



The Dynamics of Sustainable Development in Rurban Area (Case Study in Mejobo Village, Mejobo District, Kudus Regency)

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Abstract

Mejobo Village was located in the Southern part of Kudus Regency, is a strategic area for the development of industrial activities. The growth of small and household, industrial activities in agricultural areas in Mejobo Village has led to the formation of the rural-urban areas (rurban). This study aims to describe the dynamics of sustainable development in rurban areas in Mejobo Village alongside the development of the industrial sector in agricultural areas. The research method being used in this study is quantitative, where data are collected through questioner, conducted observation, semi-structured interview, and obtained documents that are relevant to the investigation. The research shows that in Mejobo Village proves of sustainable development can be found within the economic activities; productivity of industrial activities; community activities and the availability of environmental facilities and infrastructure. Through this study, it can be concluded that the change from rural to rural-urban areas due to the development of small industries and households' industries in Mejobo Village has been sustainable, with the need for continuous attention towards the productivity of the agricultural areas, so that it remains as the basis of local economic development.

Keywords: agriculture; industry; rurban; sustainable development

1. Introduction

Urbanization influences the development of urban areas. The urbanization process affects the morphology of urban formation in rural areas. Soetomo (2013), an Indonesian expert in urban and city planning, explained that the process of urbanization in rural areas is a process of urban formation in rural areas because of the modernization of local rural potential to improve the socio-economic conditions of the people. Urban development in rural areas due to urbanization can create new urban areas in rural areas which are known as rural-urban areas (rurban) (Bassand, Joye, & Schuler, 1988). Generally, rurban areas are characterized by the development of human settlement rather than agricultural development. Besides, the level of built-up land density continues to increase, so that the rurban area produces a series of environmental problems such as loss of vegetation and natural habitat, a decreasing of water levels, exploitation of natural resources and air, water and soil pollution (Kolhe & Dhote, 2016).

The concern for the formation of a rurban area in rural areas has always been related to the sustainable development of the area. Sustainable development in the rurban area emphasizes the integration between human activities and the nature that requires a balance between economic, social and environmental factors. The World Commission on Environment and Development (WCED) explains that sustainable development requires temporal and spatial considerations for the benefit of the present generation (intra-generation dimension), future generations (inter-generation dimension), and for the benefit of the region (intra-frontier dimension) and other regions (inter-frontier dimension).

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The development of urbanization in Java island, especially the one that occurred in Kudus Regency had causes changes in the rural areas to become rurban areas, because of the growth of local agricultural economic activities and industrialization. One of the areas where this change can be found is in Mejobo Village. Mejobo Village, located in the Southern part of Kudus Regency, is a strategic area for the development of industrial activities. The development of industrial activities in Mejobo Village changed the Mejobo Village into a rurban area. The change into a rurban area in Mejobo Village is shown by the increasing level of built-up land along the main road corridor, the changing occupation from the primary to secondary and tertiary sectors, the increased migration of the people from outside Mejobo to Mejobo Village that is higher than the number of the people who migrate from the village, and the decreased productivity of agricultural land.

This study aims to identify the factor influencing the dynamics of sustainable development in the rurban area alongside the development of the industrial sector in the agricultural area in Mejobo Village. This study is important to be investigated because within it lies the knowledge of how rurban areas can develop around urban areas sustainably. This study will bring benefit to those who are working in determining the factors that impacted the development of sustainable rurban areas. The dynamics of sustainable development in rurban areas in Mejobo Village can be described by examining the characteristics of changes in the rural areas and by analyzing indicators that affect the sustainable development in the rurban area, especially in Mejobo Village.

2. Research Method

This research was conducted by using the quantitative method which is considered as the best method to understand the dynamics of sustainable development in rurban areas alongside the development of the industrial sector in the agricultural areas. Quantitative as a research method is a technique based on the philosophy of positivism that is being used to examine specific populations or samples (Sugiyono, 2012). Data were obtained by using a questioner, field observation, semi-structured interviews, and collected documents that are relevant to the study. The questioner is used to reach a large number of respondents in Mejobo village where 94 people are taken as the sample out of 1503 people (BPS Kabupaten Kudus, 2015). The amount of the sample is decided based on Slovin's sample theory (Sevilla et al., 1960). Observations in this study are conducted through the passive participatory technique through visited Mejobo village without getting involved in the activity of the residents. By doing so, the collection of the field data was conducted by acting as an observer. The object that is observed includes the place and space, the people and their actions, and the activities or the events. The interview was conducted in a semi-structured form. The purpose of this type of interview is to acknowledge the problem more openly, mainly because the interviewee is invited to states their opinions and ideas. Last but not least, data collection through documents was conducted by collecting data in the form of official records, statistical and quantitative data, photography of the area, and mapping of the area in Mejobo village.

3. Literature Review

3.1 Sustainable Development

Sustainable development is the development that meet the needs of today's society without neglecting the needs of the future generations to meet their needs, as a process of change in which resource utilization, investment direction, development orientation, and institutional change are always in balance and synergistically reinforce the potential of present and future human needs and aspirations (Brundtland Commission, 1987). Sustainability emphasizes the integration between human activities and nature and thus requires a balance between economic, social and environmental goals (Saragih, 2015). In the imperatives of sustainable development, Holden, Linnerud, & Banister (2016) explained that the minimum requirement for sustainable development is the total availability of natural capital stock. The availability of entire natural capital stock is also explained specifically by Serageldin et al. (1994) in four main categories, namely: (1) Natural capital stock, includes everything provided by nature; (2) Human-made capital stock, includes all forms of investment and technology; (3) Human capital stock, includes human resources (HR); (4) capital stock, includes social, social organizations, institutions, and institutions.

The concept of sustainable development includes three aspects, namely: (1) economic sustainability that can be defined as development that produce goods and services on an ongoing basis and able to avoid sectoral imbalances that can damage agricultural and industrial production; (2) environmental sustainability that can be understood as the ecological sustainability system that must be able to maintain stable resources, avoid exploitation of natural resources; and (3) the function of environmental absorption. The concept of sustainable development also concerns with the maintenance of biodiversity, the stability of airspace, and other ecosystem functions that are not categorized as economic sources, and third social sustainability that can be defined as a system capable of achieving equality, providing social services including health, education, gender, and political accountability.

According to Hemphill, Berry, & McGreal (2004), in a study entitled "An Indicator based on an Approach to Measuring Sustainable Urban Regeneration Performance" the indicators of sustainable development should consist of five critical factors, namely: economy and work activities based on the available resources, resources, policies on land use, transportation and mobility, and community benefits. The concept of sustainability is multidimensional, and therefore it leads to multiple interpretations. Ghosh,

Vale, & Vale (2006) states that the indicators that have been developed to date can be classified as general and core-level indicators. At a general level, indicators are simple, act as awareness signals and are easily understood by the public. At the core level, they are decision making and modification indices and performance appraisal guides for formulating and initiating effective policy planning (Ghosh et al., 2006). Furthermore, Neuman & Churchill (2015) states that there are eight indicators of sustainable development, namely: (1) the balance of economic, ecological and social aspects in achieving growth; (2) the analysis of the development of the quality of people's lives; (3) the protection of natural data sources, ecosystems and local habitats in supporting human activities; (4) the protection of natural living processes of ecosystems; (5) reducing the level of consumption and effective use of resources; (6) ecological friendly industry; (7) economical environment in the utilization of resources; and (8) the assessment of the impact of development on ecology (Neuman & Churchill, 2015).

Based on the above definition of sustainable development and its indicators, it is clear that sustainable development is a process that occurs continuously. Given the development of modern society and consumptive culture, sustainable development is a necessity for the life of the world community today. To conclude, indicators of sustainable development in Mejobo Village, Mejobo District, by the explanation of the sources of literature above are as follows: first is the economic aspect. In the economic aspects, it is necessary to consider factors such as the cost efficiency, local economic development (LED), employment opportunities and economic activities, productivity, resource efficiency, affordability (the market purchasing ability), government efficiency, product quality and design that is attractive to the market to consume, eco-friendly industry, transportation and mobility, and renewable technology and energy. Second is the ecological aspect. The ecological issues that need to be considered are the impact of environmental damage, preventive actions, preservation of open space, aesthetics, the use of building resources and development of sustainable settlements. The third is the social aspect. The social elements focus on equal access to public and green open spaces, education, health and entertainment facilities, social service provision, public participation, cultural preservation, and quality of life.

3.2 Establishment of Rurban Area

Bassand et al. (1988) explain that rurban area is a change in the rural area to become the rural-urban area because of the development in the rural area and the increasing potential of local resources that includes agricultural and non-agricultural, such as rural industries and the nodes of rural trade. Rurbanisation is a process of development from the rural area with support from the urban area. Urban areas are regions that experience the effect of growth because of urban and rural activities (Kolhe & Dhote, 2016). According to Kolhe & Dhote (2016), rurban is an area that is developing in rural areas that are regulated by local rural systems with urban activity patterns (Kolhe & Dhote, 2016). The pattern of rurban areas mixes local rural activities and urban activities. Therefore, it is also known as rural-urban or *desakota* areas (Masser, Shapira, & Edgington, 1994). Generally, rurban areas are characterized by several factors, such as: (1) the use of land as residential and real estate areas rather than agricultural areas; (2) changes in employment from the primary to the secondary and tertiary sectors; (3) the density of the building along the main road because of the construction along the highway so that the widening of the road becomes very difficult; and (4) the level of built-up land density continues to increase so that the rurban area produces a series of environmental problems such as loss of vegetation and natural habitat, decreasing water levels, exploitation of natural resources and degradation, and air, water and soil pollution (Kolhe & Dhote, 2016).

4. Overview of the Mejobo Village in Mejobo District, Kudus Regency

Mejobo Village is part of the Mejobo District administrative area located in the Southern part of Kudus Regency (Figure 1). Mejobo Village is one of eleven villages in Mejobo District with an area of ± 205.33 Ha. Topographically, Mejobo Village in Mejobo District is a land with an altitude of ± 6-14 m above sea level. The slope in Mejobo Village is 0-8% with the landform of Alluvial plains and flat reliefs. Mejobo Village has mineral resources in the form of clay. The land allotment in Mejobo Village in 2017 is for rice fields and non-rice fields. In 2017, there are 101.43 ha (49%) of paddy fields in Mejobo Village and 103.91 Ha (51%) of non-rice fields (BPS Kabupaten Kudus, 2017).

The population in Mejobo Village in 2016 was 8,881 people, an increase from the year before. The number of people who comes to Mejobo Village from 2008 to 2016 increased in comparison to the number of people who left the village (BPS Kabupaten Kudus, 2017). Based on the data of 2008-2016, there are 1014 people (53 %) who came to Mejobo village, and there are 916 people (47 %) who left the village. An exception can be made only for the data from 2016 where there are slightly more people who left Mejobo Village in comparison to the number of people who came to the village. In 2015, there was 105 people (48%), or less than the number of people who moved from Mejobo Village, which were 116 people (52%). The population of Mejobo Village who worked in 2016 was 1,749 people. The number of people who work as industrial workers are 584 people or 33% of the total working population (BPS Kabupaten Kudus, 2015).

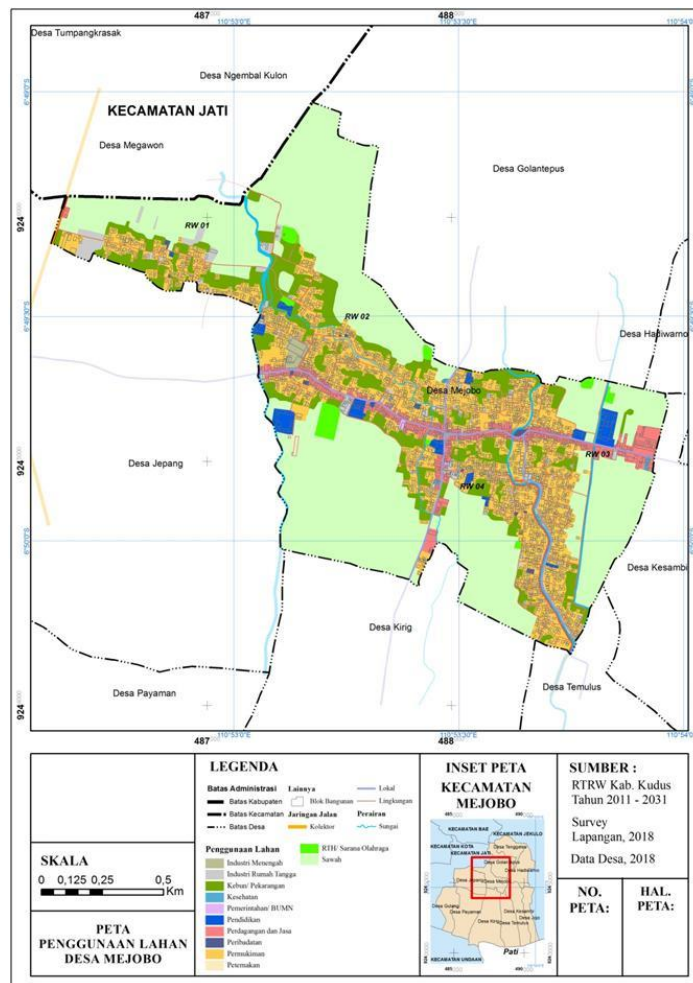


Figure 1. Map of the Land Use in Mejobo Village (Source: Pemerintah Kabupaten Kudus, 2011)

Based on Mejobo's Village profile data in 2017 (Figure 2), it can be known that the rice field area in Mejobo Village is 101.43 Ha or 69% of the agricultural land of food crops. The area of paddy fields according to the type of irrigation in Mejobo Village in 2016 shows that 88% of paddy fields in Mejobo Village were still in the form of rice fields with a simple irrigation system. In 2016 the harvested area was 186 hectares with a production of 11.946 kW of rice. To conclude, the area of harvest and production of rice in Mejobo Village from 2010 to 2016 has not increased.

The development of small and household industries in Mejobo Village has occurred since 1990 and has had an impact on urban growth. In figure 3, it can be seen that in 2016, Mejobo village has 27 small-scale industries and 92 household industries. The home industry absorbs the most significant number of workers as many as 216 people, followed by a small industry that incorporates 197 people. The development of small and household industries in Mejobo Village is influenced by the potential of human resources, such as the local people who wants to learn and form an independent business by developing a concrete iron processing industry. The development of the industry has caused many young people in Mejobo Village to switch jobs from farmers to the industrial worker. In continuation of these developments, the area that is being used for small and households industrial activities in Mejobo Village is 4.52 Ha. In addition to developing small and household industries, in Mejobo Village there is also one medium scale industry, which is the Nicorama Citra Tobacco company, a cigarette industry with a land area of 0.9 Ha.

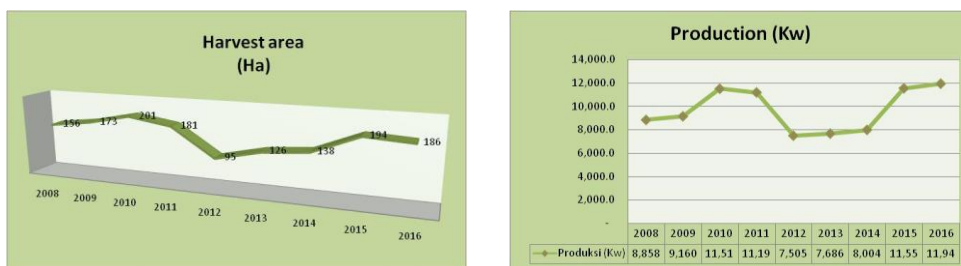


Figure 2. The Amount of Industries and Workers in the Small and Household Industries (Source: BPS Kabupaten Kudus, 2017)

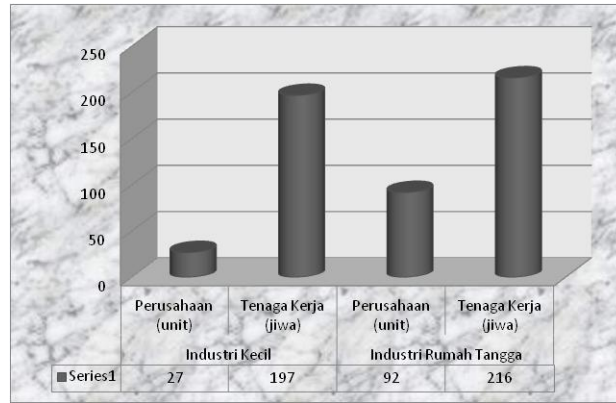


Figure 3. The Amount of Industries and Workers in the Small and Household Industries (Source: BPS Kabupaten Kudus, 2017)

5. Description and Analysis

5.1 Analysis of the Formation of Rurban Area

The formation of a rurban area in Mejobo Village located in Mejobo District increased due to the activity of small and households' industries in agricultural areas, beginning in the 1990s. Small and household industries that are developing, such as the iron processing industries (Figure 4).

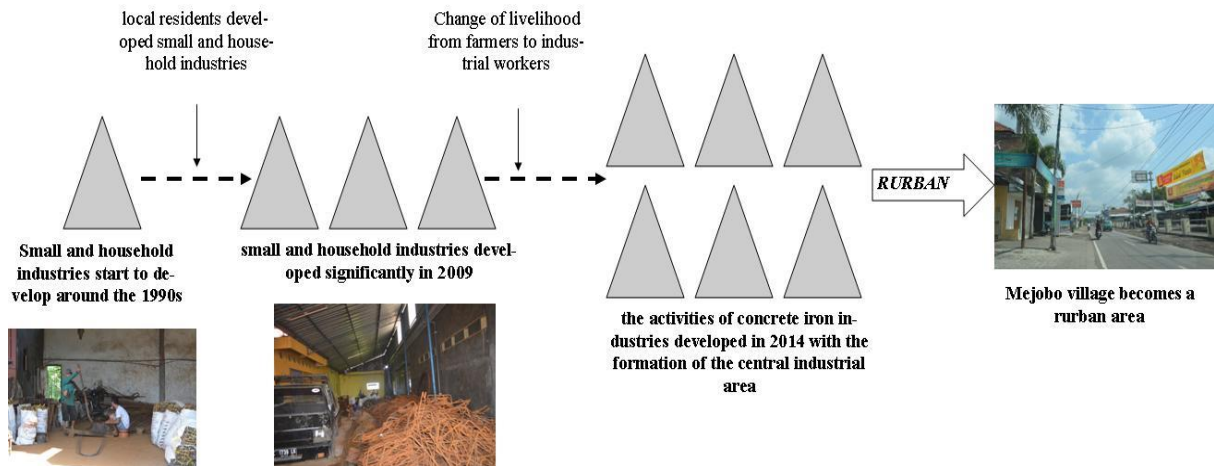


Figure 4. The Development of Small and Household Industries (Source: BPS Kabupaten Kudus, 2017)

This type of industry initially emerges from the creativity of residents who work as an iron processor who later develops his skill into a business in transforming iron concrete into finished goods ready to be used for building and construction. Because of the development of the iron-concrete processing industry becomes ready-made products become more promising, most of the population in Mejobo Village experience the change from farming to industrial workers. In 2000, the number of families working in the concrete iron manufacturing sector was increased, which was followed by the rising number of income levels and the improved quality of life among the people in Mejobo Village.

Mejobo's rurban area began to grow more rapidly because the development of the iron industry influenced it. The concrete iron processing industry activities started to increase in 2014. The development of the concrete iron processing industry in Mejobo Village created the formation of several industrial centers because of its ability to provide professional workforce in the manufacture of concrete iron and share knowledge and skills in iron processing. With the development of the concrete iron processing industry in Mejobo Village, the urban area was growing, followed by the increased employment in the secondary sector so that residents in Mejobo Village began to shift their livelihoods from farmers to entrepreneurs in the concrete iron industry or concrete iron industry workers. Characteristics of rurban areas due to changes in rural areas in Mejobo Village include:

1. Dependence on the central city/urban areas around the rurban area decreases.

Mejobo village has developed into a rurban area which functions as the regional center in the distribution of agricultural products from areas in Mejobo District and the surrounding. This change also influences the economic, social and environmental facilities in Mejobo village. With the increasing number of facilities and infrastructures in Mejobo Village, the people become less dependent on the central city. The distance from Mejobo Village to Kudus City is about 7 KM creates a dependence from the Mejobo

Village residents to Kudus City when they need a district-level service. With the availability of facilities and infrastructure in Mejobo village and less reliance on the main city, Mejobo Village went through the experience of urbanization.

2. The availability of main roads that facilitate transportation and mobilization as an essential aspect of urban activities.

Mejobo Village connects Kudus Regency with Pati regency and Kudus City with other villages in Mejobo District. With this strategic location, Mejobo villagers can easily access the transportation between the main cities. The primary road in Mejobo Village functions as the central axis of transportation activities in Mejobo District. Besides, there is also an alternative road that works as a liaison for agricultural activities and household industrial activities in Mejobo Village.

3. Economic activities in Mejobo village change from mainly agricultural sector to small-scale and household, industrial activities.

- a. Change in the agricultural sector.

With the development of the activities of small industries and households making concrete iron which is multiplying, the economic activities in the agricultural sector in Mejobo Village are increasingly abandoned. Residents turn their livelihoods into industrial/secondary and tertiary sectors, while agriculture / primary workers are employed by residents from outside the village of Mejobo.

- b. The development of small and household industries.

Small and household industrial activities, especially the concrete iron processing industry, proliferates towards the formation of industrial center. The concrete iron industry develops in the residential area and absorbs many workers from inside and outside of the Mejobo Village. Mejobo village has 27 small-scale industries and 92 household industries

- c. Rural potential

The potential of human resources with their expertise and high work ethic especially in the iron concrete industry is the leading potential in Mejobo village. The concrete iron industry develops quite rapidly in Mejobo Village.

- d. Rural products

Products from the small and household, industrial activities continue to increase along with the continued growth of new housing and building development. It is important to mention that agricultural production has decreased or stagnated from 2010 due to a lack of productivity in agricultural land.

4. The use of land for urban settlements and household industries (see figure 5 below).

- a. Urban settlements

Urban settlements develop around the axis of the main roads and the alternative streets followed by the development of household industrial activities in the urban settlements.

- b. The level of density continues to increase

The density of built land continues to increase, and the price of land in Mejobo Village has also increased since 2014; the same year where the concrete iron industry experienced an increase. Residents' land has developed into several functions, namely as a place to live, as a place for household industrial activities, and as a distribution center for industrial products.

- c. Building density alongside the corridor of the road

Alongside the main road, there is a higher density of buildings that function as trade and service center activities. These functions emerge to support urban operations and marketing of the products from the concrete iron processing industries.

5. Changes in the lifestyle of rural people who switch their livelihoods from the primary sector to the secondary and tertiary sectors that eventually leads to a better quality of life for the people (see figure 6 and figure 7 below).

- a. Changes in employment from primary to secondary and tertiary sectors

The increased number of people working in the industrial and trade sectors caused a reduction in the number of people working in the agricultural sector. It is clear that there is a change in employment from the agricultural sector to the industrial sector.

- b. The quality of life of the villagers

The development of the concrete iron industry increased the quality of life of the people in Mejobo Village. Because of this development, the people in Mejobo Village began to develop modern lifestyles, indicated by the construction of permanent multilevel houses; many residents own four-wheeled vehicles; and the level of awareness in the importance of education for the younger generation.

5.2 Factor Analysis in Determining Indicators of Sustainable Development in the Rurban Area

Factor analysis is used to find indicators of sustainable development in Mejobo Village that are related to the existence of industrial activities in the agricultural area. The variables that are analyzed to determine the factors of sustainable development in Mejobo Village includes cost efficiency, labor, quality of workforce, primary sector production, continuity of goods and services, production balance, marketing continuity, human resources training, human resources effectiveness, consumption patterns, government-related industry policies, food agricultural land policies (*Kebijakan Lahan Pertanian Pangan Berkelanjutan/LP2B*), product quality, environmental aspects, industrial activities, government

interventions to prevent pollution, environmental aesthetics, agricultural land conversion, deforestation, pesticide use, sustainable settlements, access to health facilities, access to educational facilities, provision of social services, organizational participation, mutual cooperation (*gotong royong*), poverty line, settlement sanitation, malnutrition prevalence, life expectancy, economic supporting infrastructure, infrastructure quality, public transportation, and technology innovation.

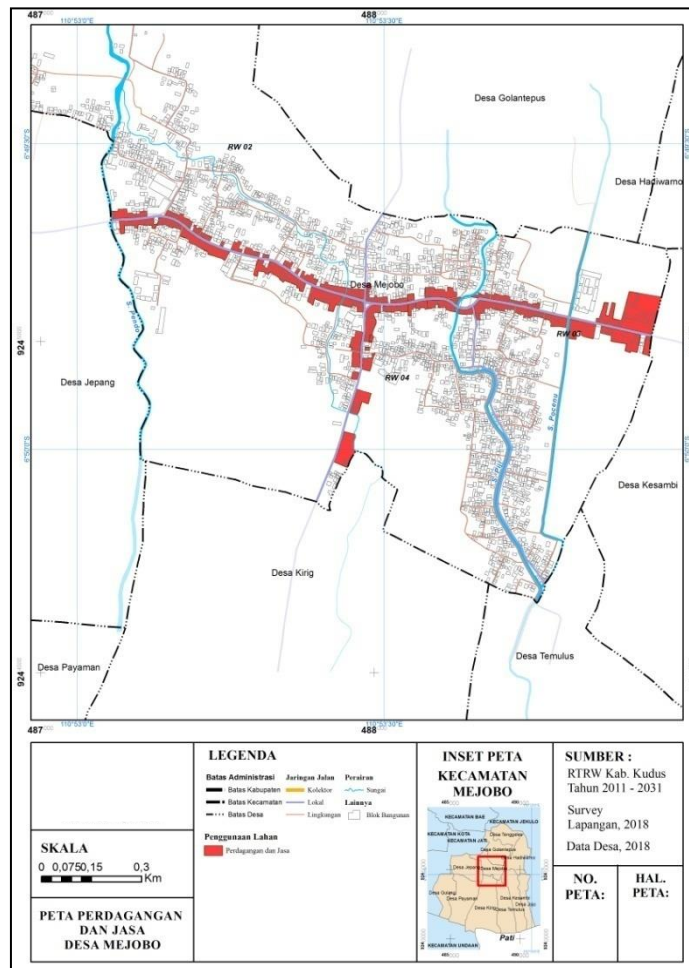


Figure 5. Secondary and Tertiary sector activities in the Main Road (Source: Pemerintah Kabupaten Kudus, 2011)

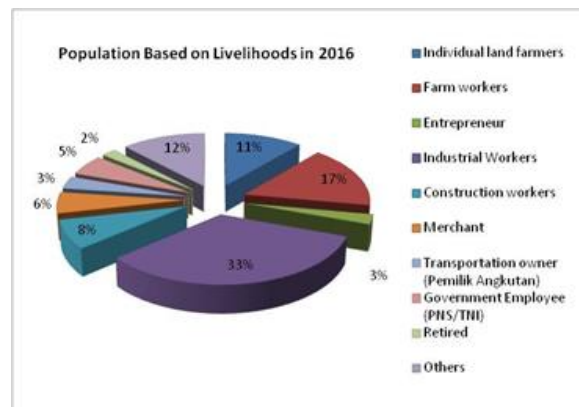


Figure 6. Population-Based on Livelihoods in Mejobo Village 2016 (Source: BPS Kabupaten Kudus, 2017)

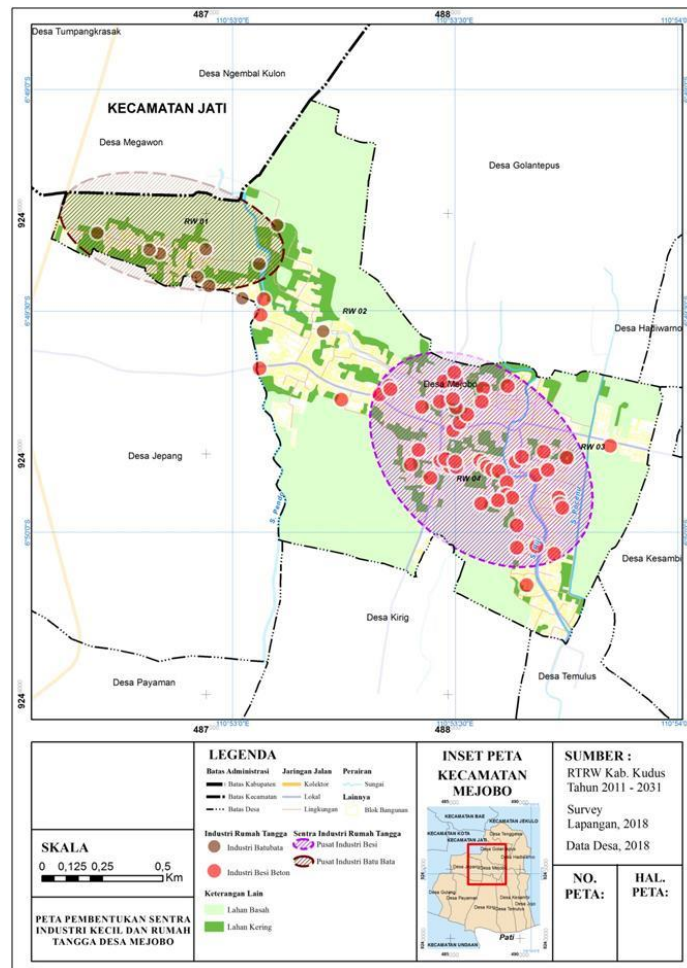


Figure 7. The Formation of Small and Household Industries in the Rurban Area (Source: Pemerintah Kabupaten Kudus, 2011)

Factor analysis was used to find the determinants of sustainable development in Mejobo Village, the IBM SPSS 20 software was used. The factor analysis was carried out using IBM SPSS 20 Software. The result shows that: (a) the activities of small and household industries that are sustainable includes indicator activities that are ecologically friendly, industrial activities that pay attention to environmental aesthetics; industrial activities that pay attention to the importance of green open space, participation of the community in relation to the economic activities, production balance between the primary and secondary economic sectors, new technological innovations to improve the economy, government policy that supports industrial activities, and the effective and efficient use of natural resources; (2) the sustainability in productivity as one of the factors includes indicators such as the ability to produce goods and services sustainably, the availability of training to improve the workers' skills/improvement of human resources, and the quality and the design of products that meet the demand of the market; (3) the factor of the sustainable agricultural sector include indicators, namely the policy for sustainable food agriculture (LP2B), the growth of productivity from the agriculture as the primary; and the attention on the role of workers as an essential resource; (4) the factor of sustainable social life in the industrial society include indicators, namely the availability of infrastructure that supports economic activities, provision of social services, continuous marketing of products in the market, efficient costs in producing the products, affordability in consuming the products, equal access to public and open spaces, equitable access to health facilities, better access to educational facilities, and maintenance of the mutual cooperation; (5) the factor of sustainable of the quality of life in the rurban community includes indicators such as low poverty line, skilled workers, the quality of eco-friendly infrastructure, and the availability of public transportation services; (6) the factor of the sustainable environment includes indicators, namely housing with proper sanitation, high life expectancy, government and community efforts to prevent waste pollution, and the development of sustainable settlements; (7) the factor of sustainable land use includes preventing agricultural land/agricultural land conversion.

5.3 Analysis of Sustainable Development in Rurban Area Alongside the Development of Small and Household Industries based on the Sustainable Development Indicators

Based on the determinant indicators of sustainable development in rurban areas alongside the development of small and household industries, it can be concluded that the development of rurban area

because of industrial activities in the agricultural areas of Mejobo Village meet the characteristics of a sustainable rural development area. The continuous growth of the rural area is caused by (1) the growth of small-scale industry and household activities that utilize the potential of local resources; (2) the productivity of industrial operations that continue to increase due to the existence of local resources that includes human resources and the availability of productive industrial areas around the households; (3) the social life of the community with the availability of urban facilities and infrastructure, such as the infrastructure that supports easy transportation and the existence of local and regional market where the products of goods and service are being distributed, while able to maintain local culture; and (4) the maintenance of environmental quality in residential areas and zero conversion of agricultural land.

There are also indicators that show the potential future problem in the current sustainable development, namely the economic factor includes indicators of production imbalance where production in the primary sector becomes stagnant while the industrial sector continues to increase along with the continued increase number of industrial activities in Mejobo Village. The absence of technological innovation in the production of concrete iron, the agricultural designation area that consists of 88 % of rice fields with simple irrigation systems, and the number of workers from outside of Mejobo village that continuously grow because the people in Mejobo Village prefers to work in the industrial sector. The social factor includes members of families who are still working as farm laborers with a low-income level (lower than the minimum wage), and the environmental factor consists of the problem of waste from the sugar industry outside Mejobo Village that can pollute the source of clean water belonging to residents.

6. Conclusion

The dynamics of sustainable development in the rural area alongside the development of industry in the agricultural areas in Mejobo village shows the existence of sustainable development. Sustainable development in the rural area, especially in Mejobo Village, can be seen through the industrial economic activities; productivity of industrial activities; availability of environmental facilities and infrastructure; and maintenance of the sanitation in the rural area. The growth of the urban area in Kudus city leads to the development of small industries and households in rural areas, such as in Mejobo village. In other words, the formation of the rural area in Mejobo village follows the model of rural establishment area around the Kudus regency, which develops as the impact of the growing urban areas in Kudus city. The hypotheses of this study are proved to be right because based on the conducted research it is clear that the development of the rural area is mainly possible because of the ability of the local resources to fulfill the need of the urban region around it by maximizing their local resources. In Mejobo village, the local resources include the quality of the human resources, the professional workplace that leads into work opportunities for residents, the availability of market to distribute industrial products, and the availability of supporting infrastructure. The dynamics of sustainable development in the rural area along with the development of industry in agricultural areas in this study follows Holden's description. The development of the rural area in Mejobo village is sustainable because the area met the three categories of sustainable development, which includes the natural capital stock, where the agricultural land is protected, and the activities of industrial production did not damage the environment. Beside that, the human capital stock, where the operations in small and household industries leads to skillful workers in the specific field of concrete iron as the primary material and the social capital stock, where the impact of the high employment status of the residents because of the increasing industrial activities in Mejobo village. The residents experience a higher quality of life as a community where they can maintain their local culture as a way of living together.

7. Recommendation

7.1 The concept of Sustainable Development in the Rural area because of the Development of Industrial Activities in the Agriculture Area

The concept of sustainable development in the rural area due to the development of industrial activities in agricultural areas, such as what happened in Mejobo Village, Mejobo District, Kudus Regency, is:

1. The concept of policy for the rural area in rural areas.
The development of the rural area in rural areas cannot be separated from the direction of government policies in developing rural areas. Government policies in developing rural areas in rural areas must pay attention to local industrial economic activities that develop by being driven by the strength of local resources, both natural resources and human resources, by not forgetting developments in the commercial agricultural sector.
2. The concept of land use and settlements in the rural area.
The land use in urban areas due to the development of the industry needs to be directed towards the development of built land in the rural area so as not to transfer the function of agricultural land and prevent environmental damage. On the other hand, built-up land use must be well organized to avoid interference with the purpose of different areas.
3. The concept of the development of facilities and infrastructure in the rural area
The increased number of facilities and new infrastructures in the rural area because of the existence of new industries is closely related to service equity and the need to improve the quality of

life for the local population. Besides, the development must also be directed towards the culture of the community so that it can be utilized optimally.

4. The concept of sustainable local economic activities
Local economic activities that develop in the rurban area such as the creation of an industrial center can support the development of the rurban area. Local economic activity needs to pay attention to the balance between the level of productivity in the economic sectors and the growth of economic activity in each sector. Local economic activities rely on the growth of industrial activities while supporting the productivity of crops that have potential economy values.
5. The concept of increasing the quality of life in the local socio-cultural community
The social life of the local people in the rurban area needs to be protected by respecting the local culture. In addition to preserving the importance of the local culture of the community, it is also necessary to establish organizations that support the growth of the rurban area and understands the local culture.
6. The concept of environmental sustainability of the rurban area
Environmental sustainability is an essential factor that needs to be considered in measuring the sustainability of rurban areas. With the development of industrial activities in urban areas, it is necessary to focus on the development of environmentally friendly industries. Economic activities need to be limited which can damage the environment and which can lead to the exploitation of natural resources.

7.2 Recommendations for Further Research

Based on the results of this research, there are several recommendations for further study, namely:

1. It is necessary to conduct new research in several different rurban areas with a broader population so that the rate of change because of the effect of the rurban area can be recognized.
2. It is essential to collect the data on migration especially on the number of people working in the small industrial sector and household industries in the rurban area. The data can be used to find out how many workers is absorbed by local industrial activities.
3. It is necessary to pay attention to the sustainability of the urban and rural settlement in the rurban areas so that they do not cause disparities in the process of sustainable development.
4. The study of sustainable development in rurban areas must lead into the production of concepts in rurban theories, that focus on producing economic activity zone and conservation zone that limit the growth of built land in rurban areas.
5. In researching sustainable development in the rurban area, it is necessary to use qualitative and quantitative as research method or to use the mix-method to understand the factors that cause the growth or rurban area.

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