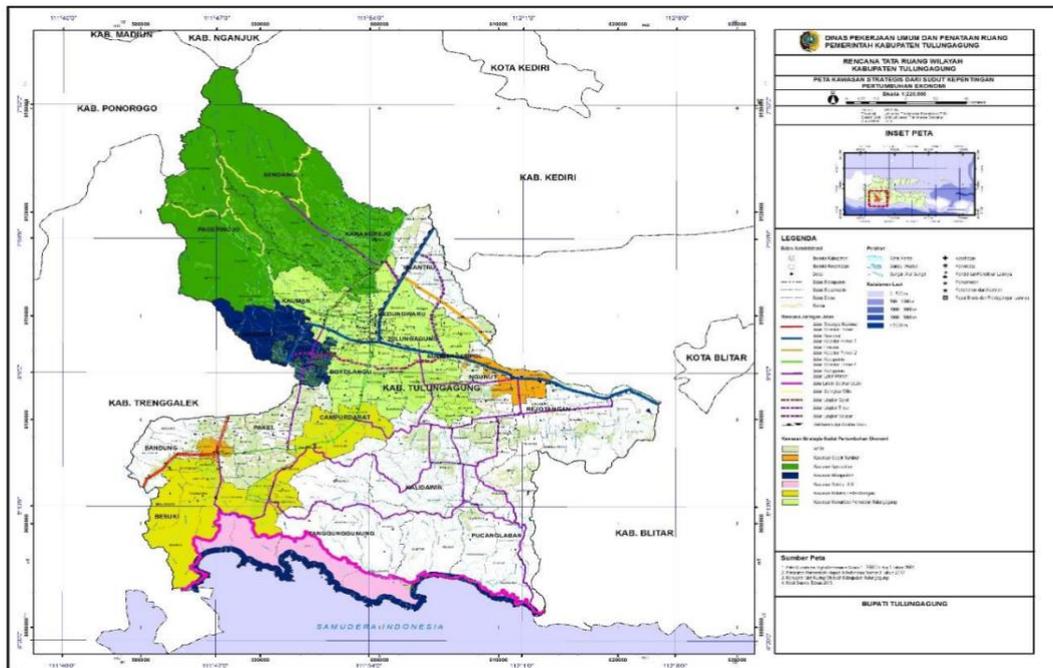


Figure 3. Strategic Area in Tulungagung Regency (RTRW Tulungagung Regency 2012-2032, 2012)

The urban system of the area mentioned above can be in the form of economic centers, new city plans, new economic nodes, and/or new economic corridors needed to maintain space balance, sustainable development, and community resilience. The area's delineation directed as an agropolitan development includes Sendang District and Pagerwojo District. Hierarchically, Sendang Urban and Pagerwojo Town function as Regional Service Centers (PPK) and the surrounding villages function as Local Service Centers (PPL). Thus, the hierarchy in the development of agropolitan areas is in accordance with the direction of the district spatial structure, tiered from PKW, PPK, to PPL. In addition, the hierarchy has a connection with the urban hierarchy in other districts that are included in the Selingkar Wilis Area.

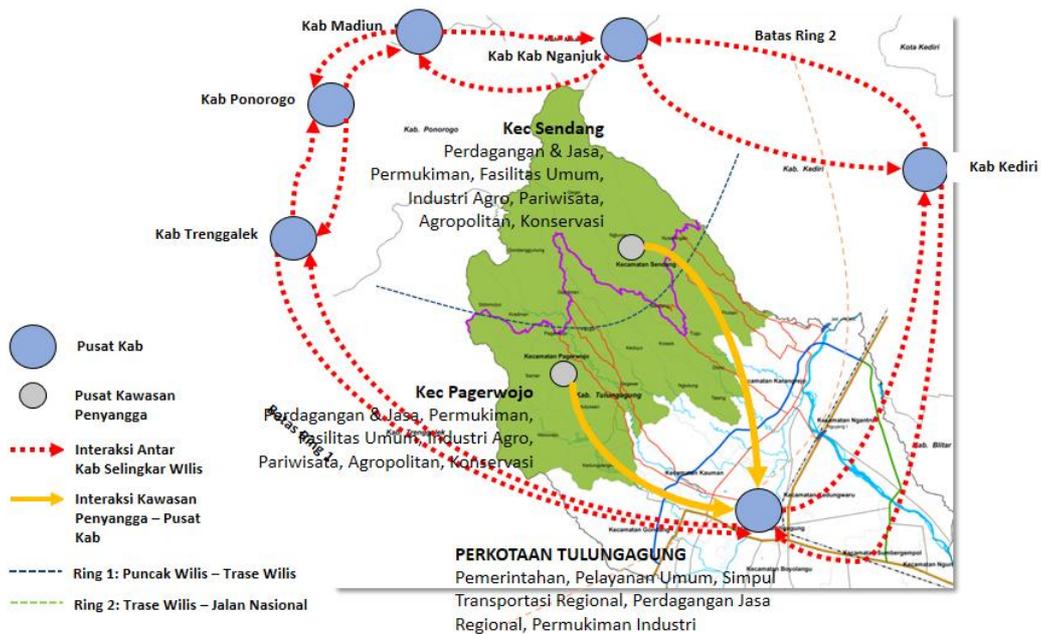


Figure 4. Spatial Structure Around the Wilis Circle Area

Furthermore, if we look at the direction of the spatial pattern, the development of the agropolitan area is also appropriate because it is dominated by cultivation areas such as production forests, community forests, plantations, food crops, and dryland agriculture. However, it should be noted that the agropolitan area is also a protected area in the form of protected forest and water absorption areas. Thus the development carried out should still take into account the carrying capacity and capability of the land.

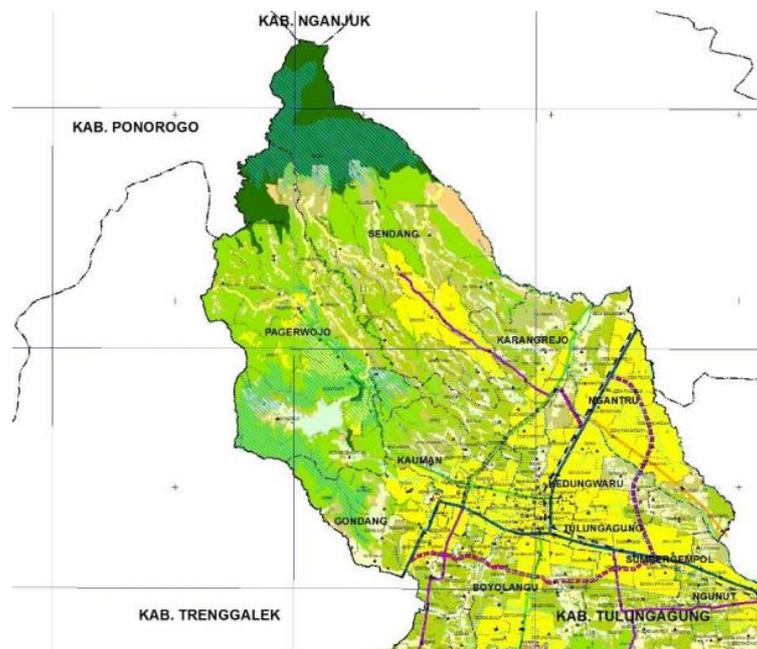


Figure 5. Patterns of Space Around the Willis Circular Area

Figure 5 shows detailed directions related to using spatial patterns in the Tulungagung Regency that are allowed, allowed with conditions, permitted, and prohibited in each RTRW substance following the development policies and dynamics. General Provisions for Zoning Regulations (KUPZ) for the areas are generally classified into protected areas and cultivated areas. Several zoning regulations for protected areas immediately related to agropolitan development include KUPZ for protected forest areas, water catchments, and river boundaries. Meanwhile, the zoning regulations for cultivation areas immediately related to agropolitan development include KUPZ for production forest areas, community forests, food crops, horticulture, plantations, livestock, and tourism (RTRW Kabupaten Tulungagung 2012-2032, 2012).

Meanwhile, in the regional development planning document contained in the 2018-2023 Tulungagung Regency RPJMD, the development of the agropolitan area is based on the second and fourth missions related to economic and infrastructure development (Tulungagung Regency Regional Medium Term Development Plan 2018-2023, 2018). Mission 2 is "to encourage the strengthening of people's economy based on local wisdom and regional potential, while Mission 4 is "to build quality infrastructure for peripheral areas in achieving equitable development." Thus, the optimization of the economic potential of the Tulungagung Regency must be supported by reliable infrastructures which will eventually improve the distribution of goods and services, support economic growth, and increase the distribution of development results.

The previous agropolitan study was carried out in 2004 with the title Masterplan for the Agropolitan Region of Tulungagung Regency. The purpose of the study was to develop a master plan for agribusiness development with a scope of spatial structure plans, land use/use, physical needs (facilities and infrastructure), nonphysical needs (institutions related to agribusiness), stakeholder empowerment, agribusiness development policies, and selected agropolitan areas. In determining the location of an agropolitan area, it should be selected based on criteria, physical, access to service coverage, complementation and synergy with regional spatial regulations. Thus, Sendang District is designated as the location of the Tulungagung Regency Agropolitan Area with the name Sendang Agropolitan Area (KAS). The leading commodity development plan consists of (1) tropical exotic fruit horticultural commodity development; (2) vegetable horticultural commodity development; (3) food crop commodity development; (4) goat/sheep commodity development; and (5) development for dairy cattle and beef cattle.

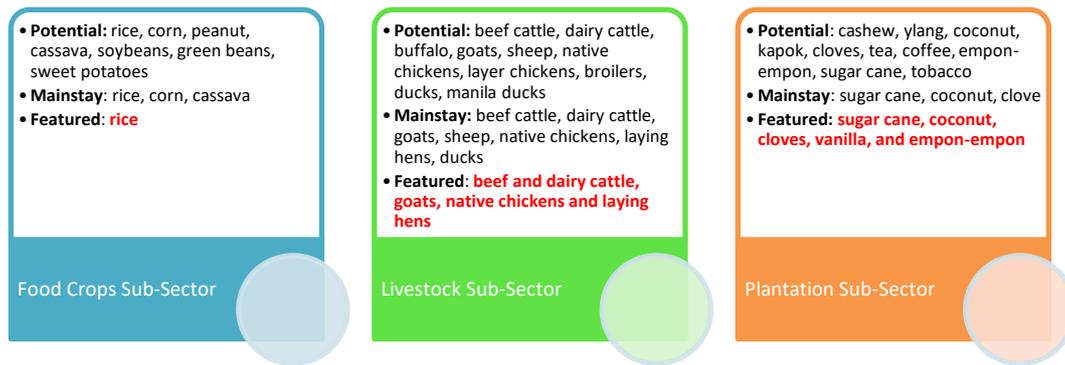


Figure 6. Leading Commodities in the Agricultural Sector (Agropolitan Area Master Plan, 2004)

Based on the various policies mentioned above, it can be concluded that the development of the Tulungagung Regency Agropolitan Area is in line with the planning concept at the national, provincial, and district levels. The essence of the planning concept is how the development of the Tulungagung Agropolitan Area can be accelerated to increase economic growth in the Selingskar Wilis Area and spur the development of the surrounding area. The Government of Tulungagung Regency can realize this by developing infrastructure. The allocation of infrastructure development budgets must also be integrated, meaning that the development of the Tulungagung Regency Agropolitan Area may be cross-sectoral to achieve the same goal.

3.2. Environmental Condition Analysis

3.2.1. Analysis of Basic Physical Conditions

The KAS of Tulungagung Regency, which is located in the north, is the southeastern part of the Wilis Mountains. The altitude in the area ranges from 200-700 meters above the sea level. These topographic factors also support a growing climate in cooler and wetter air, which is good for food crops and plantations. Meanwhile, if viewed from the geology of the rocks that make up the area, the agropolitan area is dominated by intermediate volcanic turf rock types. There are at least three types of soil in the area, brown Mediterranean soil, reddish-brown lithosol soil, and andosol soil; all of which are relatively fertile as the remnants of volcanic materials in the past.

Based on the type of existing soil and its relationship to land use, it should be noted that the chemical and physical properties of the local soil can later be used to increase soil productivity as optimally as possible. Lithosol soils have shallow effective depth due to the undulating topography, and the slope of the soil is more than 40%. So this area is expected to be planted with perennials that have high economic value and, at the same time, function as protective plants and root zones for water management.





Figure 7. Existing Land Use in Agropolitan Area

Land use is dynamic, meaning that land use can change depending on the dynamics of existing development. In preparing the plan, it is necessary to pay attention to the facts of the existing area, including the current land use, so that the allocation of planned activities follows the potential and carrying capacity of the region.

Currently, there is no latest data on land use in the KAS of Tulungagung Regency, including the detailed amount of each land-use dynamics. However, it can be ascertained that the existing conditions have resulted in inappropriate land-use patterns. For example, the cropping patterns in production forests and community forests are no longer for perennials but seasonal crops and are prone to erosion. The planting method with a terracing pattern often does not include a suitable water distribution mechanism, causing landslides. In the future, this must be a concern because, in the agropolitan area, there are also protected areas in the form of protected forests and water catchment areas.

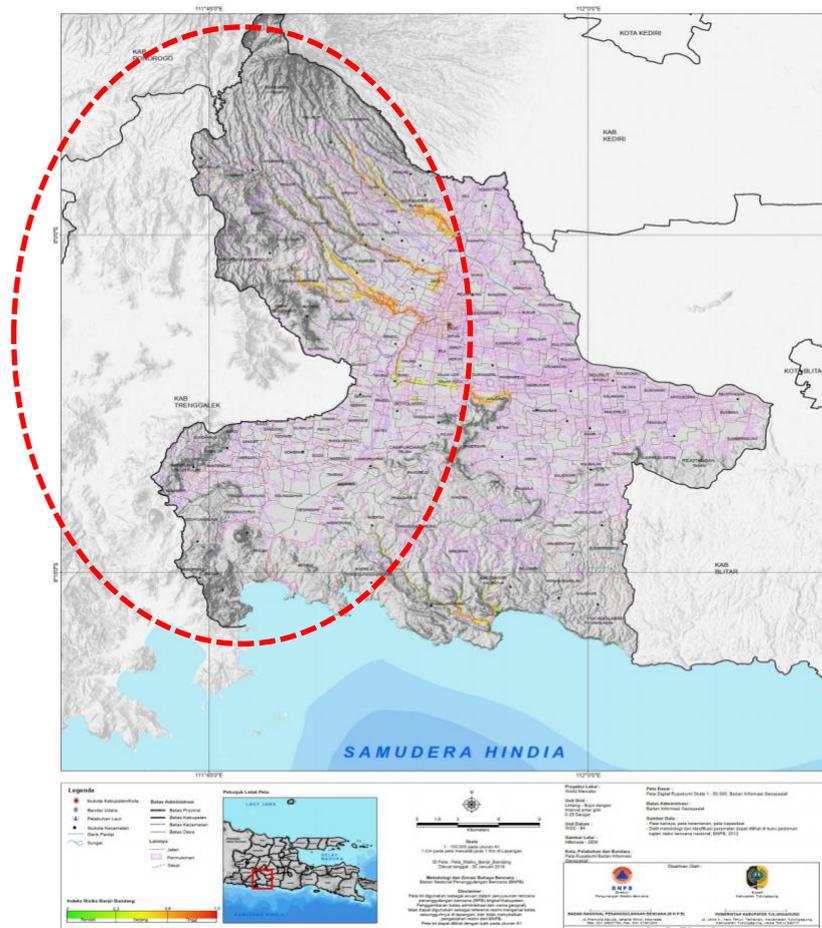


Figure 8. Flash Flood Disaster-Prone Areas (Tulungagung Regency Disaster Risk Study, 2019)

Based on the Tulungagung Regency Disaster Risk Study 2019-2023 (Source: BPBD Tulungagung Regency), the KAS is also an area with the risk of flash floods and landslides. Several factors trigger the disaster: geological and soil aspects, hydrological and climatological aspects, topographical aspects, and land cover aspects (vegetation). Farmers who use nature irresponsibly also contribute to the risk.



Figure 9. Landslide Prone Areas (Tulungagung Regency Disaster Risk Study, 2019)

Based on the explanation of the primary physical conditions above, it can be concluded that the development of the Tulungagung Regency Agropolitan Area in addition to promising economic growth potential, can also be a threat if the area is used excessively. Threats at several locations indicate that land-use changes from perennials to horticultural crops may cause landslides and flash floods. The land used to catch water cannot function properly due to different plants. In the dry season, the water discharge produced by this area's water sources is reduced or even completely dry. Therefore, land use in agropolitan areas must be suitable and capable of reducing the risk of disasters in the future.

3.2.2. Analysis of Economic Conditions

The largest GRDP contributor to Tulungagung Regency in 2020 is the manufacturing sector, with 22.33% of the total GRDP. The second-largest sector is wholesale and retail trade; car and motorcycle repairs contributed 19.74% to the GRDP, and the third sector was the agriculture, forestry, and fishery sector with 19.51% of the total GRDP. The picture of the GRDP contributor indirectly positions the KAS in its contribution to shaping the economic structure of the agriculture, forestry, and fisheries sectors in the Tulungagung Regency. The people's economic activities in the Tulungagung Agropolitan Region (Sendang

District, Pagerwojo District, Karangrejo District, and Kauman District) are very representative of the characteristics of the region. Sendang and Pagerwojo sub-districts which are located in the highlands, tend to develop the agricultural sector of food crops, horticulture, and animal husbandry. Karangrejo and Kauman sub-districts are located at the foot of Mount Wilis, so the community's economic activities are more varied and tend not to be in the non-agricultural sector.

Based on the description of the economic conditions above, it can be concluded that Sendang and Pagerwojo sub-districts are the centers of regional growth. Meanwhile, Karangrejo and Kauman sub-districts act as buffer zones and agroindustry development. The regional growth center is an agribusiness service area for a buffer zone. The system is related to the existing accessibility and will be built according to need. As an economic area, the existing physical facilities and those to be built are attracting factors for agribusiness activities in the surrounding area.

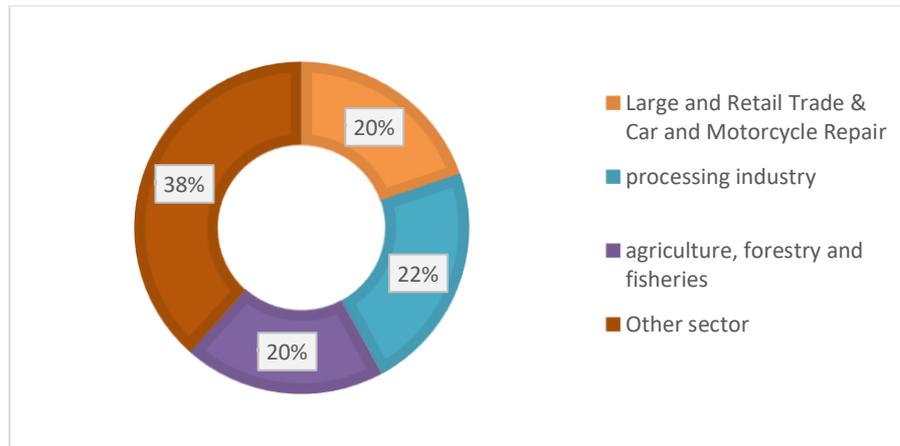


Figure 10. Sector Forming GRDP Kab. Tulungagung Year 2020 (Badan Pusat Statistik [BPS], 2021)

3.2.3. Analysis of Population Social Conditions

Referring to the 2020 Population Census Results, the highest population in the KAS is Kauman District (BPS, 2021). The population of Kauman District is 51,776 people, consisting of 25,951 male residents and 25,825 female residents, with a population density of 1,676 people/km². In the second position is Sendang District, with a population of 46,906 people consisting of 23,503 male residents and 23,403 female residents and an average population density of 530 people/km². In the third position is the Karangrejo sub-district, with a population of 43,439 people consisting of 21,644 male residents and 21,795 female residents and a population density of 1,222 people/km². Kauman District occupies the last position with a population of 31,396 people, consisting of 15,774 male residents and 15,622 female residents, and a population density of 356 people/km². The population density between villages in all sub-districts is not evenly distributed. Geographical factors and unequal infrastructure contribute to this asymmetrical distribution.

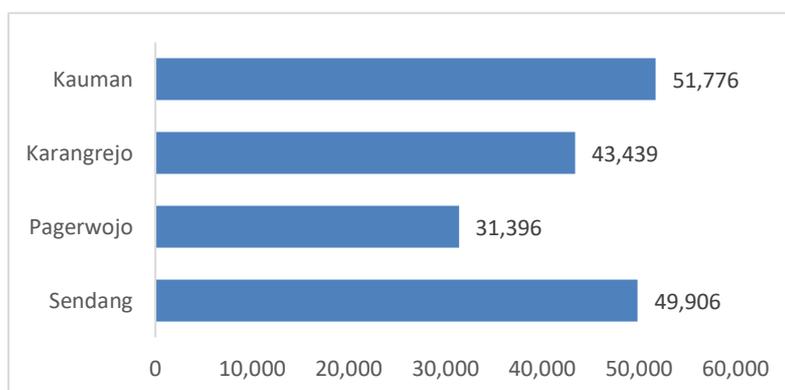


Figure 11. Total Population of KAS (BPS, 2021)

Furthermore, the population of the KAS is entirely dominated by the productive age group of 15-64 years. This shows that residents in the Districts of Sendang, Pagerwojo, Karangrejo, and Kauman have abundant human resource potential in developing the agropolitan concept. In addition, from the population composition above, it can be seen that the number of people with productive age is higher than the number of unproductive age. This demographic bonus for the government should be a distinct advantage because the high number of productive age population will help accelerate regional economic growth.

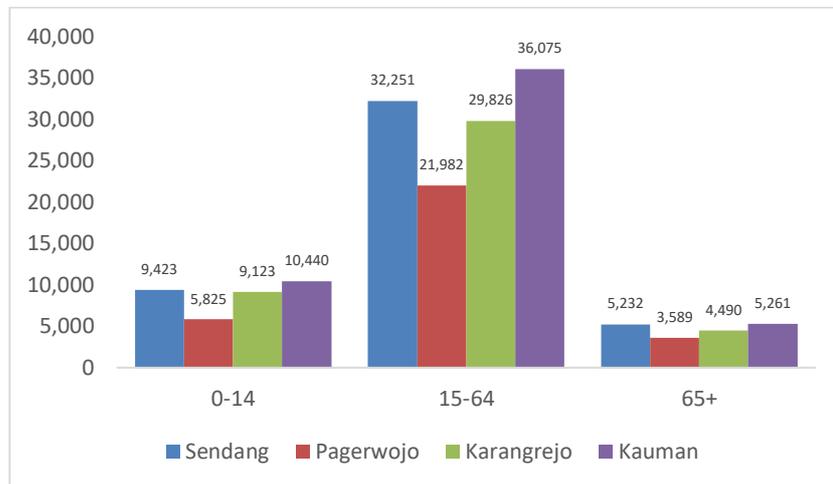


Figure 11. Total Population of Agropolitan Areas by Age Group (BPS, 2021)

If observed by age group, more than 50 percent of the population in Sendang District is in the productive age group, 32,251 people. The remaining 9,423 people are in the 0-14 year age group, and 5,232 people are in the age group above 65 years. Similar conditions were found in Pagerwojo District with a productive age group of 27,982 people, while the remaining 5,825 people were in the 0-14 year age group and 3,589 people in the over 65 year age group. Karangrejo subdistrict productive age group of 29,826 people, while the remaining 9,123 people in the age group 0-14 years and 4,490 people in the age group above 65 years. Furthermore, the productive age group in Kauman District is 36,075 people, while the remaining 10,440 people are in the 0-14 year age group and 5,261 people are in the age group above 65 years.

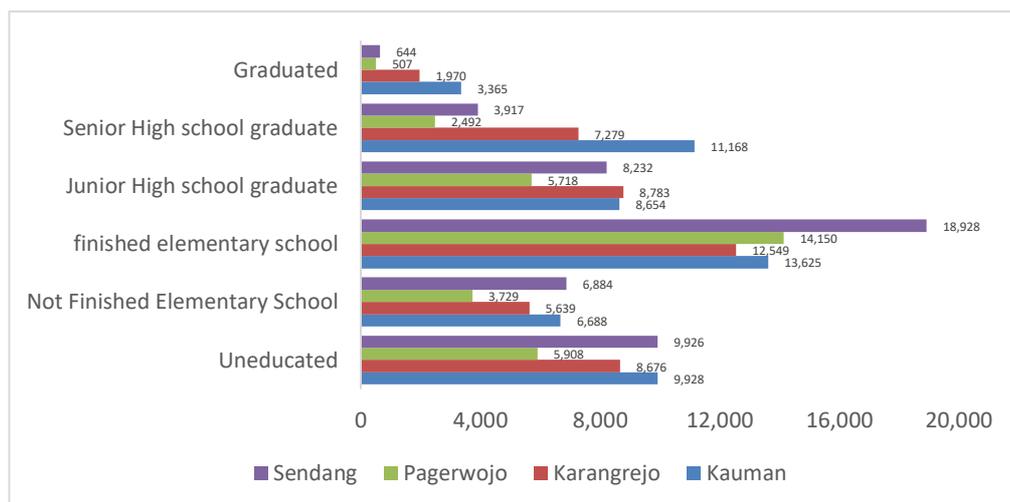


Figure 12. Total Population of KAS Based on Education (BPS, 2021)

The quality of human resources is also determined by how high the level of education is. In general, the availability of labor in agropolitan development is dominated by workers with a basic education level. Meanwhile, workers with junior high school and university education are more often found in the

Karangrejo and Kauman sub-districts. These districts are closer to the Tulungagung urban area, with more complete educational facilities. Therefore, in the future, it is still necessary to carry out training activities or increase skills so that agropolitan supporting sectors such as agriculture and animal husbandry can be maximized. The concept of agropolitan development should pay attention to increasing farmers and breeders' income and improving the welfare of rural communities. With the increase in the welfare of rural communities, it is automatically expected that the income of farmers and ranchers will also increase.

3.3. SWOT Analysis

Determination of alternative strategies for achieving each target indicator or set of inherent targets is first to conduct a SWOT (strength, weakness, opportunity, and threat) analysis. The main material used in the SWOT analysis is the result of the study of the strategic issues that have been formulated in the previous chapter, which are further classified based on the influence of internal and external factors attached to each issue. The identification of internal and external factors and the SWOT analysis are shown in the table below:

Table 1. Internal and External Factors

Strength	Opportunity
Managers of agropolitan areas have good communication skills with the community and related stakeholders	Availability of supporting infrastructure and agricultural processing that can support agropolitan areas
Decision making through the approval level according to the authority	Local residents have known and agreed with the government's commitment to developing agropolitan areas
There are farmer group institutions that support and accommodate farming communities around the agropolitan area	Local residents are involved in the development of agropolitan areas
Weakness	Threat
Resources owned by managers of agropolitan areas are low	Existing infrastructure does not meet the needs of agropolitan areas
The resources involved in the development of agropolitan tourism areas have not been trained and have not been professional	Infrastructure is in poor condition and poorly maintained
Management commitment to agropolitan areas is low	The government has not been able to fulfill the infrastructure needs of the agropolitan area
There has been no regular training to improve the skills and insight of agropolitan area managers. There is an overlapping in each agropolitan area manager position	The absence of adequate resources in managing the supporting infrastructure for agropolitan areas
There is no key performance indicator (KPI) in agropolitan area management	There is no environmental impact study on the development of agropolitan areas
	The government is less active in the dialogue with some residents who disagree with the existence of agropolitan
	The government has not formed and fostered a professional and adequate agropolitan area management team
	The policies taken related to the management of agropolitan areas have not absorbed the aspirations of the relevant stakeholders

From the identification of these internal and external factors, a strategy formulation is drawn up and divided into four types of strategy options:

- a) S-O Strategy, a strategy that focuses on efforts to optimize strengths and maximize opportunities
- b) S-T Strategy, a strategy used by using the strength (strength) owned to deal with the threats (threats) faced

- c) W-O Strategy, the choice of strategy is made by improving the weaknesses (weaknesses) to maximize the existing opportunities (opportunities)
- d) W-T Strategy, the choice of strategy with efforts to improve internal weaknesses to prevent the impact of threats (threats) that arise

The matrix of SWOT strategy choices in the development of KAS can be seen in the following table:

Table 2. The matrix of SWOT strategy choices

Internal Eksternal	Opportunity	Threat
	Availability of Supporting infrastructure and agricultural processing that can support agropolitan areas	The existing infrastructure does not meet the needs of agropolitan areas
	Local residents have known and agreed with the government's commitment to developing agropolitan areas	Infrastructure is in poor condition and poorly maintained
	Local residents are involved in the development of agropolitan areas	The government has not been able to fulfill the infrastructure needs of the agropolitan area
		The absence of adequate resources in managing the supporting infrastructure for agropolitan areas
		There is no environmental impact study on the development of agropolitan areas
		The Government is less active in the dialogue with some residents who disagree with the existence of agropolitan
		The Government has not formed and fostered a professional and adequate agropolitan area management team
	The policies taken related to the management of agropolitan areas have not absorbed the aspirations of the relevant stakeholders	
Strength	S-O Strategy	S-T Strategy
Managers of agropolitan areas have good communication skills with the community and related stakeholders	Increase collaboration and synergy between cooperatives and business entities managing agropolitan areas with residents	Carry out development and improvement of infrastructure quality
Decision making through the approval level according to the authority	Increasing the empowerment of farmer groups in agropolitan areas	Conduct environmental impact studies to prevent natural disasters
There are farmer group institutions that support and accommodate farming communities around the agropolitan areas		Improve communication, dialogue, and collaboration between the government, cooperatives, area managers, and residents/farmer groups
		Carry out professional management of agropolitan area management
Weakness	W-O Strategy	W-T Strategy
Human resources owned by managers of agropolitan areas are low	Increase cooperation between managers and local residents in mutually beneficial schemes	Intensify regional support infrastructure development
Human resources involved in the development of agropolitan areas have not been trained and have not been professional	Conduct coaching and training for local residents as commodity producers	Increase awareness of agropolitan area managers to increase production in a sustainable manner
Management commitment of agropolitan areas is low		Improve management training and development, skill and knowledge of residents, farmer group, and cooperatives/agropolitan area manager
There has been no regular training to improve the skills and insight of agropolitan area managers		
There is overlapping in each position of the agropolitan area managers		
There is no key performance indicator in agropolitan area development		

Furthermore, to determine the strategy used in the development of the KAS, a SWOT analysis was carried out through a series of calculations known as IFAS (internal factor analysis strategy) and EFAS (external factor analysis strategy) calculations by calculating the weight value and ratings. Twenty people responded to the questionnaire from 30 distributed questionnaires.

Table 3. IFAS-EFAS matrix

	Weight	Rating	Score
Strength			
Managers of agropolitan areas have good communication skills with the community and related stakeholders	0,34	3,6	1,23
Decision making through the approval level according to the authority	0,32	3,5	1,12
There are farmer group institutions that support and accommodate farming communities around the agropolitan area	0,34	3,7	1,26
Total	1,00		3,60
Weakness			
Resources owned by managers of agropolitan areas are low	0,14	2,5	0,36
The resources involved in the development of agropolitan tourism areas have not been trained and have not been professional	0,17	2,8	0,48
Management commitment of agropolitan area is low	0,17	2,8	0,48
There has been no regular training to improve the skills and insight of agropolitan area managers	0,17	2,2	0,38
there is overlapping in each position of agropolitan area managers	0,17	2,5	0,42
There is no key performance indicator (KPI) in agropolitan area management	0,17	2,9	0,50
Total	1,00		2,62
TOTAL IFAS SCORE			0,98

	Weight	Rating	Score
Opportunity			
Availability of supporting infrastructure and agricultural processing that can support agropolitan areas	0,30	3,7	1,12
Local residents have known and agreed with the government's commitment to developing agropolitan areas	0,34	3,5	1,18
Local residents are involved in the development of agropolitan areas	0,36	3,6	1,29
Total	1,00		3,60
Threat			
Existing infrastructure does not meet the needs of agropolitan areas	0,12	2,5	0,30
Infrastructure is in poor condition and poorly maintained	0,11	2,8	0,32
The government has not been able to fulfill the infrastructure needs of the agropolitan area	0,12	2,6	0,31
The absence of adequate resources in managing the supporting infrastructure for agropolitan areas	0,11	2,5	0,29
There is no environmental impact study on the development of agropolitan areas	0,14	2,6	0,36
The government is less active in the dialogue with some residents who disagree with the existence of agropolitan	0,13	2,8	0,37
The government has not formed and fostered a professional and adequate agropolitan area management team	0,13	2,9	0,38
The policies taken related to the management of agropolitan areas have not absorbed the aspirations of the relevant stakeholders	0,13	2,6	0,34
Total	1,00		2,67
TOTAL EFAS SCORE			0,93

From the results of the IFAS-EFAS analysis above, it was found that the IFAS score was 0.98, and the EFAS score was 0.93. Thus, the right strategy used for the development of the KAS is the S-O strategy. In other words, two KAS development strategies can produce optimal impacts on regional development. The first is increasing collaboration and synergy between cooperatives and business entities managing agropolitan areas with residents. Triangular cooperation between farmers as producers, cooperatives as business managers, and business entities as users of agropolitan products must be carried out more intensively. The second is increasing the empowerment of farmer groups in agropolitan areas, which aims to improve the skills and knowledge of farmers in producing agricultural commodities in KAS. Further details can be seen in the following diagram:

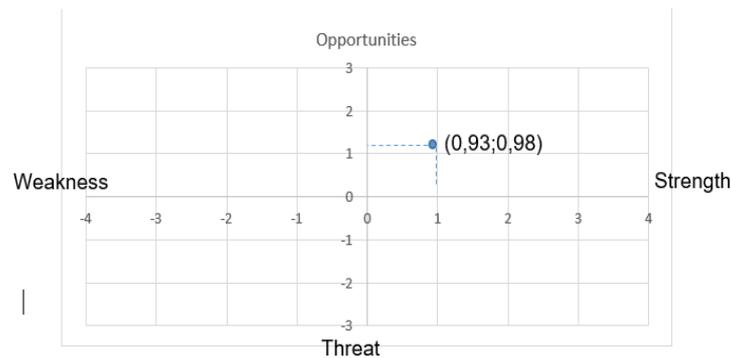


Figure 13. SWOT Diagram

After going through the analysis and compilation of data, the direction of the whole discussion returns to the main goal of whether or not agropolitan development can provide sustainable economic growth. Agropolitan development in the current state can provide sustainable economic growth. In summary, several factors that affect the ability of the Sendang Agropolitan Area (KAS) to become a sector that can be relied upon include policies, primary physical conditions (environment), and economic and social conditions of the population.

Even though it is not the main contributor to Tulungagung's GRDP at this time, the contribution of the agriculture, forestry, and fisheries sectors, including the Sendang Agropolitan Area (KAS) is still worthy of consideration. At the national, provincial, and district levels, the policy directions for developing the Sendang Agropolitan Area (KAS) show linkages and harmony. However, it is necessary to maintain consistency at the level of program or activity planning in regional apparatus and implementation at the community level of agropolitan actors. The relevant regional apparatus can promote cross-sectoral programs/activities by providing related infrastructures so that existing and future infrastructure can simultaneously spur agribusiness activities in the surrounding area.

The potential of the Tulungagung Regency Agropolitan Area should be viewed not only from economic growth but also from the potential environmental impact caused by the resulting development. Thus, land suitability and capability must be the main requirements in developing agropolitan areas to suppress potential disaster risks. Concerning the social aspect of the population, the composition of the population of the Sendang Agropolitan Region (KAS) shows that the productive age population is higher than the non-productive age. However, the laborers for agropolitan development are still dominated by workers with elementary school education.

The facts mentioned above can be developed into a regional development strategy in the next few years. The SWOT analysis provides several alternative strategy formulations, mainly increasing cooperation and synergy between cooperatives and business entities that manage agropolitan areas and residents, which are then developed into two main programs. The first is hinterland development areas that support the processing of agricultural products until it has added value. Second is the cooperation in providing infrastructures such as banking institutions, markets, and road networks. Furthermore, it is necessary to empower farmer groups through two programs: (a) skills training and quality improvement of innovative and creative agropolitan product standardization and (b) counseling on socio-economic fluctuations that impact people's lifestyles and behavior.

Conclusions

The development of the Agropolitan Area in Tulungagung Regency began in 2005 with the establishment of the Sendang Agropolitan Area (KAS). With various obstacles and challenges over the past 16 years, KAS still promises prosperity and sustainability if its development pays attention to several aspects. First, support for agropolitan development policies is obtained both from within the region and from regional, provincial, and central levels. Developing the necessary infrastructure, such as a road network, may accelerate development and increase economic growth in the Selingkar Wilis area. Second, the physical condition of the agropolitan area is at risk of flash floods, landslides, droughts, and forest

fires. Therefore, its development must also be guided by the spatial utilization plan. That is, the development of agropolitan must be in accordance with the structural plan, spatial patterns, and the carrying capacity of the environment so as to minimize the impact of decreasing environmental quality. Third, residents in the Districts of Sendang, Pagerwojo, Karangrejo, and Kauman have abundant human resource potential in developing the agropolitan concept. However, the availability of labor in agropolitan development is dominated by workers with a primary school education level. Thus, training and skill improvement are very much desired in the future.

From the SWOT analysis results, the proper strategy for the development of the KAS is the S-O strategy, (a) increasing collaboration and synergy between cooperatives and business entities managing agropolitan areas and residents, (b) increasing empowerment of farmer groups in agropolitan areas.

As with other studies, this study has some limitations. Since this is a case study, it cannot be generalized to a larger scope. Differences in research results are very likely to occur in different objects and research locations. Therefore, there is an opportunity to conduct further studies with the same theme but in different locations. Future research may focus more on business strategies and public and private sector partnerships.

Recommendation

The KAS in the Tulungagung regency can be likened to a sleeping giant. Since its establishment in 2005, the KAS has not been able to show itself as an ideal picture of an Agribusiness and Agro-industry area that drives regional economic growth, alleviates poverty, and triggers community welfare. This is apparent from the dominant production of raw goods compared to semi-finished and finished goods. KAS also faces the threat of land damage that can lead to natural disasters. Thus, we provide the following recommendations to develop KAS into an ideal agropolitan area.

First, develop areas that provide value-added facilities for agricultural products. Second, provide supporting infrastructures such as financial infrastructure, road networks, markets, and several other infrastructures through state financing, third parties, or public and private sector partnerships. Third, encourage innovation and creativity to improve the quality of Agropolitan products. Fourth, conduct counseling about the possibility of economic turmoil that affects people's behavior.

Implementation

KAS development is not a single sector development activity but is a cross-section development. The local governments can focus on providing infrastructures, connectivity, and developing human resources. Meanwhile, public and private sector partnership is carried out to encourage regional development in terms of capital, innovation, facilities, and marketing. Lastly, cooperation between local governments and the central government needs to be done to ensure support for policies that maintain agropolitan sustainability and regional integration.

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