

Doctoral Dissertation

A Study of Village Decentralization Policy and Its
Implications for Regional Development at the
Sub-District Level in Rural Riau, Indonesia

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の地域開発に向けた村落分権化政策とその影響に
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Abstract

Indonesia's village decentralization, an affirmative policy for rural development, has entered its fourth year of implementation. Existing studies regarding the implementation of the policy have focused on policy evaluation, financial transfers, and the changing nature of village governance. These studies have conducted little, if any, examination of how the policy affects regional development equity in the spatial context. The main goal of this study is to provide a discussion of the implications of Indonesia's decentralization policy for equitable regional development at the sub-district level. This study takes the sub-district as an observation unit because it is the smallest cluster unit in Indonesia's spatial hierarchy, which consists of groups of villages with urban and rural functions within the context of spatial structure. Indragiri Hulu Regency in Riau Province was chosen as the case study area because this district is a representation of developing rural districts in Indonesia.

Chapter 2 examines the implications of the village decentralization policy for the regional development framework in Indonesia. The aim is to figure out the paradigm shift in Indonesia's regional development framework due to the implementation of the policy. Regulations and literature reviews show that, Indonesia's village decentralization introduced a new framework for regional development in Indonesia and potentially encouraged regional development equity within the district area. However, this study found that it was inappropriate to determine the target location of the village decentralization policy solely based on village-level locality's administrative status. Therefore, this study proposes that the determination of target locations for the implementation the policy uses rural-urban classification based on geographical functions established by the central bureau of statistics.

Chapter 3 classifies the sub-districts based on their rurality and centrality. The aim of this classification is to identify spatial disparities at the sub-district level and to simplify reality as a rough dichotomy between sub-districts that are not separate but, rather, closely intertwined. Quantitative spatial structure analysis is conducted to classify sub-districts. The rurality and centrality of sub-districts determine their role in the region's spatial structure. Based on their rurality and centrality, sub-districts are classified into "small-town" and "periphery."

Chapter 4 discusses the implications of village decentralization policy at the sub-district level by comparing groups of sub-district classification results in Chapter 3. The policy implications among sub-district groups are analyzed using quantitative and qualitative approaches. The findings suggest that the policy has increased community involvement in decision-making and supervision of development at the sub-district level. The level of community involvement in the "periphery" sub-districts is higher than those in the "small-town" sub-districts. The policy has also promoted equal opportunities in village-scale development at the sub-district level and has a significant impact on increasing the budget for village-scale infrastructure and public facilities development in the "periphery" sub-districts. Meanwhile, there

is no significant difference in the average annual budget per village in the “small-town” sub-district before and after village decentralization. Concerning the implication of village decentralization policy on district government policy, there is no significant difference in the variation in district spending in the two sub-district groups before and after the implementation of village decentralization.

This study offers the policy science community a new discussion of the terms of “small-town” and “periphery” in regard to the spatial structures of rural areas, which differ from the traditional relationship between urban and rural in existing studies. This study also contributes to the empirical evidence that Indonesia’s village decentralization policy has had a significant impact on village-scale development at the sub-district level. However, the policy needs to be supported by district government development policies to reduce development disparities at the sub-district level.

Chapter 1

Introduction

The first chapter of this dissertation introduces the art of study, the study objectives and questions, and, most importantly, the significance of the study. The chapter then explains the framework and briefly describes the content of the dissertation.

1.1 Background

Spatial inequality is a common issue that is faced by many countries, especially developing countries. Many governments in developing countries are facing significant economic and political challenges due to the increasing spatial inequality in regard to income, health, education, and poverty. Kanbur and Venables (2005) suggested that this increasing spatial inequality in developing countries is partly due to the uneven effect of trade openness and globalization. Owing to globalization, rural and urban areas are not merely physical entities that can be differentiated based on their geographical characteristics or divided based on their administrative boundaries. Rather, rural and urban areas are also relative spatial entities in an economic context that is always influenced and even controlled by the higher-order systems of production and capital accumulation (Kitano, 2009). Therefore, spatial inequity seems to occur not only between countries, islands, and provinces that have different cultures, histories, and geographical backgrounds but also within relatively small regional units with homogeneous social and economic structures, such as sub-districts and villages.

Indonesia, like most developing countries in the world, experiences spatial polarization. The physical development and benefits of economic growth have

become increasingly concentrated in one or more core urban areas, especially on Java Island. According to Rustiadi, Saefulhakim, and Panuju (2009), the widespread spatial inequality between rural and urban, Java and outer Java, and Western and Eastern Indonesia was generated by economic and other factors, such as geographical location, politics, government policy, administration, and social culture. This widespread spatial disparity contributed significantly to the economic and political turmoil that occurred in Indonesia in the late 1990s, which resulted in the fall of the Suharto's New Order regime. The economic and political upheaval at that time raised concerns regarding territorial collapse; many observers predicted that Indonesia would experience "balkanization," referring to the Soviet Union and Yugoslavia, which had splintered earlier in the decade (Hadar, 2000).

In the late 1990s, vertical conflicts increased between the central government and some provinces, especially those with abundant natural resources, such as Aceh, Riau, East Kalimantan, and Papua. Dissatisfaction with the system that prevailed at that time caused the provinces to take a position that supported either the implementation of the federal system or their separation from the Republic of Indonesia. Though this effort ultimately failed, the energy behind it was intense. According to Kimura (2013), among other political factors, spatial disparities, especially felt by regions that had abundant natural resources but were lagging in development, had been a driving force for these provinces to separate from the Republic of Indonesia at that time.

Following the fall of Suharto's New Order regime in 1998, Indonesia underwent a major political reform. The fall of Suharto's government marked the start of the *reformasi* (reform) era in Indonesia. Amid the threat of disintegration

and regional development inequality issues, the government of Indonesia issued a decentralization policy. Decentralization is the central policy that has been introduced in the reform process, beginning with local decentralization through the implementation of Law 22/1999 on regional governance. This law was subsequently replaced by Laws 32/2004 and 23/2014.

The local decentralization policy was part of the efforts to address disparities in regional development, including an imbalance of authority between the central and local governments. In Indonesia, there are four local government hierarchies: provinces, districts, sub-districts, and villages. Local decentralization refers to the provincial and district levels. According to Smoke (2015), the decentralization of infrastructure and public service provision is expected to increase service coverage, quality, and efficiency. Compared to a centralized system, the closeness of the local government and the community will increase the transparency and accountability of the government.

Local decentralization has had a positive impact on local government finances from central government financial transfers and own-source revenues (Rustan, 2013). However, significant improvements in finance and broader autonomy for local governments in the implementation of development have led to the massive proliferation¹, especially at the district level. According to Lewis (2017), the massive proliferation that has occurred since the implementation of local decentralization has been largely driven by the political motives of local elites and rent seekers to generate profits. The relatively poor service performance of the newly formed districts, particularly in regard to infrastructure development, has

¹ Proliferation: internal fission where provinces and districts were divided into ever smaller units.

been driven by a relatively more fragile government environment and the somewhat corruptible nature of the infrastructure sector. Therefore, the goal of local decentralization, which is expected to encourage equitable regional development, has not yet had a significant impact, particularly in rural areas. As the lowest administrative unit, village government remains in a weak position and is still highly dependent on higher government authorities.

The unsatisfactory outcome of local decentralization in regard to rural development has been reflected in the low village index of self-sufficiency Indonesia-wide (Agusta, 2014). The village self-sufficiency index measured three dimensions: self-capability (basic needs, village government facilities, and economic facilities), collective responsibility (community activities, village government activities, and economic activities), and sustainability (basic-need benefits, village governance benefits, and economic benefits). The low rates of self-sufficiency among Indonesian villages indicate that development efforts are still less likely to increase an area's development potential, its levels of community participation, and desired benefits within villages.

To address the spatial disparities between urban and rural areas, the government applies a “developing from the periphery” paradigm, which focuses on building up regions and rural areas that are lagging in terms of development (Priyarsono, 2017). The government believes that rural-based development is necessary for strengthening the foundation of the national economy, accelerating poverty alleviation, and reducing disparities between regions. To enable social change, villages are a strategic base for change. In 2014, the government issued an affirmative policy for rural development through Village Law 6/2014. With the

enactment of Village Law 6/2014, Indonesia decided to decentralize to the village-level locality and entered its fourth year of implementation. Under village decentralization, village-level localities are given greater autonomy to plan and implement rural development plans. For the first time in Indonesia's history, village-level localities have received significant development funds that are managed based on their preferences and needs.

Village decentralization mandates that the central government allocate village funds (*dana desa* in bahasa), amounting to 10% of total central government transfers to district governments. The Ministry of Finance data from 2017 show that over 84% of total village funds (2015–2016) has been used for village-scale infrastructure and public service development throughout the country. Under village decentralization, village-level localities in Indonesia are experiencing rapid development for the first time. Village-scale infrastructure and public service facilities, such as roads, bridges, clean-water facilities, nonformal educational facilities, village market amenities, and supporting health facilities are the outputs of the implementation of village decentralization.

At the national level, the government has claimed that the implementation of village decentralization has had a positive impact on the distribution of income in rural areas. According to the Ministry of Finance (2018), this result was indicated by the decline in the Gini ratio² in rural areas from 0.34 in 2014 to 0.32 in 2017. The fall in the Gini ratio was followed by a decline in the poverty level in rural areas from 14.09% in 2015 to 13.93% in 2017 (*ibid*). However, the disparity between regions in regard to the outcomes of development remains an issue for

² The Gini ratio is a statistical calculation used to measure population income distribution in a country, particularly in terms of equality.

Indonesia, which is the largest archipelagic country in the world, with more than 17,000 islands. Based on data from Statistics of Indonesia (2017), the disparity in the development outcomes was reflected in the widely diverse Human Development Index (HDI)³ at the provincial and district levels in 2016.

Many studies have examined the implications of village decentralization from various perspectives. Antlov, Wetterberg, and Dharmawan (2016) suggested that the village decentralization policy has the potential to increase government responsiveness through a combination of robust financial management systems and structured national instruments and by empowering the community to encourage village governments to work according to community interests. However, substantial risks and obstacles remain, including the capacity of the village government. As a consequence of the implementation of the village decentralization policy, village governments will be able to manage their finances independently despite the remaining challenges, such as the lack of administrative capacity, the lack of experience in financial management, low accountability, and weak supervision (Anshari, 2017; Husin, 2016; Husna & Abdullah, 2016). Although village decentralization will not have a significant impact on community welfare immediately, the level of community participation and satisfaction with the deliberative democracy process, provision of public services, and infrastructure development has increased since its implementation (Hartoyo, Haryanto, & Fahmi, 2018; Irawan, 2017).

³The Human Development Index, coined by the United Nation Development Program (UNDP) in 1990, is a summary measure of average achievement in key dimensions of human development: living a long and healthy life, being knowledgeable, and having a decent standard of living.

The decentralization of the financial and rural development authority from central and local to village government is a critical factor in increasing the satisfaction and participation of rural communities, even though the issue of inequity in regard to the distribution of funds remains. Lewis (2015) highlighted issues related to how funds are allocated under the village decentralization policy, which, to a large extent, emphasize the equitability of the allocation to each village, despite the significant heterogeneity among villages. This approach neglects revenue from other sources that have traditionally been accessed by villages, meaning that village revenues remain unequally distributed. Villages with comparatively high levels of poverty generally receive less money than needed. Meanwhile, villages with enhanced access to other funding sources, particularly from oil and gas revenues (such as villages in East Kalimantan and Riau), generally receive more money than needed.

The aforementioned studies tend to focus on issues related to the changing nature of village governance and its impacts from the perspective of state administration and public policy. Little, if any, emphasis tends to be placed on the issue of how decentralization policies regarding rural development affect regional development equity from a spatial analysis perspective. Moreover, existing studies examine the impact of Indonesia's village decentralization at the national, provincial, or district level, while the impact at the sub-district level has received no attention.

According to Douglass (1998), in most countries, the sub-district scale is the most appropriate unit of development because it is sufficiently small to allow rural households frequent access to urban functions, yet large enough to expand the

scope of economic growth and diversification to overcome the limitations of using villages as a development unit. This study uses the sub-district as the unit of observation because, in the Indonesian spatial hierarchy, the sub-district is the smallest cluster unit consisting of a group of villages in which there are “urban” and “rural” functions in the context of spatial structure. However, the role of the sub-district in regional development planning received less attention in the Indonesian legal system. Sub-districts are torn between being a territorial unit representing a number of villages and being a regional apparatus working units, representing the district government (Antlov and Eko, 2012).

Lynch (2004) suggested that urban–rural interactions are a critical area that must be considered in regional planning. However, the existing literature regarding urban–rural interaction focuses primarily on spatial issues between large cities and rural areas at the macro and mezzo levels, with little, if any, discussion of planning systems at the micro level. Thus, a comparison of the impact of the village decentralization policy between sub-district groups is expected to contribute to the literature on micro-planning systems in rural areas.

This case study is based in Indragiri Hulu Regency, which is representative of developing rural districts in Indonesia. The main goal of this study is to discuss the implications of Indonesia’s village decentralization policy for equitable regional development at the sub-district level. Below is the definition of the keywords in this study, as shown in Table 1.1.

Table 1.1 Definition of keywords

Keywords	Definition
Decentralization	The transfer of responsibility for planning, management, and resource raising and allocation from the central government to: (a) field units of central government ministries or agencies; (b) subordinate units or levels of government; (c) semi-autonomous public authorities or corporations; (d) area-wide regional or functional authorities, or; (e) organizations of the private and voluntary sector. (Rondinelli, Nellis & Cheema, 1981).
Regional Development	The definition of regional development varies both within and between countries and different articulations change over time. In brief, regional development can be defined as a general effort to reduce social inequality, promote environmental sustainability, and encourage inclusive governance by providing assistance to regions that are less developed (Pike, Rodríguez-Pose & Tomaney, 2007).
Sub-District	An administrative unit under the regency/city, consisting of several villages (Law 23/2014 on Regional Government).
Village	A unit of community that has boundaries with the authority to regulate and manage the affairs of government, interests of the local communities based on the community's initiatives, right of origin, and/or traditional rights recognized and respected in the system of government of the Republic of Indonesia (Law 6/2014 on Village).

Source: Rondinelli, Nellis & Cheema (1981), Pike, Rodríguez-Pose & Tomaney (2007), Law 23/2014 on Regional Government, Law 6/2014 on Village.

1.2 Research Objectives and Questions

Spatial inequality has become an important issue in developing countries. Many governments in developing countries are facing significant economic and political challenges due to increasing spatial inequality in terms of income, health, education, and poverty. Several studies have discussed spatial inequality in various forms in several countries in Asia, Europe, Africa, and Latin America (Kanbur & Venables, 2005; Kanbur, Venables & Wan, 2005). However, empirical evidence

regarding spatial inequality in developing countries remains comparatively scarce. According to Kim (2008) country-specific studies dominate the literature on spatial inequality because it is rather challenging to summarize spatial inequality studies given the many different country dimensions. Nevertheless, a review of various countries can facilitate comparisons. Thus, studies on spatial inequality in developing countries are still needed, as they provide material for comparative analysis with cases in developed countries. In response to these issues, this dissertation aims to provide knowledge of regional planning systems related to the government's policy to address spatial inequality in Indonesia. The study has three objectives:

1. To examine the implications of the village decentralization policy within the framework of regional development in Indonesia;
2. To identify spatial disparities at the sub-district level and classify sub-districts within the spatial structure of a rural area;
3. To investigate the implications of the village decentralization policy at the sub-district level.

Based on the above research objectives, there are three research questions:

1. To what extent does Indonesia's village decentralization policy have implications for the regional development framework?
2. How should sub-districts be classified within the spatial structure of a rural area?
3. What are the implications of the village decentralization policy for regional development at the sub-district level?

1.3 Research Gap

This study fills the gap left by previous research on decentralization policies and regional development equity in the following ways:

- 1) Despite the growing number of discussions in the literature about the Indonesia's village decentralization, the existing studies focus primarily on financial transfers (Anshari, 2017; Gonschorek & Schulze, 2018; Lewis, 2015), community satisfaction and participation, and the changing nature of village governance (Antlov et al., 2016; Hartoyo et al., 2018; Irawan, 2017; Phahlevy, 2016; Vel & Bedner, 2015); there is little, if any, additional examination of how the policy affects regional development in the spatial context. Moreover, despite diversity in population, infrastructure, and the availability of public service facilities across villages and sub-districts, the studies mentioned above have considered rural areas as a single homogenous entity.
- 2) From an empirical point of view, discussions of spatial inequality in the literature still require more empirical evidence about regional and urban disparities in developing countries (Kim, 2008).

1.4 Research Methodology

Both qualitative and quantitative approaches are employed in this study. In Chapter 2, this study will apply a qualitative approach, using both literature and regulatory reviews, to investigate the implications of the village decentralization policy for Indonesia's regional development framework. At first, the author will study documents related to Indonesia's decentralization policy and literature on the

paradigms and theories of regional development. Any additional reading material that emphasizes both the theory and practice of government policies to address regional development inequalities is also essential at this stage. The results of the literature and regulation reviews will be used to draw a conceptual framework that illustrates the implications of the village decentralization policy for regional development in Indonesia.

Qualitative and quantitative approaches will be applied in Chapter 3 to examine the extent to which spatial inequality has occurred at the sub-district level. Spatial inequality at the sub-district level will be measured quantitatively using spatial structure analysis and will be confirmed qualitatively by questionnaire survey and direct observation. The results of the analysis in Chapter 3 are the classification and characteristics of sub-districts based on the spatial structure of the district. The sub-district classification will be used in Chapter 4 to compare the impact of village decentralization on regional development equity at the sub-district level. The analysis in Chapter 4 will also use quantitative and qualitative approaches; a mixed-method approach relying on the quantitative analysis of the customized survey data and qualitative analysis at the village and sub-district levels will be used.

The data collection process was divided into three stages. The first stage of data collection was carried out from July to September 2017. This process began with the collection of documents and statistical data related to population, development budget, and the public service facilities and infrastructure built in Indragiri Hulu Regency from 2012 to 2017. The secondary data collection was carried out simultaneously with the spatial data collection through field observation

and mapping. Spatial data collection was carried out in all sub-districts in Indragiri Hulu Regency. All public service facilities and road networks in the study area were identified and mapped using ArchMap 10.2.2. Spatial data collection was carried out simultaneously using direct observation and questionnaires.

A questionnaire survey of 140 local respondents was conducted to obtain community assessments of the spatial disparities between districts in the study area. The respondents were asked to group sub-districts into “urban” and “rural.” The questionnaire survey was conducted in 28 villages, which were chosen from 194 villages in Indragiri Hulu. There are 14 sub-districts in Indragiri Hulu, and the average number of villages in each sub-district is 14. Lubuk Batu Jaya is the sub-district with the fewest villages (10), and Batang Cenaku has the most (20). Two villages were selected as a sample from each sub-district based on their geographical location, population, and the availability of public service and infrastructure; the sample, therefore, represented all these characteristics in the case study area. Five locals from each village were randomly selected as respondents. The respondents were villagers aged over 17 years who the author met while performing direct observation in the villages. The villages were Rawa Asri, Rawa Sekip, Sungai Guntung Hilir, Sungai Beringin, Kota Lama, Sungai Dawu, Titian Resak, Bukit Meranti, Sungai Akar, Penyaguhan, Bukit Lingkar, Talang Mulia, Talang Sungai Limau, Talang Suka Maju, Koto Medan, Simpang Koto Medan, Jati Rejo, Petalongan, Seko Lubuk Tigo, Mekar Sari, Pasir Kelampaian, Pasir Batu Mandi, Air Putih, Pontian Mekar, Gumanti, Semelinang Darat, Sencano Jaya, and Sungai Aur.

Interviews with stakeholders who were involved in rural development in Indragiri Hulu were conducted during the second stage of data collection. Fifteen participants, consisting of six district officials, five sub-district officials, and four community facilitators,⁴ underwent semi-structured interviews. The second stage of data collection was carried out in June 2018.

In the third stage of data collection, with the help of four enumerators, a questionnaire survey was conducted with 692 household heads from February to March 2019. The number of respondents is the sum of the samples taken from the population of each village. The sampling method in this study used the Slovin formula, with a margin of error of 10% and a confidence level of 90%. The number of samples in each village varied from 41 to 66 household heads, depending on the size of the village population. The villages were randomly selected from the villages surveyed in the first stage of data collection. Sungai Guntung Hilir, Sungai Beringin, Sungai Dawu, Kota Lama, Bukit Meranti, and Titian Resak represent “small-town” sub-district villages, while Sungai Akar, Penyaguhan, Koto Medan, Simpang Koto Medan, Rawa Asri, and Rawa Sekip represent “periphery” sub-district villages. These villages were selected from a group within a 23-minute radius of travel time⁵ from the sub-district capital, which is the average travel time from the villages to the sub-district capital in Indragiri Hulu Regency. Of the 12 villages, 6 were selected as samples for field observation, which was carried out to investigate development planning at the village level. The villages in question were Sungai

⁴ Community facilitators are professionals in financial management and civil engineering who are assigned by the government to increase community empowerment in a village.

⁵ In this study, travel time is the calculation of the distance from the sub-district capital to the village, divided by the average speed of a motorcycle. The distance between locations was calculated from the road network using the ArcMap 10.2.

Guntung Hilir, Sungai Dawu, Bukit Meranti, Sungai Akar, Simpang Koto Medan, and Rawa Sekip. Interviews with stakeholders involved in rural development in Indragiri Hulu were also conducted during the third stage of data collection. Nineteen participants were involved in semi-structured interviews, which consisted of seven sub-district officials and 12 community leaders.

The collected data were used to analyze spatial inequality at the sub-district level and the impact of the village decentralization policy on equitable regional development at the sub-district level. Table 1.2 is a summary of the data collection and field research activities.

Table 1.2 Summary of data collection and field research activities

Time	Method	Number of samples	Outcome
July–Sept. 2017	Document reviews	14 sub-districts	<ul style="list-style-type: none"> • Spatial disparity analysis and sub-district classification • Analysis of the impact of village decentralization at the sub-district level
	Questionnaire	140 locals	Spatial disparity analysis and sub-district classification
	Observation and GIS Mapping	14 sub-districts	Spatial disparity analysis and sub-district classification
June 2018	Interviews	6 district officials 5 sub-district officials 4 community facilitators	Analysis of the impact of village decentralization at the sub-district level
Feb.– March 2019	Questionnaire	692 household heads	Analysis of the implications of village decentralization at the sub-district level
	Field Observation	6 villages	Analysis of the impact of village decentralization at the sub-district level
	Interviews	7 sub-district officials 12 community leaders	Analysis of the impact of village decentralization at the sub-district level

Source: The Author.

1.5 Research Framework

In this study, both qualitative and quantitative analyses are used to investigate the impact of Indonesia's village decentralization on regional development equity from the spatial perspective. This section explains the study framework to facilitate understanding of the flow of the dissertation (Figure 1.1).

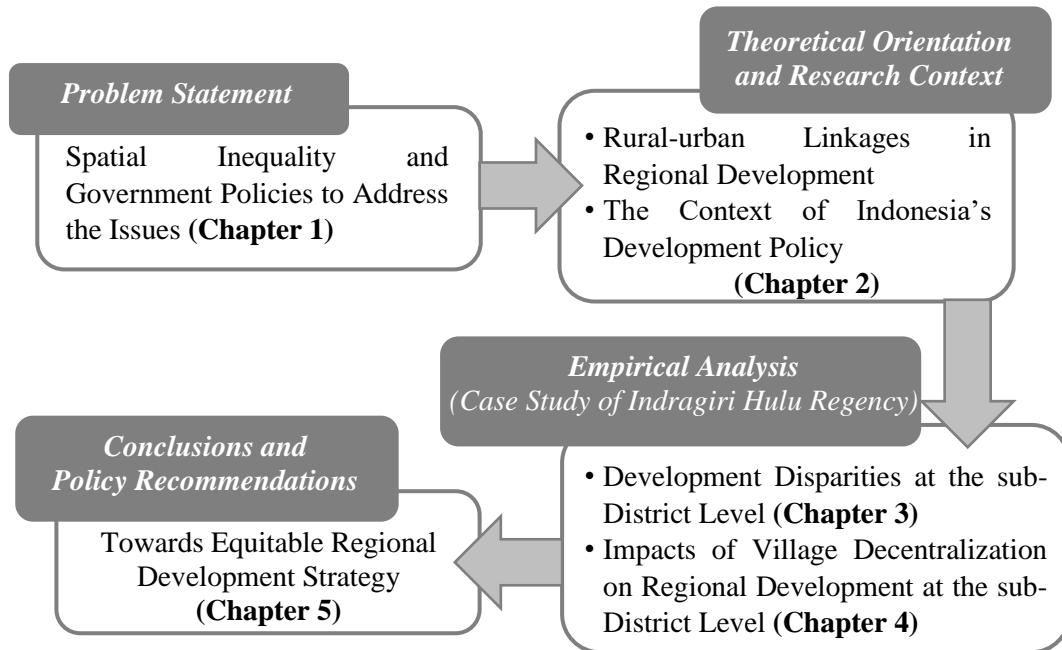


Figure 1.1 Research framework

Source: The Author.

In conducting this study, a regional development framework in the context of Indonesia's development policies is developed by adapting rural–urban linkages in regional development theories. The framework is used to analyze the implications of the village decentralization policy for Indonesia's regional development framework. An overview of Indonesian policies regarding decentralization and rural development is also presented before the empirical analysis.

An analysis of spatial structure and pattern at the sub-district level is used to classify the sub-districts in the study area based on their rurality and spatial interactions. Both qualitative and quantitative spatial analysis is used to investigate development inequality across sub-districts within a district area. Furthermore, the implications of the village decentralization policy for regional development equity between sub-district groups is examined.

The results of the analysis are used to conclude the study regarding the implications of Indonesia's village decentralization on regional development at the sub-district level and to make policy recommendations regarding an equitable regional development strategy.

1.6 Structure of the Dissertation

This dissertation comprises five chapters:

Chapter 1: Introduction describes the background, objectives, research gap, methodology, and framework.

Chapter 2: Village Decentralization as a Policy to Encourage Regional Development Equity in Indonesia provides a discussion of the implications of the village decentralization policy for the regional development framework at the micro level from the perspective of rural–urban linkages in the Indonesian context.

Chapter 3: Spatial Inequality at the Sub-District Level presents an analysis of spatial structure and pattern at the sub-district level based on rurality and spatial interactions to investigate development inequality across sub-districts within the study case area.

Chapter 4: Village Decentralization and Its Implications for Regional Development at the Sub-District Level presents an empirical analysis of the sub-district level with regard to the implications of the village decentralization policy for regional development equity, comparing the “small-town” and “periphery” sub-districts of Indragiri Hulu Regency.

Chapter 5: Conclusions concludes the study and proposes policy recommendations based on the results.

Chapter 2

Village Decentralization as a Policy to Encourage Regional Development

Equity in Indonesia

This chapter reviews the literature on the rural–urban linkages in the regional development paradigm and decentralization policy within the context of Indonesia’s development policies. Additionally, it presents the implications of Indonesia’s village decentralization for the regional development framework.

2.1 Regional Development Disparities and Decentralization Policy

The definition of regional development varies both within and between countries and different articulations change over time. In brief, regional development can be defined as a general effort to reduce social inequality, promote environmental sustainability, and encourage inclusive governance by providing assistance to regions that are less developed (Pike, Rodríguez-Pose & Tomaney, 2007). It is, however, complex, as regional development is a multidimensional concept with many socioeconomic variations. Nijkamp and Abreu (2009) have suggested that several factors determine the large socioeconomic variations in regional development. These are the availability of natural resources, access and availability of capital, labor quality and quantity, physical infrastructure, investment, culture, social structure, technology, and open-mindedness. The diversity of these factors affects the equity of regional development.

Regional development disparities between rural and urban areas and between geographically disadvantaged and advantaged regions are common issues faced by many countries, especially developing ones. Kanbur and Venables (2005)

revealed that the increasing spatial inequality in developing countries is partly due to the uneven impact of trade openness and globalization. Due to globalization, rural and urban areas are not merely physical entities that can be differentiated based on geographical characteristics or divided based on administrative boundaries. Rural and urban areas are also relative spatial entities in an economic context that is always influenced and even controlled by the higher-order systems of production and capital accumulation (Kitano, 2009). Hence, spatial inequity seems to occur not only between regions with different cultural, historical, and geographical backgrounds but also within a relatively small administrative unit with homogeneous social and economic structures.

In regard to governance reform, decentralization has been a popular method of addressing spatial inequalities around the world. The trend gained momentum in the 1980s and reached new heights in the early 2000s. The World Bank and many major donor agencies have placed particular emphasis on the governance benefits of decentralization and supported this with advice and aid to countries with poor governance records. According to Rondinelli, Nellis, and Cheema (1981), decentralization is the transfer of responsibility for planning, management, resource raising, and resource allocation from the central government to (a) field units of central government ministries or agencies; (b) subordinate units or levels of government; (c) semiautonomous public authorities or corporations; (d) area-wide regional or functional authorities; or (e) organizations in the private and voluntary sectors. The devolution of authority and responsibilities to lower levels of governments fosters more responsive decision-making and motivates public

administrators who, in turn, produce better policies and implement them more effectively (Ramesh, 2013).

Many countries have implemented a decentralization policy to address development issues. This has been done using various approaches and has had varied results. For example, some countries, such as Indonesia and Bolivia, have experienced a “big bang” shift toward economic and political decentralization for the first time; the Chinese government has provided a great deal of economic power but very limited political power to local governments; and some countries have been using decentralization to consolidate the power of undemocratic national governments (Bardhan & Mookherjee, 2006). Other Southeast Asian countries, such as Vietnam, Thailand, the Philippines, and Cambodia, have also implemented decentralization policies with varying degrees of subnational autonomy (Table 2.1).

According to Cheema and Rondinelli (2007), decentralization in developing countries can be grouped into four forms: political, administrative, fiscal, and economic. There have been variations in the implementation of decentralization among nations. However, Tacoli (2018) argued that since the implementation of decentralization policies in many countries in the 1990s, the role of small and intermediate urban centers in the provision of goods and services to surrounding rural areas and as a potential engine for regional economic growth has regained attention.

Table 2.1 Degree of subnational autonomy in Southeast Asian Countries

Country	Degree of subnational autonomy
Cambodia	Commune governments have their own budgets, whereas provincial budgets are linked to the national budget; strong central civil service control.
Indonesia	Subnational governments have complete budget autonomy, with next-higher level having legality review and national civil service regulations allowed a reasonable degree of subnational discretion.
Philippines	Subnational governments prepare budgets with legality review by next-higher level; national civil service regulations allow subnational discretion.
Thailand	Local governments prepare budgets subject to certain central mandates and follow civil service regulations; major reforms planned.
Vietnam	Subnational governments have their own budgets, but these are hierarchically integrated and approved by higher levels; this is being phased out, and major cities have been permitted to experiment with greater autonomy.

Source: Smoke (2005).

2.2 Rural–Urban Linkages in Regional Development

The definitions of rural and urban vary significantly among countries, and the generalization of these definitions based on demographics or economic criteria is problematic. According to Tacoli (2018), most countries define urban areas based on several criteria, such as population size threshold, population size threshold combined with population density or the proportion of the population working in nonagricultural sectors, administrative or political status, and “urban” settlements listed in the national census. However, population size thresholds, methods of establishing urban boundaries, and political or economic considerations vary significantly between countries. For example, while many European and Latin

American countries use a population threshold of 2,500 inhabitants for an urban area, many countries with large populations apply a threshold of more than 20,000. The method of determining the boundaries of urban centers also varies between countries. In some countries, urban boundaries relate to built-up areas and population agglomeration, while, in others, urban center boundaries are set to include large areas into which urban development is expected to expand.

Various scholarly traditions have attempted to deal with urban–rural interactions in the context of defining an area. Agricultural areas (very rural) and megacities (very urban) coexist in unity, with various types of interaction flowing between the two spaces. However, development policies and related studies have traditionally adopted a simplified concept of urban and rural areas, whereby rural refers to “remote agricultural areas” and urban to the “crowded city” (Von Broun, 2007). The urban–rural dichotomy in development theory and practice has led to urban–rural polarization in regional development.

The widening urban–rural polarization in regional development, especially in developing countries, has been a significant issue since the 1950s. At that time, the debate centered on the nature of rural–urban relationships and whether the city played a role as a parasite or a driver of the development of rural hinterland (Singer, 1964). Planners, scholars, and policy makers are split into two groups: pro- and anti-urban. Pro-urban groups argue that economic growth and modernization in urban areas will have a positive impact on the development of rural areas through a “trickle-down effect.” In contrast, the anti-urban group believes that the role of urban areas is only to exploit rural areas so that economic growth is concentrated

in urban centers, which will become a source of problems for surrounding rural areas (Douglass, 1998).

Table 2.2 Rural–urban linkages: Form and interaction

Author	Urban–rural form and interaction
Preston (1975)	Linkages are reflected in the movement of people (or migration), the flow of goods, services, energy, financial transfers, asset transfers, and information.
Rondinelli (1985)	Linkage groups: physical, economic, technological, population movement, social delivery, and political relationships.
Douglass (1998)	Five major linkage flows: population, production, commodity, capital, and information.
Tacoli (1998)	The flow of people, goods, waste, information, and money acts as the linkage between rural and urban spaces.
Pradhan (2003)	Rural–urban linkages: spatial/physical, economic, sociocultural, technological, administrative organization, and service delivery.

Source: Author’s summary.

While traditional development policy research has adopted a simplified concept of rural and urban, with rural referring to more remote farming areas and urban to cities, new development paradigms tend to focus on the linkages and consider networks and flows between rural and urban areas (Lynch, 2004). The new development paradigm views rural–urban interactions as interdependent relationships. Various scholars have discussed the networks and flows between rural and urban in regional development; these include Preston (1975), Rondinelli (1985), Douglass (1998), Tacoli (1998), and Pradhan (2003) (Table 2.2). Such scholars believe that developments in urban areas will have an impact on rural areas, and vice versa. According to Rondinelli (1985), the following three factors mean

that rural–urban interactions are unfavorable to the development of the village: (a) the limited number of small and medium towns, (b) the limited distribution of facilities and services between small and medium towns in rural areas, and (c) the limited linkages between residential sites in rural areas.

UN-Habitat (2017) defined rural–urban linkages as nonlinear, diverse interactions across space within an urban–rural continuum, including flows of people, goods, capital, and information, as well as between sectors and activities such as agriculture, services, and manufacturing. In the past few decades, studies of rural–urban linkages in developing countries have been carried out with varied findings. The discussion topics in the rural–urban linkages literature can be grouped into four: rural–urban linkages and livelihood transformations, population mobility and migration, environmental issues caused by rural–urban linkages, and government policy regarding urban–rural linkage issues (Tacoli, 2018). Table 2.3 summarizes selected literature regarding rural–urban linkages in developing countries.

Table 2.3 Summary of selected literature on rural–urban linkages: Topic and discussion

Topic	Author	Study Area	Main Findings
Rural–urban linkages and livelihood transformations	Jonathan Baker (1995)	Northwest Tanzania	Rural areas and small urban centers are economically interdependent. Income diversification by using “urban” opportunities and assets is a benefit that can be obtained by rural households from linkages with small urban centers.
	Mahmoud Bah, Salmana Cisse, Bitrina Diyamett, Gouro Diallo, Fred Lerise, David Okali, Enoch Okpara, Janice Olawoye and Cecilia Tacoli (2003)	Mali, Nigeria, and Tanzania	Globalization and liberalization of international trade can have a direct impact on the local economy and change the livelihoods of rural communities.
	Jonathan Rigg (2003)	Southeast Asia	Despite differences in geographical conditions and the diversity of changes that occur across regions, in general, there is an increase in income share derived from nonagricultural activities among rural communities.
Population mobility and migration	Haydea Izazola, Carolina Martinez and Catherine Marquettee (1998)	Mexico City	The economic issue is not the only motivation for population movements, but the factors are far more complex. Thus, different groups move to various destinations and for different reasons.
	Priya Deshingkar (2004)	India	Migration must be seen as one way to get additional income for rural communities from the surrounding urban areas, and this is an unavoidable consequence of uneven development.
	Fred Kruger (1998)	Botswana	Rural–urban interaction in terms of rural assets (financial and social aspects) among urban migrants with their hometowns is still maintained even though they have moved more than a few decades.

Topic	Author	Study Area	Main Findings
Environmental issues caused by rural–urban linkages	H. Losada, H. Martinez, J. Vieyra, R. Pealing, J. Rivera, R. Zavala, and J. Cortes (1998)	Mexico City	The transformation of agricultural systems and production is an adaptation of changes in demand from urban populations for food, wood, and recreation.
	Philip F. Kelly (1998)	Philippines	Rural–urban relations cannot be seen solely as exchange flows between urban and rural areas. Rather, the relationship between the two must be seen as the tension that exists because of the different development priorities.
Government policy concerning rural–urban linkage issues	Mary Tiffen (2003)	Sub-Saharan Africa	Government policies that increase the purchasing power of local urban communities and encourage the growth of local markets are more relevant to the improvement of rural community welfare than export-oriented agriculture.
	Mike Douglass (1998)	Indonesia	Given the diversity in the form and nature of rural–urban linkages between regions, government policies should be based on groups of settlements (clusters) with varying sizes and characteristics and not based on rural and urban dichotomies.
	Jan Hinderink and Milan Titus (2002)	Cross-country	Any generalization about the role of small towns in regional development is challenging to make because it depends on the level of hinterland development, as well as the political and economic conditions prevailing in the region.
	David Satterthwaite and Cecilia Tacoli (2003)	Cross-country	Government policies on the role of small urban centers in regional and rural economic growth are influenced by a variety of factors, including regional characteristics, natural resources, infrastructure and population density, and land ownership systems, as well as socioeconomic and cultural transformation at the local, national, and international levels.

Source: Tacoli (2018) and Author’s summary.

The abovementioned references illustrate that government policies play a significant role in addressing the rural–urban linkage issues outlined above. Over the years, there have been enormous variations in policy interventions around the world in response to regional development disparities. However, the policy variations that are presented in the literature can be grouped into five major currents: supply-side policy, growth pole strategy, infrastructure policy, self-organizing policy, and *suprastructure policy*⁶ (Nijkamp & Abreu, 2009). Policy variations indicate that the developmental problems faced by countries in the world vary considerably. Thus, the policy interventions that are implemented also vary.

The disparities in rural and urban development are also a significant issue in Indonesia. Since the 1990s, the Indonesian government has made policy interventions to reduce regional development disparities by implementing various sectoral development programs. Sectoral programs—such as Poverty Alleviation through Rural–Urban Linkages, the Sub-District/*Kecamatan* Development Program (KDP), the National Program of Community Empowerment/*Program Nasional Pemberdayaan Masyarakat* (PNPM), the Development of Production Centres, *Agropolitan*⁷ Development, *Minapolitan* (marine and fishery center), and Tourism Development Areas—have resulted in variations across Indonesia (Mulyana, 2014). Policy interventions through sectoral programs have not had the expected results in regard to reducing disparities in rural–urban development. One

⁶The provision of supportive research & development conditions, educational facilities, knowledge centers, etc. to the region for self-sustained development.

⁷The agropolitan program was launched in 2003 by the Ministry of Agriculture and is supported by the Ministry of Public Works. The agropolitan concept aims to create growth centers in rural areas that are productive or potentially productive, as well as in agriculture-based small towns (Mulyana, 2014).

contributing factor is the diversity in geographic, socioeconomic, and cultural conditions.

Douglass (1998) provided a critical study of past regional development policies in Indonesia. He showed evidence that rural–urban systems in Indonesia have much less uniformity and regularity compared to development models that are based on either central place or industrial dissemination theories. Furthermore, he proposed a “regional network” concept, which is an alternative paradigm for regional development planning that considers the significance of both rural and urban areas, as well as variations in the form and nature of rural–urban linkages. The “regional network” approach emphasizes the critical role of both urban and rural areas in the development of a region, and that the reciprocal relationship between the two can affect economic growth in both areas. Given the wide variation in rural–urban linkages between regions, the role of local government is critical in formulating and implementing appropriate policies to address the problems, because as decision-makers, they are in the best position to overcome local economic problems and reduce poverty in cities and rural areas within their administrative boundaries. Figure 2.1 shows the rural-urban linkages in the context of Indonesia’s spatial hierarchy.

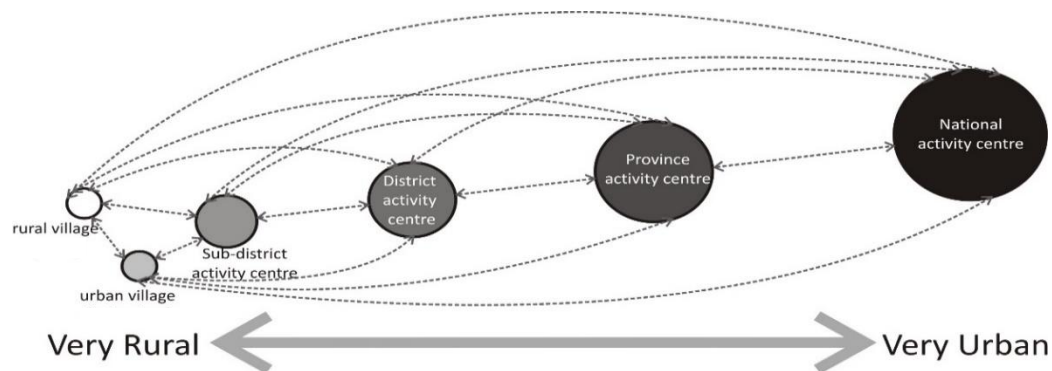


Figure 2.1 Rural-urban linkages Indonesia’s spatial hierarchy

Source: The Author.

According to Rustiadi et al. (2009), regional and local development policies that prioritize sectoral integration, spatial linkages, and synergy among development actors tend to be more effective in reducing rural–urban disparities than sector-based approaches. The lesson learned from the implementation of past sectoral policies is that owing to the diversity of regional characteristics and issues, a top-down approach cannot be used as a single prescription to solve problems in the regional context. Therefore, what is needed is a national policy that also considers development from below, whereby the community is actively involved in the planning and implementation of development according to the needs and characteristics of the region.

2.3 Classification of Rural and Urban in Indonesia

Indonesia is a vast archipelago comprising more than 17,000 islands, and its population of approximately 265 million makes it the fourth most populous country in the world. At present, its administration is divided into five hierarchies: central government, provinces, districts, sub-districts, and village-level localities (Figure 2.2). According to Ministry of Home Affairs Regulation 137/2017, the country has 34 provinces and 514 districts. Districts are classified as either *kota* (city) or *kabupaten* (regency), of which there are 98 and 416, respectively. *Kota* and *kabupaten* consist of *kecamatan* (sub-district), which number approximately 7,094. The lowest public administration is village-level locality, which are classified into two types: *kelurahan* and *desa*. There are approximately 8,490 *kelurahan* and 74,957 *desa*.





<p>1. Province/Provinsi (34)</p> <ul style="list-style-type: none"> • Average Area: 56,282 km² • Average Population: 6,989,448 		
<p>2. District (514)</p> <p>City/<i>Kota</i> (98) & Regency/<i>Kabupaten</i> (416)</p> <ul style="list-style-type: none"> • Average Area: 3,723 km² • Average Population: 462,337 		
<p>3. Sub-District/<i>Kecamatan</i> (7,094)</p> <ul style="list-style-type: none"> • Average Area: 269.74 km² • Average Population: 33, 499 		
<p>4. Village-level locality (83,447)</p> <p><i>Desa</i> (74,957) and <i>Kelurahan</i> (8,490)</p> <ul style="list-style-type: none"> • Average Area: 22.93 km² • Average Population: 2,848 		

Figure 2.2 Administrative hierarchy in Indonesia

Source: [Peta shp Potensi Desa Seluruh Indonesia]. Retrieved 2 June 2017 from <http://www.info-geospasial.com/2015/10/data-shp-seluruh-indonesia.html>.

The definitions of the terms rural and urban vary significantly among countries. According to Tacoli (2006), the definitions of rural and urban used by most governments is determined in one of four ways: through (a) population size threshold, (b) population size threshold combined with several other criteria (population density, or the proportion of the population working in nonagricultural sectors), (c) administrative or political status, and (d) a list of settlements that are designated “urban” or “rural” in the national census. In Indonesia, there are several legislations regarding the definitions of rural and urban (Table 2.4).

Table 2.4 Definition of rural and urban in legislations

No.	Legislation	Rural	Urban
1.	Law 22/1999 on Local Government	Areas of predominantly agricultural activities, including management of other resources, with the arrangement of functions including rural settlement, service, government, social services, and economic activities.	Areas of predominantly non-agricultural activities, with the arrangement of functions including urban settlements, centralisation, and distribution of government services, social services, and economic activity.
2.	Law 26/2007 on Spatial Planning	Areas with main activities in the agricultural sector and natural resource management, with the arrangement of local functions including rural settlements, government services, social services, and economic activities.	Areas dominated by non-agricultural activities, with functions including urban settlements, centralisation and distribution of government services, social services, and economic activities.
3.	Regulation of the Central Bureau of Statistics 37/2010 on the Definition of Urban and Rural	Rural is the status of a village-level administrative area (<i>desa/keurahan</i>) that does not meet urban classification criteria.	Urban is the status of a village-level administrative (<i>desa/keurahan</i>) area that meets the urban classification criteria.

Source: Compiled from Law 22/1999, Law 26/2007, and Regulation of the Central Bureau of Statistics 37/2010

The classification of rural and urban areas in Indonesia is only applied at the district (*kota* and *kabupaten*) level and village-level locality (*desa* and *kelurahan*). Despite sub-district is the smallest cluster unit consisting of a group of villages in Indonesian spatial hierarchy. The role of the sub-district in regional development planning received less attention in the Indonesian legal system. Sub-districts are torn between being a territorial unit representing a number of villages and being a regional apparatus working units, representing the district government (Antlov and Eko, 2012). There is no rural and urban classification of spatial structure at the sub-district level in Indonesia's spatial system.

There are two ways of defining urban and rural in the hierarchy of Indonesia's local government: in the contexts of administration and geographical function. Administratively, *kota* and *kelurahan* are defined as urban, while *kabupaten* and *desa* are defined as rural. *Kota* and *kabupaten* each comprise a mixed composition of urban and rural populations. The urban population (approximately 90%) dominates *kota*; in contrast, only about 25% of the population in *kabupaten* is classified as urban. Most parts of *kelurahan* are in the *kota* and the urbanized areas of *kabupaten*, while *desa* are commonly found in *kabupaten*, although a small number are in more rural areas of *kota* (Lewis, 2015). Based on Government Regulation No. 26/2008 concerning National Spatial Planning, cities (*kota*) in Indonesia are classified into five categories based on population size, namely: megapolitan city (more than ten million inhabitants, generally consisting of two or more metropolitan), metropolitan city (more than 1 million inhabitants), big city (500,001 - 999,999 inhabitants), medium city (100,001 - 500,000 inhabitants), and small city (50,001 - 100,000 inhabitants). Referring to the Census in 2010, the most significant proportion of cities in Indonesia are medium cities with 56 cities. Besides, there is one megapolitan city, Jakarta, which has agglomeration with the surrounding urban areas, ten metropolitan cities, 16 big cities, and nine small cities.

In the geographical function context, as determined by the *Badan Pusat Statistik (BPS)* (the Central Bureau of Statistics) for census purposes, each village-level locality—*desa* or *kelurahan*—is assigned a geographic functional status of rural or urban based on statistical measurements. The BPS applies a technical scoring method to determine whether a village can be classified as rural or urban;

this is based on criteria such as population density, agricultural livelihood, urban facilities, formal education facilities, and public health facilities.⁸

Table 2.5 shows a comparison of the rural-urban classification in Indonesia's administrative system. Based on administrative status, the *kelurahan* is designated as urban and *desa* as rural. However, if classified according to geographical function, *kelurahan* and *desa* can be either rural or urban, based on specific statistical criteria. Thus, there is a gap in the number of urban and rural villages because, based on the geographical function, some *desa* technically meet the criteria as urban villages. Conversely, several *kelurahan* technically do not meet the requirements of urban villages.

For example, Figure 2.3 shows a comparison of the number of urban and rural villages based on administrative status and geographical functions in two districts in Riau Province. Dumai City is an urban district in Riau, which consists of five sub-districts. Administratively, all village-level localities in Dumai are *kelurahan* (urban villages). However, based on its geographical function, the Central Statistics Bureau classifies 19 village-level localities as urban villages, and 14 others as rural villages. Meanwhile, Indragiri Hulu Regency is a rural district that consists of 14 sub-districts. Based on administrative status, Indragiri Hulu consists of 178 *desa* (rural villages) and 16 *kelurahan* (urban villages). However, based on its geographical function, there are 167 rural villages and 27 urban villages.

⁸ Regulation of the Central Bureau of Statistics 37/2010 on the definitions of urban and rural.

Table 2.5 Rural-urban classification in Indonesia's administrative system

Administrative Hierarchy		Administrative Head	Basic Requirements		Urban–Rural Classification	
			Area Coverage	Population	Administrative Status	Geographical Function
Province	<i>Provinsi</i>	<i>Gubernur</i> /Governor (elected by popular vote)	Five regencies/cities or more		n/a	n/a
District	<i>Kota</i> (City)	<i>Walikota</i> /Mayor (elected by popular vote)	Four sub-districts or more		urban	n/a
	<i>Kabupaten</i> (Regency)	<i>Bupati</i> /Regent (elected by popular vote)	Five sub-districts or more		rural	
Sub-District	<i>Kecamatan</i>	<i>Camat</i> /Sub-District Head (civil servant appointed by mayor/regent)	Ten <i>desa/kelurahan</i> or more in the regency	≥ 10 times the minimum population of the <i>desa/kelurahan</i> in the regency	n/a	n/a
			Five <i>desa/kelurahan</i> or more in the city	≥ 5 times the average population of the <i>desa/kelurahan</i> in the city		
Village-level locality	<i>Kelurahan</i>	<i>Lurah</i> /Village Head (civil servant appointed by mayor/regent)	n/a	≥ 8,000 (Jawa and Bali), ≥ 5,000 Sumatra), ≥ 4,000 (Sulawesi), ≥ 3,500 (Nusa Tenggara), ≥ 2,000 (Kalimantan), ≥ 1,500 (Maluku), ≥ 1,000 (Papua)	urban	urban/rural
	<i>Desa</i>	<i>Kepala Desa</i> /Village Head (elected by popular vote)	n/a	≥ 6,000 (Jawa), ≥ 5,000 (Bali), ≥ 4,000 Sumatra), ≥ 3,000 (Sulawesi), ≥ 2,500 (Nusa Tenggara), ≥ 1,500 (Kalimantan), ≥ 1,000 (Maluku), ≥ 500 (Papua)	rural	urban/rural

Source: Compiled from Law 32/2004, Law 26/2007, Law 6/2014, Government Regulation 17/2018, and Central Bureau of Statistics Regulation 37/2010.

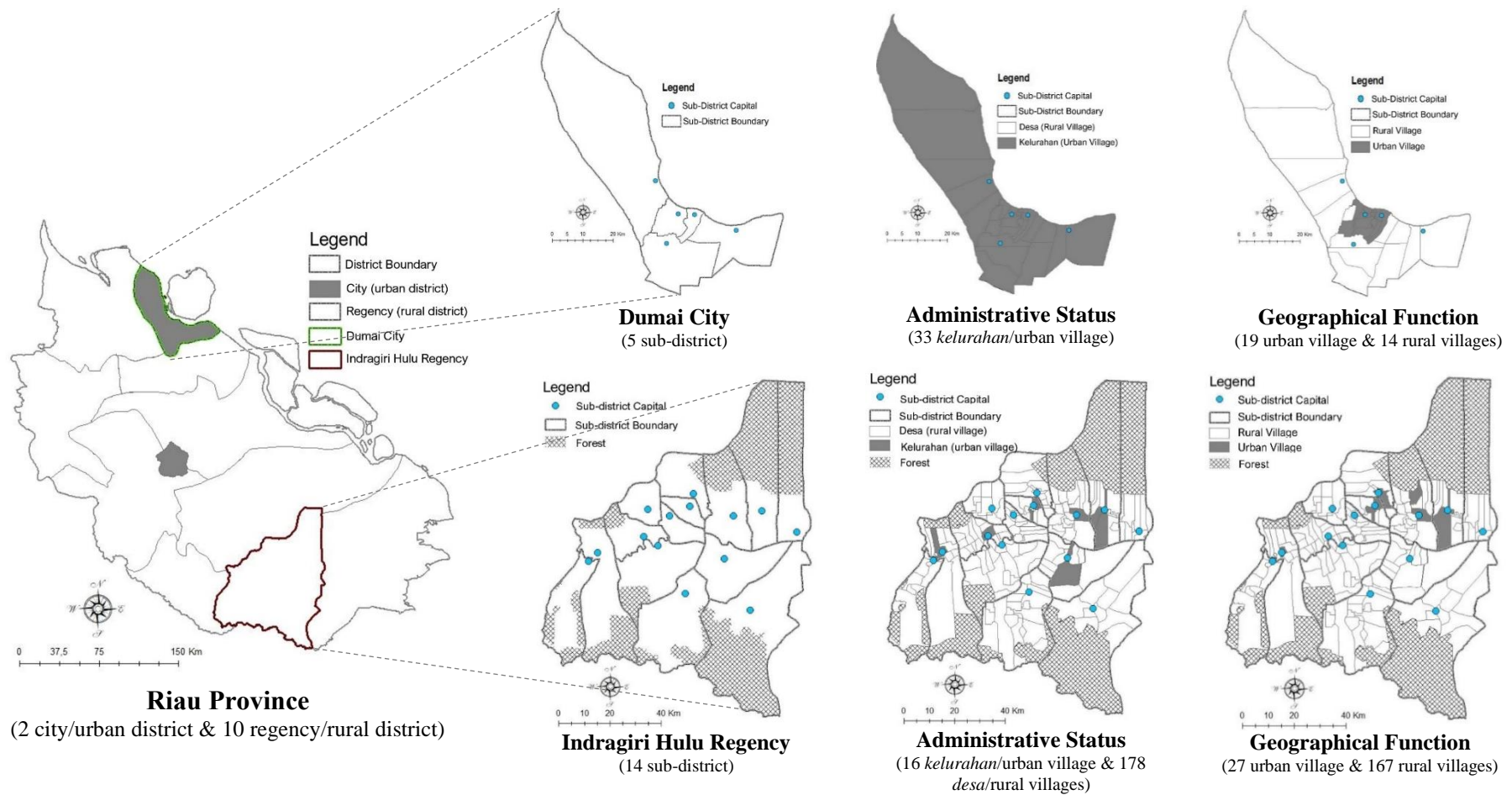


Figure 2.3 Rural-urban classification at village-level locality in Dumai and Indragiri Hulu

Source: Illustrated based on Ministry of Home Affairs Regulation 137/2017, and Central Bureau of Statistics Regulation 37/2010.

2.4 Indonesia's Decentralization Policy: From Local to Village-level Decentralization

The impressive number of administrative areas, the population, and the significant diversity in the geographical, cultural, and socioeconomic conditions between regions are factors that hinder development in Indonesia. Like most developing countries, Indonesia experiences spatial polarization; physical development and the economic growth have become increasingly concentrated in one or more core urban areas. According to Akita (1998), during Suharto's regime, the spatial pattern of Indonesia's economic development was concentrated in Java, with the outer islands receiving less attention. Thus, development disparity has highlighted the issue of decentralization and regional autonomy as a primary concern of the Indonesian people after the fall of Suharto's New Order regime in 1998.

Even though the issue of decentralization became a primary concern among Indonesian citizens in the late 1990s, the terminologies of decentralization and regional autonomy are not new to the country. Evidence of this can be seen in the emergence of numerous laws concerning decentralization and regional autonomy since the beginning of independence in 1945. However, in practice, the implementation of the law deviates from its original sense. For instance, Law 5/1974 on local governance, published during the New Order period, has regulated the decentralization of authority and regional autonomy more effectively than previous legislation. However, given the reasons for political and economic stability, central government control over local government becomes extensive in practice. As the capital of the state, Jakarta acts as the center of the administrative

and national economy and has significant power to determine the development policy for local government. Table 2.6 presents a summary discussion of decentralization and regional autonomy in Indonesia's legislations.

Table 2.6 Laws on decentralization and regional autonomy in Indonesia

No	Period	Law	Discussion of decentralization and regional autonomy
1.	Old Order (1945–1965)	Law 1/1945 on the Status of the National Committee of Regions	Establishes three types of autonomous regions (without mentioning the authority of each): (a) <i>keresidenan</i> /residency, (b) <i>kabupaten</i> /regency, and (c) <i>kota berotonom</i> /autonomous city. Provinces only form administrative areas without autonomy.
		Law 22/1948 on Regional Government	Government embraces a substantial autonomy system, whereby there is a detailed division of local and central government authorities. The region is separated into three levels: (a) provincial or regional level I, (b) districts and major cities as regional level II, and (c) village or small town as regional level III.
		Law 1/1957 on the Principles of Regional Government	Local government has the right to regulate and manage its domestic affairs as an autonomous region, but there is no detailed explanation of what the authorities of the local government are.
		Law 18/1965 on the Principles of Regional Government	Local government has the right to organize and manage its domestic affairs and is separated into three levels: (a) province as regional level I, (b) regency or city as regional level II, and (c) sub-district as regional level III.
2.	New Order (1966–1998)	Law 5/1974 on the Principles of Regional Government	Based on the principle of decentralization, the regions are divided into two: first-level regions (provinces) and second-level regions (regencies and cities). The central government tightened its control of local government, which is known for three types of supervision: preventive supervision, repressive supervision, and general oversight.

No	Period	Law	Discussion of decentralization and regional autonomy
3.	Reform Era (1999–present)	Law 22/1999 on Regional Government (and its amendment legislation)	<p>Divides regions into provinces, regencies, and cities (abolition of regional levels I and II)</p> <p>Emphasizes the implementation of regional autonomy regarding democratic principles, community participation, equity and development justice, and attention to the potential resources and diversity of each region.</p> <p>Regencies and cities fully use the principle of decentralization or autonomy. The sub-district governments function as a means of autonomous regions (extension of hands) from regencies and cities.</p> <p>Divides authority between local and central government.</p>
		Law 32/2004 on Regional Government (and its amendment legislation)	<p>Divides government affairs into affairs of central and local governments (mandatory and optional)</p> <p>Establishes the Village Fund Allocation (<i>Alokasi Dana Desa</i>) for village government operational and development implementation.</p>
		Law 23/2014 on Regional Government (and its amendment legislation)	<p>Incorporates elements of community participation in the development process.</p> <p>Separates central and regional government affairs into absolute, concurrent, and general government affairs</p>

Source: Author's summary.

After the fall of the New Order regime in 1998, many regions in Indonesia intended to separate themselves from the Republic of Indonesia. Among other political factors, disparities in regional development, which were especially felt by regions that had abundant natural resources but were lagging in regard to development, had been a driving force for this separation.⁹ Amid the problems of disintegration and development disparities between the regions, the government passed Law 22/1999 on local governance as a new local decentralization policy. The law was subsequently amended with Laws 32/2004 and 23/2014. Local decentralization refers to the provincial and district levels. Since the implementation of local decentralization, district governments have received greater authority to guide the development of public services, including education, health, and infrastructure, compared to that of provinces (Hofman & Kaiser, 2006).

Local decentralization has had a positive impact on local government finances from central government financial transfers and own-source revenues. However, local governments have different capabilities to deliver public services, manage their finances, and raise revenue, as well as different tax bases (Nasution, 2017). Table 2.7 shows a significant increase in local government finances after local decentralization. Significant improvements in finance and broader autonomy for local governments in the implementation of development have led to the significant proliferation, especially at the district level. In 1999, before the implementation of local decentralization, the number of districts in Indonesia was 303. In the run-up to the implementation of the policy, 44 new districts were created,

⁹ Kimura (2013) comprehensively explained the political and social conditions after the fall of the New Order regime that underlie political reform and regional decentralization in Indonesia, along with other driving factors.

bringing the total to 347 at the beginning of 2001. By the end of 2014, the number of districts totaled 514, an increase of over 69% from original levels.

Table 2.7 Proportions of local government finances before and after local decentralization

Description	Before local decentralization	After local decentralization	Growth (%)
	(1990–1999)	(2001–2010)	
The average proportion of central government financial transfers to local governments (%)	24.11	33.07	37.16
The average amount of local government revenue from the central government (million IDR*)	9,676,520.72	57,330,193.41	492.47
The average of local government own-source revenue (million IDR)	3,880,172.86	25,080,080.30	546.37

Note: *IDR: Indonesian Rupiah, Indonesian currency

Source: Rustan (2013).

According to Firman (2009), the district proliferation practice has brought about fragmentation in regional development, which many new district governments feel is their own “kingdom of authority.” Provincial authorities, and even the central government, have little right to intervene with their authority. Lewis (2017) argued that the massive proliferation that has occurred since the implementation of local decentralization has been largely driven by the political motives of local elites and rent seekers to generate profits. The relatively poor service performance of the newly formed districts, particularly in infrastructure development, has been driven by a relatively more fragile government environment and the relatively corruptible nature of the infrastructure sector. Therefore, local decentralization, which is expected to encourage equitable regional development, has not yet had a significant impact, particularly in rural areas.

The local decentralization policy not only outlined district-level decentralization but also granted autonomy to the village-level locality. However, in practice, the village-level locality gained limited power to manage the development of its territory. Antlov (2003) and Antlov and Eko (2012) highlighted the role of village government in development during the period from 1999 to 2012. Although the national government has granted wider autonomy to village governments through Laws 22/1999 and 32/2004, in regard to implementation, village government was still heavily dependent on the central and district governments regarding rural development. Village government was given little authority in the management of finances. The implementation of rural development was carried out by the district government and through top-down sectoral programs introduced by national ministries.

The unsatisfactory outcome of local decentralization in rural development has been reflected in the low village index of self-sufficiency Indonesia-wide¹⁰ (Agusta, 2014). The village self-sufficiency index measures three dimensions: self-capability (basic needs, village government facilities, and economic facilities), collective responsibility (community activities, village government activities, and economic activities), and sustainability (basic need benefits, village governance benefits, and economic benefits). The low rates of self-sufficiency among Indonesian villages indicate that development efforts are still less likely to increase an area's development potential, levels of community participation, and desired benefits within villages.

¹⁰ The village self-sufficiency index measures fall between 0.00 and 1.00 based on the following categorization: high (>0.80–1.00), moderate (>0.60–0.80), low (>0.40–60), very low (>0.20–40), and too low (0.00–0.20).

Rural development is fundamentally about bringing positive change to groups of people within rural communities (Buller & Wright, 1990). According to McAreavey (2009), since 1988, the rural policy has been altered; the new approach to rural development seeks to recognize diversity in terms of assets and needs. In this sense, rural development policies began to move away from top-down and sectoral approaches to a spatial and bottom-up approach that recognizes the need to integrate social, economic, and environmental issues.

Political reform and decentralization brought the concept of rural development to a stage that is centered on community participation. This allows community members to participate more actively in development based on the principles of partnership, sharing power, and the involvement of the community, public, and private sector (Jessop, 2002; Tedler, 1997). According to Smoke (2015), decentralization in the provision of infrastructure and public services is expected to increase service coverage, quality, and efficiency. The closeness of the local government and the community will increase transparency and accountability of the government compared to a centralized system. In the past few decades, many other developing countries in East Asia, including Cambodia, China, Philippines, Thailand, and Vietnam, have, at least to some extent, decentralized rural development to the village (or commune) tier (*ibid.*).

In 2014, the Indonesian government issued an affirmative policy for rural development with Village Law 6/2014. Indonesia decided to decentralize to the village level, and this policy has entered its fourth year of implementation. Before the enactment of Law 6/2014, villages were governed by Law 5/1979. The decentralization policy implementation, which was previously limited to the

regency/city level, became applicable to the village level, which is the lowest local administrative context in Indonesia. In the past seven decades, the definition and authority of the village government have undergone several changes. Village government, which was previously the lowest administrative area under the jurisdiction of the sub-district and district governments, has been recognized as a legal community unit with a territorial boundary, is authorized to regulate and administer government affairs, and is respected within the system of government of the Republic of Indonesia. Table 2.8 presents a summary of village definitions, financial resources, and relationships between villages and districts in Indonesian legislation.

Table 2.8 Village governance in Indonesia's legislation (1945–present)

No	Law	Definition of village	Village funding	Relation to district
1.	Law 1/1945 on the National Committee of Regions	n/a	n/a	The village is part of and falls under the district administration
2.	Law 22/1948 on Regional Government	The area of the lowest autonomous administration (level III), located directly under the regencies and cities (level II)	n/a	The village is part of and falls under the district administration
3.	Law 1/1957 on the Principles of Regional Government	The lowest community that has its territory, its people, its ruler, and possibly also its properties.	Not specifically regulated; incorporated into the local financial budget	The village government is part of and falls under the district administration
4.	Law 18/1965 on the Principles of Regional Government	A legal community unity with a ruling entity that is entitled to administer and maintain its domestic affairs.	Not specifically regulated; incorporated into the local financial budget	Village and a combination of several villages (sub-districts) are under the district
5.	Law 5/1979 on Village Governance	An area occupied by some residents as a community unity, including the legal community unity that has the lowest governmental organization directly under the <i>camat</i> (sub-district head) and entitled to conduct its affairs within the Unitary State of the Republic of Indonesia.	Block grant from district government and national initiatives such as the Left-Behind Village Program	Strictly under the authority of sub-district and district, no autonomy to approve regulation or budget

No	Law	Definition of village	Village funding	Relation to district
6.	Law 22/1999 on Regional Government (and its amendment legislation)	A legal entity that has the authority to organize and manage the interests of the local community based on local origins and customs that are recognized in the national government system and located in the district.	Block grant from district and provincial government and local sources	Far-reaching autonomy provided, with weakened upward accountability
7.	Law 32/2004 on Regional Government (and its amendment legislation)	A legal community unit with a territorial boundary that is authorized to regulate and administer government affairs, the interests of the local community, based on community initiatives, rights of origin, and/or traditional rights recognized and respected within the system of government of the Unitary State of the Republic of Indonesia	Block grant from district and provincial government, local sources, and national program funding	Far-reaching autonomy provided, with weakened upward accountability, final decision-making regarding budget and regulation by district
8.	Law 6/2014 on Village	A legal community unit with a territorial boundary that is authorized to regulate and administer government affairs, the interests of the local community, based on community initiatives, rights of origin, and/or traditional rights recognized and respected within the system of government of the Unitary State of the Republic of Indonesia	Substantial national and district-level allocations, block grant from provincial government, and local sources	Hybrid system between self-governing community and local self-government

Source: Compiled from Law 1/1945, Law 22/1948, Law 1/1957, Law 18/1965, Law 5/1974, Law 22/1999, Law 32/2004, Law 23/2014, and Antlov et al. (2016).

Under village decentralization, villages are given greater autonomy to plan and implement rural development plans. For the first time in Indonesian history, villages have received significant development funds to be managed based on their preferences and needs. The village decentralization policy not only mandates the devolution of village-scale development authority from district government to village government but also mandates the central government to allocate village funds/*dana desa* (Table 2.9).

Table 2.9 Roadmap of village funds (*dana desa*) in state budgets

	2015	2016	2017	2018	2019
Transfer of funds to district (billion IDR)	650,975	680,775	738,545	805,663	853,695
Proportion of village funds (%)	4.5	7	10	10	10
Village fund (billion IDR)	29,294	47,654	73,855	80,566	85,369
On average per village (million IDR)	402	653	1,012	1,104	1,170

Source: Ministry of Finance (2017).

The amount of village funds is 10% of the total of central government transfers to district governments. Each village receives funds consisting of “basic allocation” and “formula allocation.” Basic allocations (90% of total funds) are disbursements of the same amount of funds for all villages in Indonesia, whereas formula allocations (10% of total funds) are additional finances, which vary depending on population, poverty level, region, and the geographic characteristics of each village. According to Village Law 6/2014, the objectives of village fund transfers are to (a) improve public services in the village, (b) alleviate poverty, (c) improve the village economy, (d) overcome the development gap between villages, and (e) strengthen village communities as subjects of development.

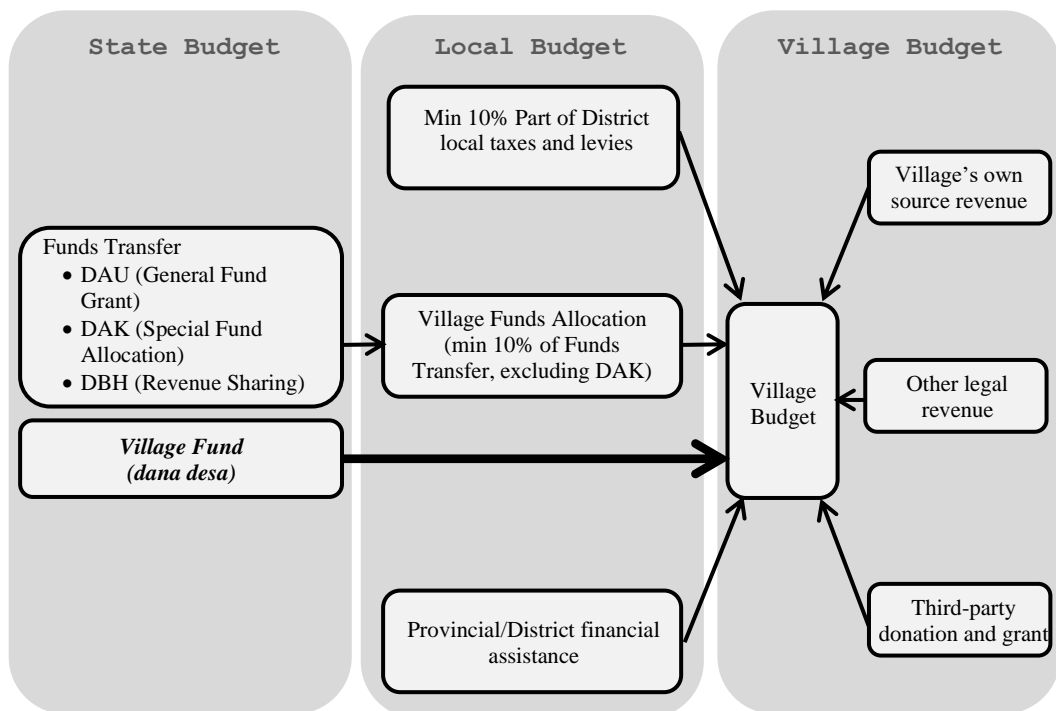


Figure 2.4 Village budget sources under village decentralization

Source: Author's interpretation of Law 6/2014, PP 72/2005, and PP 60/2014.

Following the enactment of the village decentralization policy, the village fund, sourced from the state budget, became a primary source of rural development financing (Figure 2.4). Before village decentralization, the primary source of village finances for development came from the district village allocation fund (*alokasi dana desa*) and was supported by several other sources, such as district tax revenue sharing (*bagi hasil pajak dan retribusi daerah*), provincial financial aid, the village's own revenues, and third-party assistance. Rural development was the responsibility of the district and was supported by provincial and central governments. Most rural infrastructure and public service facilities development projects were funded by the budgets of district governments. The role of village government in the implementation of village decentralization became crucial because all sources of development funds, whether derived from the state budget,

provincial budget, district budget, or village revenues, are included in the village budget and managed by the village government.

Like other developing countries with constrained governments and aid budgets, Indonesia prioritizes the use of village decentralization funds for the construction of infrastructure and public facilities. The construction of rural public infrastructure and facilities is vital in regional development because it allows citizens to utilize their talents, ingenuity, and resources (Drylands Research, 2001). Under village decentralization, villages in Indonesia are experiencing rapid development for the first time. Village-scale infrastructure and public service facilities, such as roads, bridges, clean-water facilities, nonformal educational facilities, village market amenities, and supporting health facilities, are the outputs of the implementation of village decentralization. In 2017, the Ministry of Finance reported that over 86% of total village funding had been used for village-scale infrastructure and public service development throughout the country (Table 2.10).

Table 2.10 Utilization of village funds (*dana desa*)

	2015 Budget		2016 Budget		Total (2015–2016)	
	trillion IDR	(%)	trillion IDR	(%)	trillion IDR	(%)
Rural infrastructure and facilities	14.21	82.0	40.54	87.7	54.75	86.2
Community empowerment	1.37	7.9	3.17	6.8	4.54	7.14
Government operations	1.13	6.6	1.68	3.6	2.81	4.4
Community development	0.61	3.5	0.84	1.9	1.45	2.3

Source: Ministry of Finance (2017).

According to Smoke (2015), decentralization in infrastructure and public service provision is expected to increase service coverage, quality, and efficiency.

The closeness of the local government and the community will increase the transparency and accountability of the government, compared to a centralized system. Irawan (2017) found that village community satisfaction with the implementation of deliberative democracy, the provision of public services, and infrastructure development has increased since the implementation of village decentralization. However, spatial disparities at the micro level might influence the discrepancies in the impact of the village decentralization policy on rural development at the sub-district level.

2.5 Village Decentralization and Its Implications for the Regional Development

Framework

Since 2015, there has been a growing interest in studies about Indonesia's village decentralization policy. Despite some criticisms of the method of allocating funds, financial management systems, and the capacity of village governments, several existing studies have expressed optimism that the policy will have a positive impact on service delivery performance at the village level. Table 2.11 is a summary of selected studies concerning the village decentralization policy in Indonesia. Existing studies tend to focus on issues related to the changing nature of village governance and its impacts from the perspective of state administration and public policy. Little, if any, emphasis tends to be placed on how decentralization policies related to rural development affect regional development equity from a spatial analysis perspective.

Table 2.11 Selected studies concerning Indonesia's village decentralization policy

Author	Title	Main Findings
Hartoyo, Sindung Haryanto, and Teuku Fahmi (2018)	Towards a New Village Development Paradigm in Lampung Province, Indonesia	The level of community participation in rural development is relatively higher than before the implementation of village decentralization, especially in the planning process, community empowerment, and supervision.
Nata Irawan (2017)	Tata Kelola Pemerintahan Desa Era UU Desa (translation: Village Governance in the Era of Village Law)	Village decentralization policy affects the effectiveness of village governments, and the effectiveness of village governments has a positive effect on community satisfaction.
Khairullah Anshari (2017)	Indonesia's Village Fiscal Transfers: A Fiscal Decentralisation Review	The primary considerations of the village funds transfer method, which predominantly allocated equal/the same amount to every village, are village fiscal sufficiency and the maintenance of state–regency–village relations.
Hans Antlov, Anna Wetterberg, and Leni Dharmawan (2016)	Village Governance, Community Life, and the 2014 Village Law in Indonesia	Village decentralization policy has the potential to increase government responsiveness through a combination of using robust financial management systems, structuring national instruments, and empowering the community to encourage village governments to work according to community interests.
Dasmi Husin (2016)	Flexibility of Budget Accountability Using Flow Modification in the Design of Village Financial Accounting	It is necessary to modify the financial accounting flowchart due to the complexity of procedures and village officials' limited understanding of financial accounting.

Author	Title	Main Findings
Rifqi R. Phahlevy (2016)	The Concept of Village Autonomy in Indonesia (Indonesian Constitution Perspective)	Under the village decentralization policy, villages have broader autonomy and an additional source of income from the state budget, but at the same time, the village is required to undertake various administrative procedures that are burdensome for the village government.
Blane D. Lewis (2015)	Decentralising to Villages in Indonesia: Money (and Other) Mistakes	Policymakers need to make some improvements to the village decentralization policy to achieve improved service delivery performance at the lowest administrative level via methods for allocating funds, clarifying definitions of village service responsibilities, and improving village financial management systems.

Source: Author's summary.

The transfer of resources and authority from the central and local government to the village-level government under the village decentralization policy has several objectives. Regarding regional development, the fundamental aims are to improve public services, encourage the participation of rural communities in developing the assets of the village, and address the national development gap.¹¹ Similar to many other developing countries in the world, Indonesia experiences spatial polarization. The benefits of economic growth become increasingly concentrated in one or more core urban areas and cause development disparities. The Statistic of Indonesia report in 2014 shows that

¹¹ Law 6 of 2014, Article 4.

despite the decrease in the number of poor people between 1998 and 2014, the number of rural poor continues to be higher than the number of urban poor, and the gap between urban and rural areas persists.

According to Owusu (2005), development equity, which is the primary objective of decentralization, will be difficult to achieve if there is no simultaneous increase in the income of rural populations. Thus, improving rural population income is an essential goal of regional development strategies. Increased rural population income is expected to contribute to the diversity of livelihoods, which, in turn, has a favorable impact on the employment and commodity sectors. The employment and commodities sectors in rural areas will affect the nature of interaction with the surrounding urban area, which is expected to create reciprocal linkage and encourage the equitable distribution of development.

The implementation of village-level decentralization has implications for the regional development framework at the sub-district level. There is a shift in the relationships between districts and village-level localities in the rural development framework. Before village decentralization, the district capital played a significant role in regional development at the sub-district level (Figure 2.5). Most infrastructure and public service development projects in both rural villages (*desa*) and urban villages (*kelurahan*) were organized by the district government. The fulfillment of public demand for public services and infrastructure development affects the economy of rural communities. Rural economic conditions have strong links to population, capital, product, and information flow in the surrounding small towns. Examples of such towns include sub-district capitals or villages that play the role of urban functional areas. The role of district governments is to ensure balanced

development between villages and regions. Conversely, villages play almost no role in the implementation of rural development, as the decision-making process and development policy are focused on the district capital.

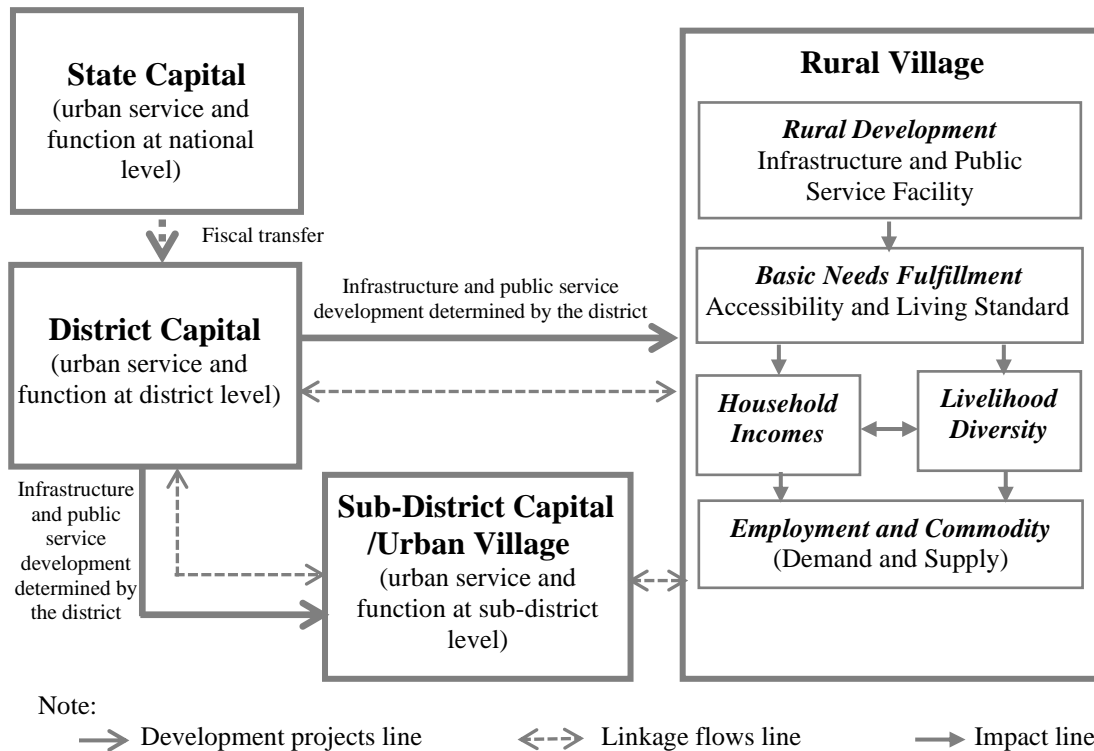


Figure 2.5 Regional development framework at the district level before village decentralization

Source: The Author.

The framework is, to some extent, similar to some theoretical frameworks that were proposed by earlier researchers who emphasized the importance of strengthening small towns in rural areas. For example, Owusu (2005) introduced a development model centered on the district capital under Ghana's decentralization program. Owusu's framework is based on the idea that small-town development will strengthen rural-urban linkages and have a positive impact on the hinterland. Owusu's framework emphasizes the significant role of district capitals in reducing poverty and improving living standards for rural populations. Likewise, before

village decentralization, the Indonesian government tended to apply the “growth pole” paradigm. During this period, development was prioritized in local activity centers that were expected to have a “trickle-down effect” on the surrounding rural areas. The development paradigm changed after the implementation of the village decentralization policy. Under village decentralization, the Indonesian government adopted the “development from the periphery” paradigm. In this case, development priorities are in rural areas and areas that are still lagging in terms of development.

According to Maro (1990), decentralization is a form of bottom-up approach that involves community participation. The village decentralization policy provides an opportunity for communities to be involved in the decision-making process through village meetings that address decisions regarding rural development projects that can promote the economy of rural communities. Since the implementation of the village decentralization policy, village community satisfaction with the implementation of deliberative democracy, the provision of public services, and infrastructure development has increased significantly (Irawan, 2017). The village has been given significant authority and resources for development since the implementation of village decentralization. Figure 2.6 illustrates the regional development framework under the village decentralization policy. Within this framework, there is a shift in the roles and interactions between villages and districts in regional development.

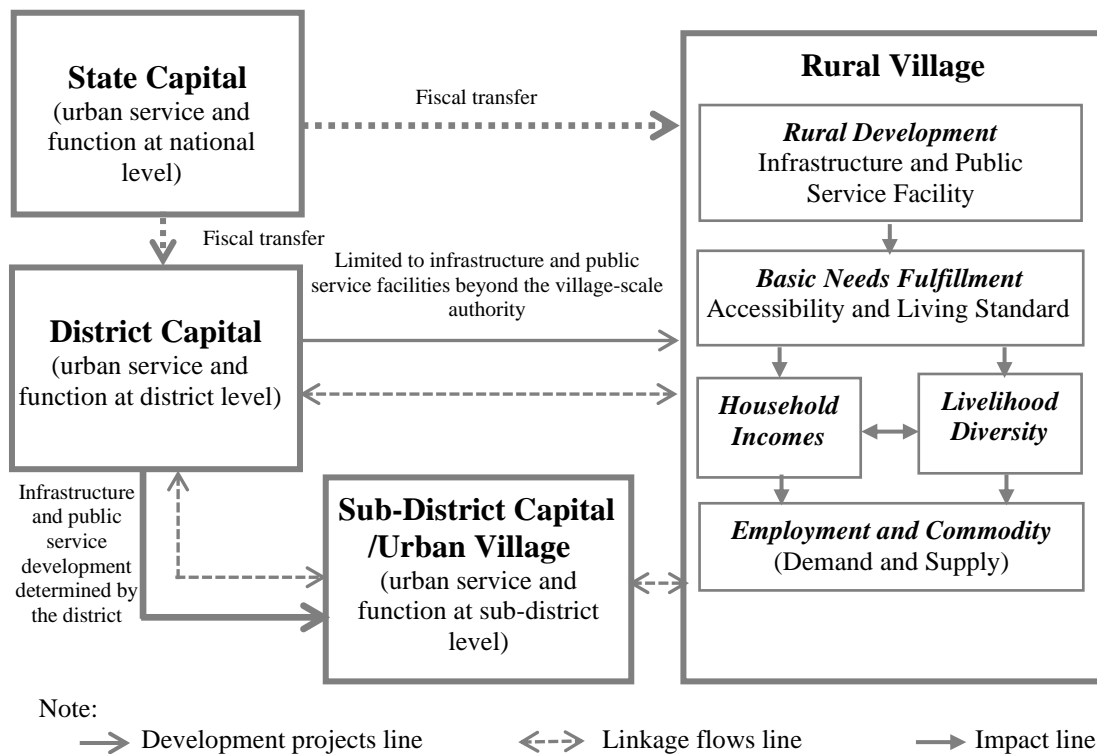


Figure 2.6 Regional development framework at the district level after village decentralization

Source: The Author.

Village decentralization provides broader autonomy to the village-level locality through the devolution of rural development authorities and resources. Rural areas are no longer highly dependent on district governments to meet their needs in village-scale infrastructure and facilities, and they can be directly involved in rural development. Since village decentralization policy mandates active participation of the community in the collaborative development process through village-level democratic deliberations, village governments and communities become actors who have prominent roles in development. The processes of planning, implementation, and accountability in rural development involve active community participation in decision-making through democratic village meetings.

The decision-making process through village deliberations is an essential milestone in the regional development framework after the implementation of the village decentralization policy. Rural communities can determine the types of infrastructure and public services they need. The priorities of rural development vary between villages according to the needs and conditions of each region. The fulfillment of community needs through infrastructure development, community empowerment, and public services would improve rural communities' accessibility to transport, health, education, and administrative services, which would enhance their living standards.

Improved accessibility and living standards in rural communities have an impact on population incomes. Changes in income levels, in turn, affect livelihood diversity in agriculture and other rural livelihoods. Flows of people, information, capital, products, and commodities to the sub-district capital and urban village are impacted by rural economic conditions. These relationships extend to the provision of public service facilities and other infrastructure that the village itself cannot construct. The role of sub-district capitals, which have long functioned as centers for services such as administration, health, education, and economy, will affect the nature of rural–urban linkages in regional development.

The role of the sub-district capital and urban village as local activity center for rural areas is vital to the development of equity. As a local activity center, the sub-district capital can serve as an antipode for the flow of population, money, and commodities from rural areas to large cities outside of district administrations. According to Douglass (1998), the functions and roles played by small and medium towns in most rural areas are the result of the interdependence between urban and

rural areas. Thus, urban–rural relations need to be seen as mutually reinforcing. Theoretically, if the basic needs of rural areas have been met, strengthening the structure and function of urban areas will have a positive impact on the surrounding countryside (Hinderink & Titus, 2002). Strengthening the functioning of small towns in sub-districts can produce two favorable outcomes. Empowered small towns can reduce the flow of the urbanization to big cities and can retain the benefits of development so that they can be felt by the residents of the region.

The village decentralization policy is an affirmative policy for rural development which previously received less attention from the central and regional governments in terms of development. This study found that the implementation of village decentralization introduced a new framework for regional development at the district level. The new framework has, to some extent, reversed the national development paradigm in which rural areas were the last to benefit from development. As a result, rural areas are now at the forefront of regional development policy in Indonesia.

However, this study found that it was inappropriate to determine the target location of the village decentralization policy solely based on village-level locality's administrative status. The government ignored the technical criteria set by the central bureau of statistics for the classification of urban and rural functions of a village-scale locality. Political factors seem to have contributed significantly to the government's decision. As revealed by Antlov et al. (2016), village decentralization policy became a political commodity during the 2014 parliamentary and presidential election campaigns. Most political parties and presidential candidates see opportunities for popular support ahead of the 2014

elections and endorse the policy. Politically, besides the number of *desa* far more than *kelurahan*, the *desa* is considered a potential voter barn because it is led by a community leader affiliated with political parties. Meanwhile, the *kelurahan* is led by a civil servant who is not allowed to have affiliations with political parties.

Thus, the objective of the village decentralization policy is limited to *desa*; *kelurahan* is not included in the policy implementation targets. As a result, the implementation of village decentralization is poorly targeted. *Desa* that technically meet urban criteria still benefit from implementing village decentralization. Meanwhile, *kelurahan* that are technically classified as rural villages are not included in the policy implementation target.

This study proposes that the determination of target locations for the implementation of village decentralization policy uses rural-urban classification based on geographical functions established by the central bureau of statistics. The classification based on geographical functions could illustrate the actual condition of a village-scale locality because it considers technical criteria such as population density, agricultural livelihoods, urban facilities, formal education facilities, and public health facilities.

2.6 Chapter Conclusion

The objective of this chapter is to examine the implications of the village decentralization policy for a regional development framework in Indonesia. Based on this objective, the research question for this chapter is, to what extent does Indonesia's decentralization policy have implications for the regional development

framework? The hypothesis is village decentralization introduced a new framework to encourage equitable regional development within the district area.

The review of the literature and regulations has shown that, Indonesia's village decentralization introduced a new framework and potentially encouraged regional development equity within the district area. The new framework has, to some extent, reversed the national development paradigm in which rural areas were the last to benefit from development. As a result, rural areas are now at the forefront of regional development policy in Indonesia. The implementation of village decentralization policy has encouraged rural development equity through the devolution of authority and the budget for village-scale infrastructure and public service facilities to the rural village. Therefore, the hypothesis is confirmed.

However, this study found that it was inappropriate to determine the target location of the village decentralization policy solely based on village-level locality's administrative status. The government ignored the technical criteria set by the central bureau of statistics for the classification of urban and rural functions of a village-scale locality. As a result, the implementation of the policy is poorly targeted. *Desa* that technically meet urban criteria still benefit from implementing village decentralization. Meanwhile, *kelurahan* that are technically classified as rural villages are not included in the policy implementation target. This study proposes that the determination of target locations for the implementation of village decentralization policy uses rural-urban classification based on geographical functions established by the central bureau of statistics.

Chapter 3

Spatial Inequality at the Sub-District Level

The previous study has revealed that the policy of village decentralization has implications for the regional development framework at the district level (Wijaya & Ishihara, 2018). This chapter provides a discussion of spatial inequality between sub-districts within the district area. The sub-district classification in this chapter will be used as a variable to investigate the impact of the village decentralization policy at the sub-district level in Chapter 4. First, this chapter presents an overview of geographical settings and the socioeconomic environment as considerations in the selection of study areas. Next, a spatial analysis of the study area is conducted to investigate development inequality and its characteristics across sub-districts. Finally, the agglomeration pattern of the population and public service facilities at the sub-district level is also examined.

3.1 The Geographical Setting and Spatial-Economic Environment of Riau Province

According to Tadjoeuddin, Suharyo, and Mishra (2001), after the fall of the Suharto regime in 1998, the vertical conflict between the central and the regional governments was strongest in provinces with abundant natural resources, reflecting the dissatisfaction of the regional governments with the system at the time. The provinces were not satisfied with the over-centralistic system, as the state had exploited their natural resources, but they had not experienced their fair share of development. Back then, four provinces were involved in a vertical conflict and supported either the application of the federal system or separation from the

government of the Republic of Indonesia. Riau Province was one of the four provinces.

Riau Province has an area of 89,150.16 km² and is located in the middle of Sumatra Island. North Sumatra, West Sumatra, and Jambi are provinces that border Riau in the north, west, and south, respectively. In the east, it is bordered by the Malacca Strait, which separates Sumatra Island from Peninsular Malaysia. Riau Province currently has 12 districts, which consist of 10 regencies and two cities: Kuantan Singingi, Indragiri Hulu, Indragiri Hilir, Pelalawan, Siak, Kampar, Rokan Hulu, Bengkalis, Rokan Hilir, Meranti Islands, Dumai, and Pekanbaru (Figure 3.1).

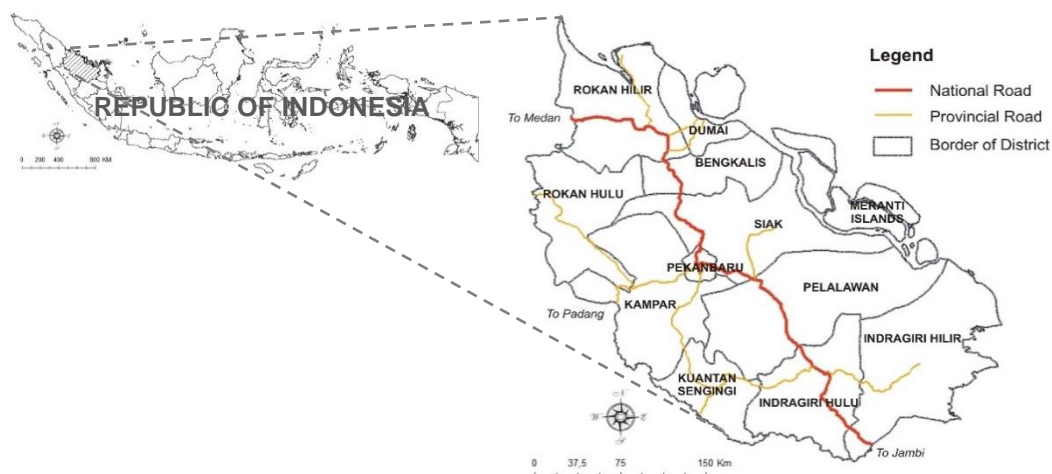


Figure 3.1 Riau Province

Source: [Peta shp Potensi Desa Seluruh Indonesia]. Retrieved 2 June 2017 from <http://www.info-geospasial.com/2015/10/data-shp-seluruh-indonesia.html>.

Pekanbaru is located in the central part of Riau province and is its capital city and economic center. From Pekanbaru, the road to Padang City, the capital of West Sumatra Province, goes west. Meanwhile, the national road that connects Pekanbaru to Medan City, the capital of North Sumatra Province, and Jambi City, the capital of Jambi Province, runs from the northwest to the southeast. From this

national road, feeder crossroads lead to the capital towns of each regency and to Dumai City.

Riau Province is one of the few regions in Indonesia (e.g., Aceh, East Kalimantan, and Papua) that have abundant natural resources in the form of gas, oil, plantations, forestry, and minerals. The potential of the natural resources in Riau Province has attracted numerous domestic and foreign entities to invest in Riau Province. The realization of domestic and foreign investment in Riau Province is the highest on the island of Sumatra and second among the provinces outside Java (Table 3.1).

Table 3.1 Investment realization by province (2000–2015)

Province	Domestic Investment		Province	Foreign Investment	
	Project	(Rp. Million)		Project	(US\$ Thousand)
East Java	2,328	170,765,421.1	Jakarta	16,536	59,508,031.9
West Java	2,219	145,132,269.8	Banten	11,643	47,490,123.9
Jakarta	1,108	102,364,394.4	West Java	4,698	45,760,813.7
East Kalimantan	391	68,034,810.2	East Java	3,093	25,085,770.7
Central Java	1,461	61,687,100.0	East Kalimantan	1,373	11,184,380.4
Riau	530	60,321,814.4	Riau	782	8,287,361.4

Source: Investment realization data, Retrieved September 18, 2017 from https://nswi.bkpm.go.id/data_statistik.

Data from the Ministry of Energy and Mineral Resources (2015) show that Riau is the largest oil producer in Indonesia; it is responsible for more than 36% of Indonesia's total oil production. All regencies and cities in Riau Province are among the top 20 districts that receive the most significant oil and gas revenue-sharing funds in Indonesia. Although oil and gas revenues dominate the economy of Riau Province, the profits from this sector are not necessarily distributed to the local community, because only large (national and multinational) companies are involved in the oil and gas industry. In contrast, the plantation sector, especially oil

palm and rubber cultivation, is relatively open to all. Consequently, oil palm and rubber cultivation attract not only large companies, which are involved in large-scale plantations, but also local communities, through small-scale plantations.

The distribution of oil palm and rubber plantations, which are managed by private companies, governmental companies, and smallholders across districts in Riau Province, can be seen in Figure 3.2. Oil palm cultivation can be found in all districts in Riau Province, with the exception of Meranti Islands Regency. The districts of Pekanbaru City and Dumai City have the smallest oil palm plantation areas in Riau Province. Meanwhile, rubber plantations are spread across all districts; Pekanbaru City and Dumai City have the smallest plantation areas for rubber cultivation. According to the Ministry of Agriculture (2016), the plantation areas and oil palm production in Riau Province are the largest in Indonesia. Regarding the area and production of rubber plantations, Riau is among the top five provinces.

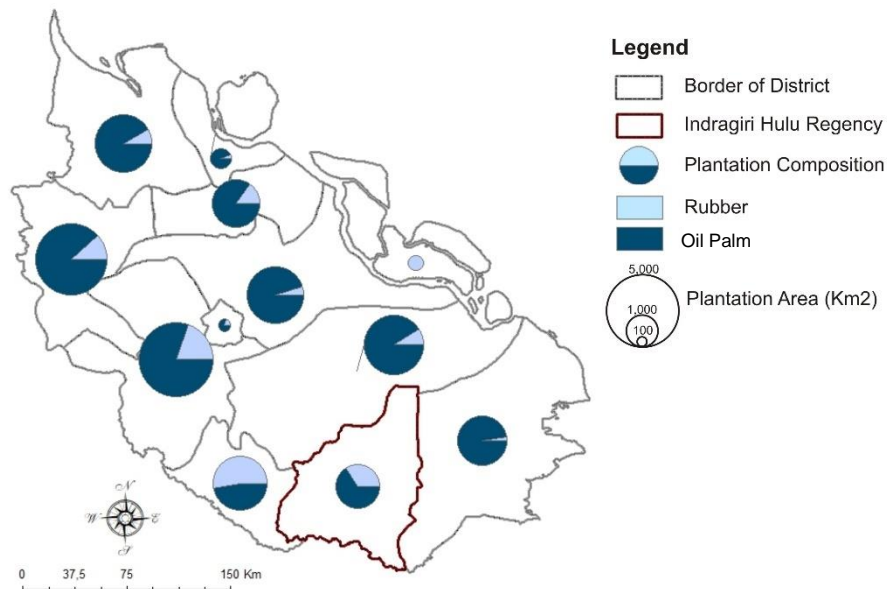


Figure 3.2 Oil palm and rubber plantations across districts in Riau Province

Source: Illustrated from Statistics of Riau (2015).

Based on data from Riau Statistics, the plantation and forestry sectors, along with mining and industries, have made an enormous contribution to Riau's economic growth. However, in addition to its economic benefits, the development of the plantation sector also harms the natural environment and rural livelihoods. Budidarsono, Susanti, and Zoomers (2013) have suggested that, on the one hand, oil palm plantations constitute a highly profitable sector that has tremendous potential for economic development. On the other hand, however, they affect the environment, particularly in regard to land-use changes due to deforestation, the invasion of peatland, and so on. Several studies have noted that the expansion of the plantation sector, especially oil palm, has led to massive land-use changes in Riau Province (Koh et al., 2010; Ramdani & Hino, 2013; Wicke et al., 2011).

Despite the negative impact of oil palm and rubber cultivation on the environment, interest in these plantations remains high not only for big companies but also for smallholders. The economic opportunities of oil palm and rubber plantations have attracted the interest of farmers, encouraging them to engage in small-scale plantations. Budidarsono et al. (2013) suggested that the future expansion of oil palm plantations will continue to meet the needs of domestic consumption and that there would be increased international interest in biofuels as an alternative to fossil fuels. The two suggestions highlight the potential for economic growth in rural communities. According to 2015 data obtained from the Ministry of Agriculture, the area cultivated by smallholders exceeded that cultivated by private and government companies. Oil palm plantations owned by smallholders account for 1,354,503 Ha, while private and governmental companies possess 954,519 Ha and 91,854 Ha, respectively. For rubber cultivation,

smallholders occupy an area of 313,743 Ha, private companies 26,344 Ha, and government companies 19,458 Ha (ibid.).

According to the last census, which was conducted in 2010, the total population of Riau Province was 5,538,367, indicating a population growth rate of 47% in the decade since the 2000 census. This rapid increase is a result of both natural population growth and migration from other provinces. The opportunity to obtain large profits from the rapidly growing plantation sector in Riau Province has caused people from other provinces to migrate to Riau. In 2015, lifetime in-migration to Riau Province was the highest among the outer Java provinces. In-migration to Riau Province was surpassed by only West Java, Jakarta, and Banten, which are “urban” provinces (Table 3.2). Koizumi (2016) revealed that most in-migrants came from North Sumatra Province; there was a significant increase in the population of Riau Province originating from North Sumatra Province, with the figure rising from 401,861 in 2000 to 914,716 in 2010, and the in-migrants were typically involved in small-scale oil palm cultivation.

Table 3.2 Lifetime migration by province in 2015

Province	in-migration	out-migration	net migration
West Java	4,961,541	2,348,128	2,613,413
Banten	2,491,589	579,790	1,911,799
Riau	1,881,079	319,558	1,561,521
East Kalimantan	1,120,017	144,527	975,490
Jakarta	3,647,328	2,701,145	946,183
Lampung	1,362,387	740,854	621,533

Source: Statistics of Indonesia (2018).

Figure 3.3 shows the population distribution and composition based on the urban and rural categories in Riau Province. Districts in the northwest of Riau

province have a relatively larger population than those in the southeast. Based on data from Statistics of Riau, more than 60% of the population in Riau was categorized as rural in 2015. Only three districts—Bengkalis Regency, Dumai City, and Pekanbaru City—have more than 50% of their populations living in urban areas.

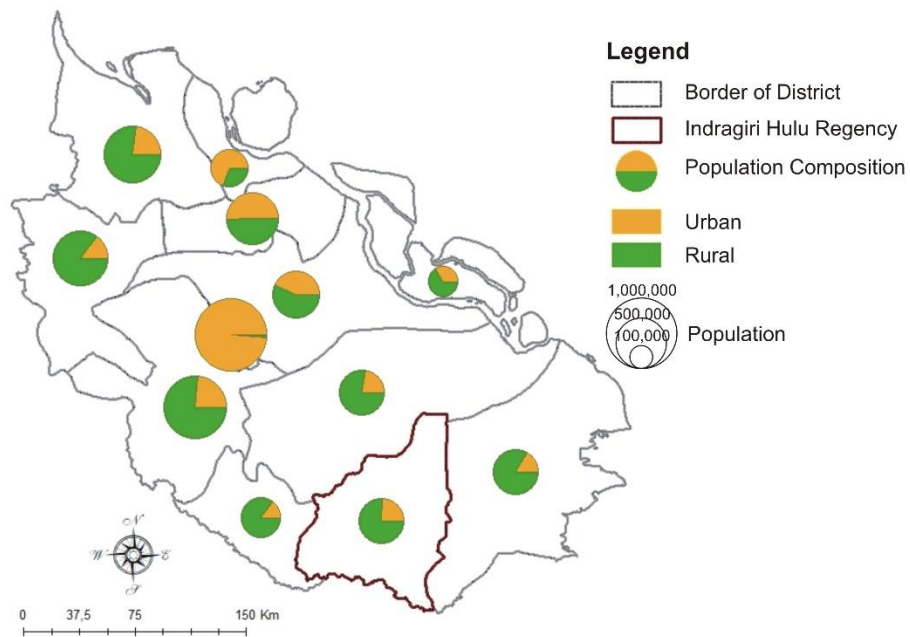


Figure 3.3 Population distribution and composition by districts in Riau Province

Source: Illustrated from Statistics of Riau (2015).

The issue of development inequality does not occur solely between provinces and islands in Indonesia but also between districts in Riau Province. In many cases, urban populations benefit more from development than rural populations. In 2015, the HDI in Riau Province was 70.84, which is above the national average of 69.55, and was ranked sixth nationally. Nevertheless, at the district level, there was striking inequality regarding development achievement in Riau Province; only half of the total number of districts in this province have an HDI above the national average. Figure 3.4 shows the pattern of inequality in the HDI between districts in Riau Province. The pattern is not surprising: Districts that

have a relatively high urban population, such as Pekanbaru City, Dumai City, Bengkalis Regency, and Siak Regency, have a higher HDI than others. This pattern provides evidence that rural districts in Riau Province are still lagging in development compared to urban districts.

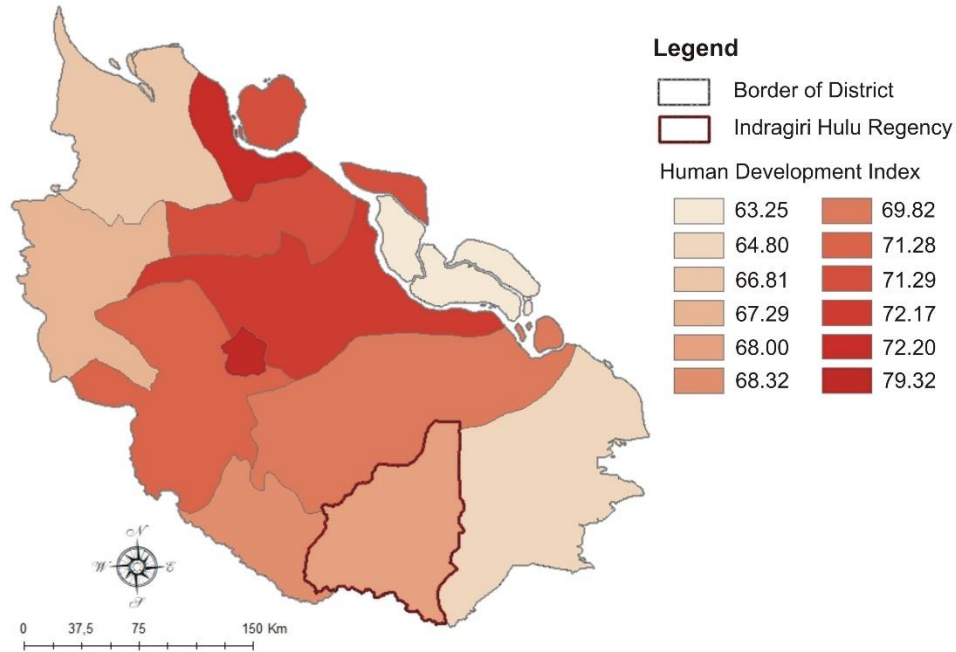


Figure 3.4 HDI by districts in Riau Province

Source: Illustrated from Statistics of Riau (2015).

The implementation of village decentralization provides a significant opportunity for rural areas in Riau Province to become involved with and benefit from development, compared to previous development policies. Moreover, the principle of village decentralization funds transfer, which mainly prioritizes budget equality among all villages in Indonesia, is considered to benefit villages with access to funding from gas and oil revenues, such as Riau Province. Lewis (2015) highlighted the method used for budget distribution, which is based primarily on the principle of equal distribution between villages that results in uneven village income distribution. He argued that villages with high levels of poverty receive less

money than they need; in contrast, villages with access to significant funding from oil and gas revenues, such as Riau Province and East Kalimantan Province, receive more than they need.

Therefore, this study investigates the impact of Indonesia's village decentralization policy on development equity at the sub-district level in Riau Province, with a focus on the provision of infrastructure and public service facilities. Given the variations in the amount of oil and gas revenues received by each district and the differences in development policy priorities between districts, this study limits the research area to one district instead of comparing villages or sub-districts between districts. This enables a detailed picture of the impact of the policy on development equity between sub-districts within a district area.

3.2 Rurality Classification of Sub-Districts in Indragiri Hulu Regency

Indragiri Hulu Regency, which is located in the south of Riau Province, is a representative of the rural districts in Riau Province. The regency is one of the oldest districts in Sumatra and has experienced two stages of regional proliferation. At the beginning of Indonesia's independence, Indragiri Hulu Regency, which was, at that time, a part of Indragiri Regency, was designated as an autonomous region under the Central Sumatra Province.¹² In 1958, the government of the Republic of Indonesia established Riau Province. This province consisted of Kampar Regency, Indragiri Regency, Bengkalis Regency, Kepulauan Riau Regency, and Pekanbaru

¹² Based on the Decree of the Central Sumatra Military Governor 10/GM/T.49 on November 9, 1948, Laws 4/1952 and 12/1956, the Autonomous Region, including Indragiri Regency, was established within Central Sumatra Province.

City.¹³ The proliferation of Indragiri Regency first occurred in 1965. Based on Law 6/1965, Indragiri Regency was split into two regencies: Indragiri Hulu and Indragiri Hilir. Furthermore, in 1999, Indragiri Hulu Regency was split into two regencies: Indragiri Hulu and Kuantan Sengingi.

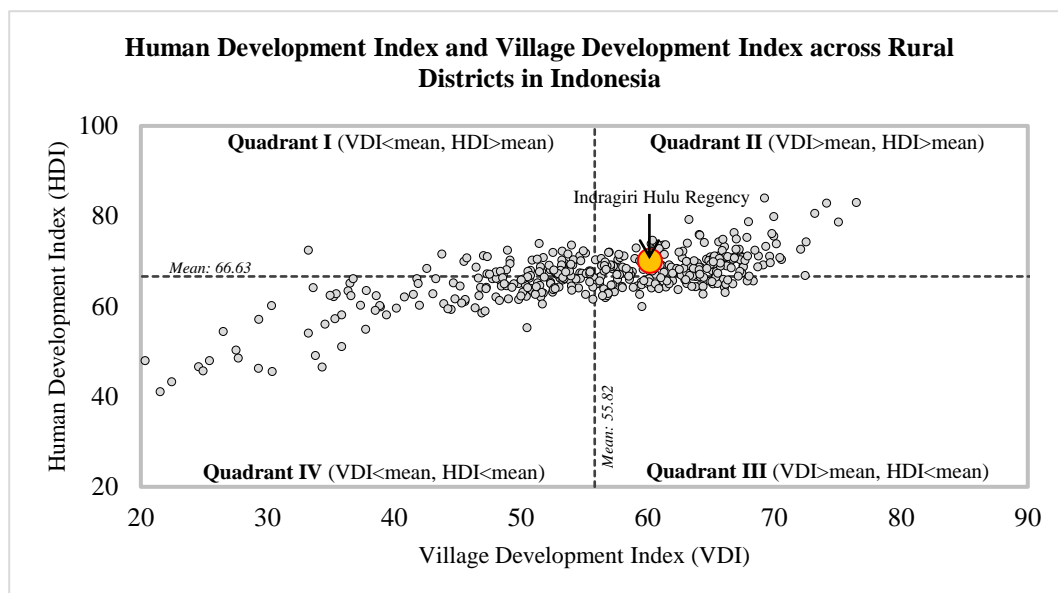


Figure 3.5 Position of Indragiri Hulu Regency among rural districts in Indonesia

Source: The Author.

The Village Development Index (VDI) and HDI of Indragiri Hulu Regency are 60.17 and 68.97, respectively. The VDI indicates the level of progress/development of a village, which is determined based on five dimensions: basic services, infrastructure conditions, transportation, public services, and administration of village government, while the HDI is an indicator that explains how the population can access the results of development by obtaining income, health, education, and so on. Nationally, Indragiri Hulu Regency is among the rural

¹³ Emergency Law 19/1957 concerns the establishment of the first-level regions (*Swatantra*) of West Sumatra, Jambi, and Riau.

districts with a VDI and HDI above the mean value (Quadrant II). Figure 3.5 is a scatter plot of the VDI and HDI across districts in Indonesia.

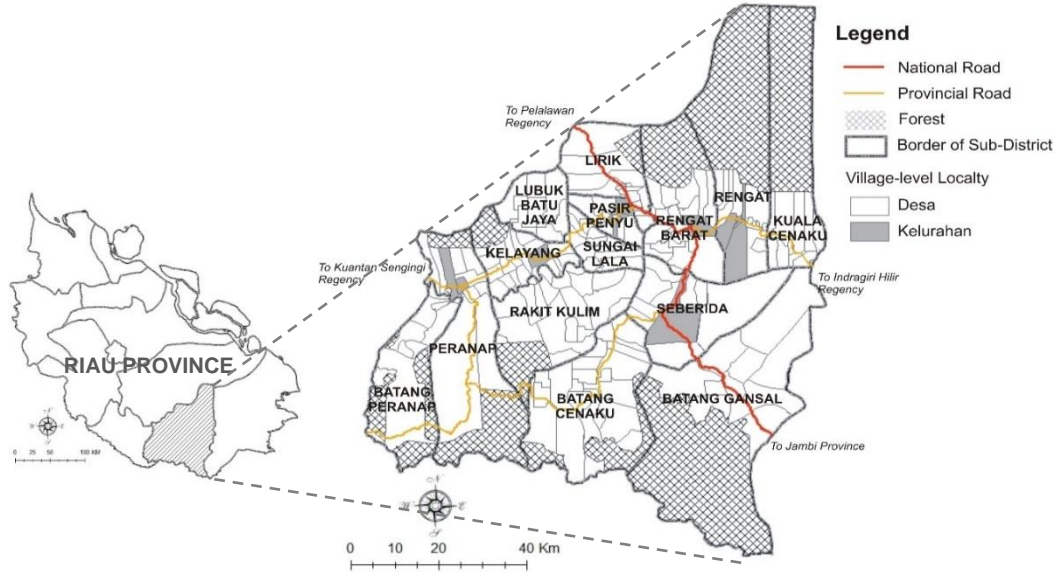


Figure 3.6 Indragiri Hulu Regency

Source: [Peta shp Potensi Desa Seluruh Indonesia]. Retrieved 2 June 2017 from <http://www.info-geospasial.com/2015/10/data-shp-seluruh-indonesia.html>.

Currently, Indragiri Hulu Regency occupies an area of about 8,198.26 km², consisting of 14 sub-districts divided into 178 *desa*/rural villages and 16 *kelurahan*/urban villages (Figure 3.6). Pelalawan Regency, Kuantan Singingi Regency, and Indragiri Hilir Regency are neighboring districts in the north, west, and east, respectively. In the south, Indragiri Hulu Regency is bordered by Tebo Regency in Jambi Province. The district capital is in Rengat. However, the district government administration is centered in Rengat Barat, which is located 15 kilometers from Rengat. The average distance from the sub-district capitals to the district capital is 57.5 kilometers.

The average travel time from villages to sub-district capitals in Indragiri Hulu Regency is 23 minutes, with the shortest travel time being under three minutes

and the longest, from the most remote villages, amounting to 120 minutes. Most of the villages with high geographical difficulties—that is, those with a score higher than 50.51 based on the Geographical Difficulty Index¹⁴—are located more than 30 minutes away from the sub-district capital (Figure 3.7).

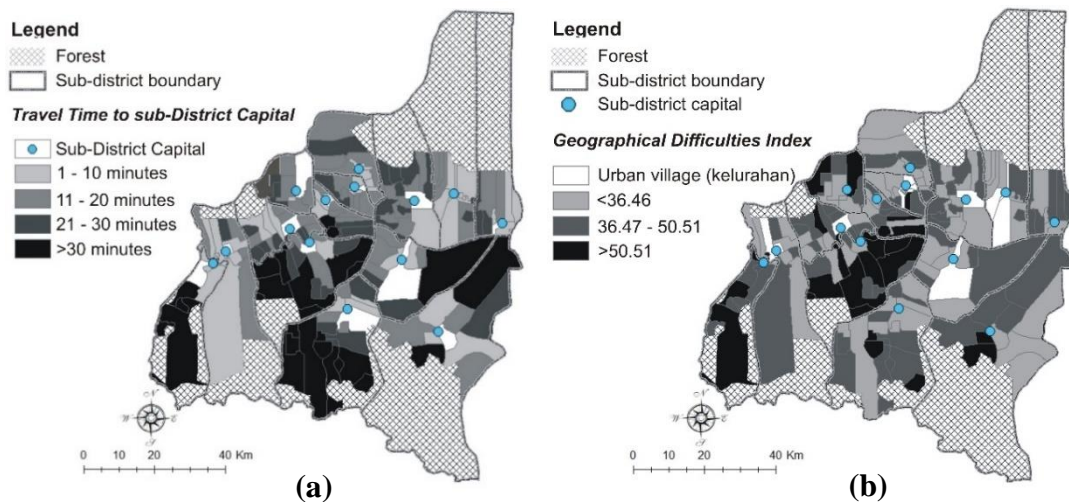


Figure 3.7 (a) Proximity from sub-district capital and (b) Geographical Difficulties Index

Source: Illustrated from Statistics of Indragiri Hulu (2016) and Author's calculations.

The population of the area increased from 365,421 in 2010 to 409,431 in 2015, with an average annual growth rate of 2.48%, which is almost double the national average of 1.36% (Indragiri Hulu Statistics, 2016). Figure 3.8 shows that most of the villages in Indragiri Hulu Regency are inhabited by between 1,000 and 3,000 people (53.6%), with a population density of less than 118.6 km²/person (74.7%). Most villages with a high population density are the capitals of sub-districts and nearby neighboring communities.

¹⁴The Geographical Difficulties Index reflects the level of geographical difficulty of a village based on the availability of basic services, infrastructure conditions, transportation, and communication. The index, which is calculated by the Central Statistics Agency, is one of the factors used to determine the proportion of additional village decentralization funds provided to all villages in Indonesia.

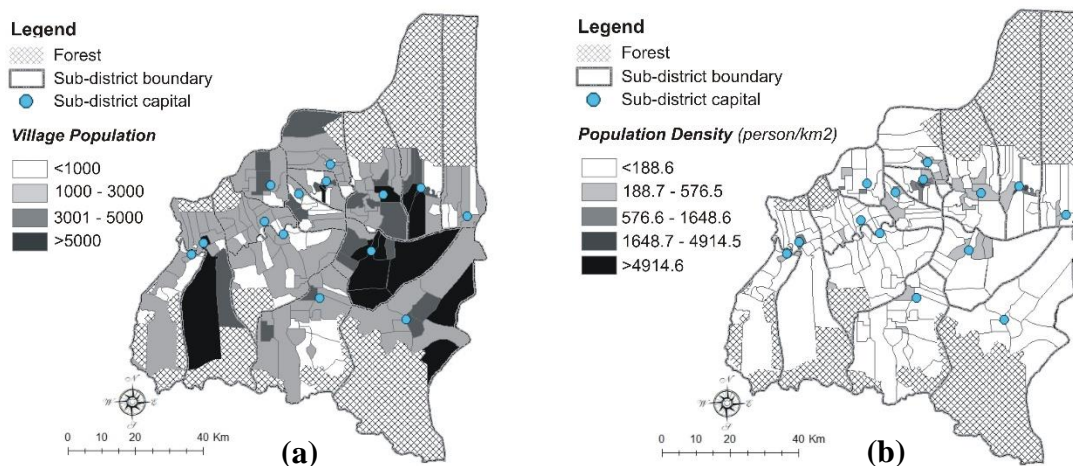


Figure 3.8 (a) Village population and (b) population density in Indragiri Hulu Regency

Source: Illustrated from Statistics of Indragiri Hulu (2016).

Agriculture, which is the dominant economic sector in Indragiri Hulu, has contributed significantly to the economic growth of the district. In 2015, the contribution of the Gross Regional Domestic Product (GRDP) from this sector accounted for 22.59%, the largest proportion of all categories (BPS, 2016). Data from 2011 to 2015 show a relatively stable GRDP trend for this sector. Plantations are the largest sub-sector contributing to GRDP; based on the yearly average, this sub-sector accounts for 67.07% of the agricultural sector (Table 3.3).

Table 3.3 Contribution of agriculture, forestry, and fishery to GRDP (%)

No.	Business Field	2011	2012	2013	2014	2015
1.	Agriculture	76.60	77.61	78.33	79.49	78.06
	a. Food crops and horticulture	4.00	4.00	4.18	4.12	4.44
	b. Plantation crops	66.39	67.27	67.34	68.48	65.93
	c. Other agriculture	6.20	6.35	6.81	6.90	7.68
2.	Forestry and logging	20.96	19.88	18.92	17.64	19.02
3.	Fishery	2.44	2.51	2.75	2.87	2.92
	Agriculture, Forestry, and Fishery	100.0	100.0	100.0	100.0	100.0

Source: BPS Indragiri Hulu (2016).

The main crops grown in the district are cash crops, particularly rubber and oil palm. Per the Agricultural Census of 2013, 57,253 households (54.8%) in Indragiri Hulu Regency rely on these two crops for their livelihood. Based on the 2016 data from Tree Crop Statistics of Indonesia, the total area of palm oil plantations of smallholders in Indragiri Hulu Regency is 56,885 hectares, which far exceeds the average area of other districts in Indonesia (25,280 hectares). Regarding rubber plantations, the total area managed by smallholders is 33,073 hectares, while the average plantation area in Indonesia's rubber-producing districts is 12,605 hectares. The distribution of plantations managed by smallholders across sub-districts can be seen in Figure 3.9.

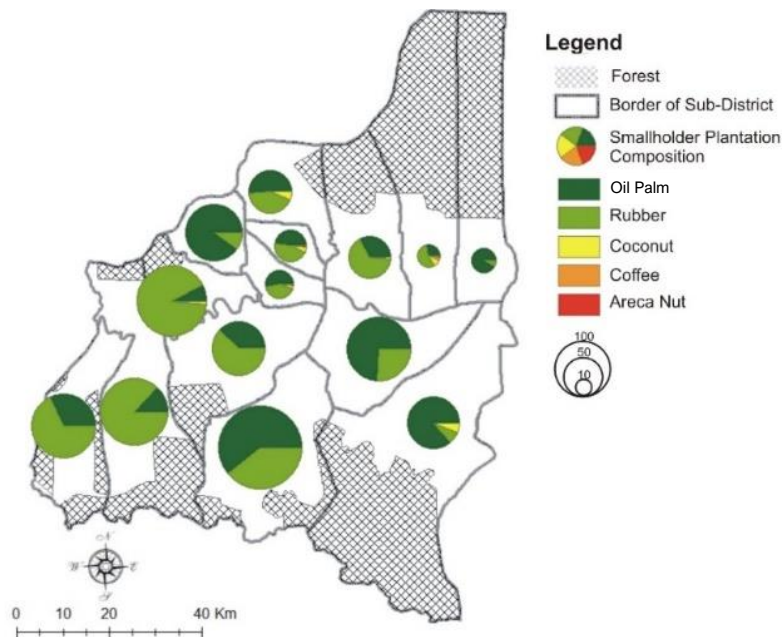


Figure 3.9 Smallholder plantations across sub-districts in Indragiri Hulu Regency

Source: Illustrated from Statistics of Indragiri Hulu (2016).

Figure 3.10a illustrates the distribution of public service facilities, which consist of administrative, health, education, and market facilities, built by Indragiri

Hulu Regency government in 2017. The result of a distribution pattern analysis, using the ArcMap 10.2.2. spatial statistical tool Average Nearest Neighbour Analysis,¹⁵ shows that the distribution pattern of public service facilities in Indragiri Hulu form a cluster pattern (Figure 3.10b). The cluster pattern indicates that there has been an agglomeration of public service facilities in several regions across sub-districts in Indragiri Hulu Regency. However, the output from the Average Nearest Neighbour Analysis could not define the characteristics of agglomeration at the sub-district level. To further investigate the characteristics of the agglomeration of public service facilities at the sub-district level, this study compares sub-districts based on its rurality and centrality.

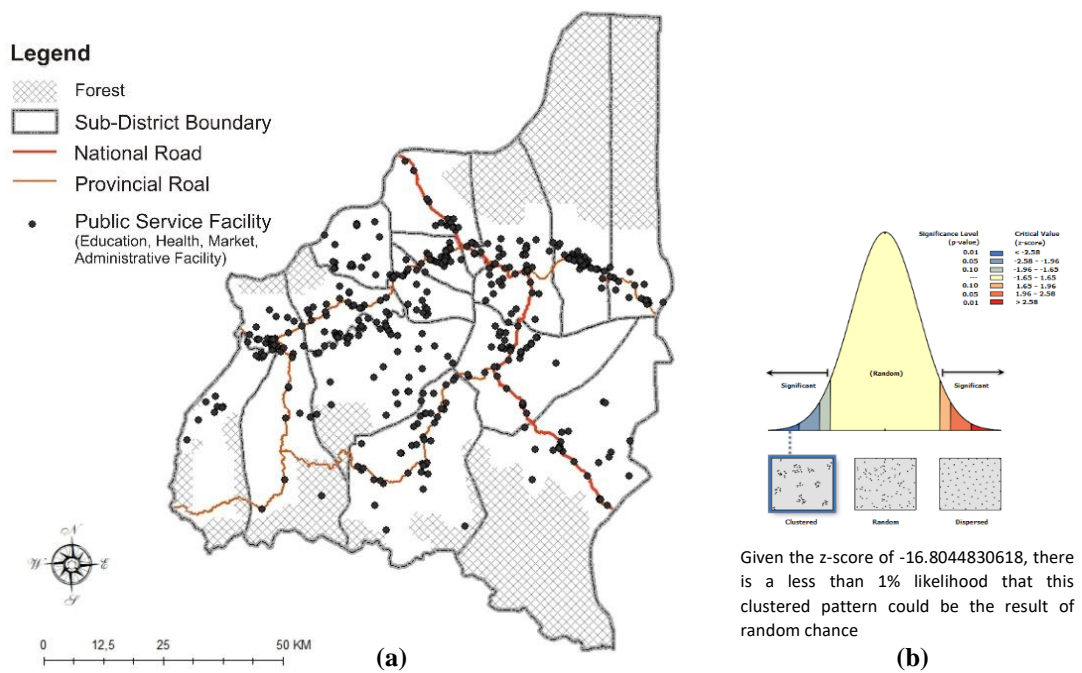


Figure 3.10 (a) Public service facility (b) Average Nearest Neighbour Analysis

Source: Outputted by Average Nearest Neighbour Analysis, ArchMap 10.2.2.

¹⁵ The Average Nearest Neighbour tool measures the distance between each feature centroid and its nearest neighbor's centroid location. It then averages all of these nearest neighbor distances. If the average distance is less than the average for a hypothetical random distribution, the distribution of the features being analyzed is considered clustered. If the average distance is greater than a hypothetical random distribution, the features are considered dispersed (Mitchell, 2005).

According to Tacoli (2006), the definitions of rural and urban used by most governments is determined in one of four ways: through (a) population size threshold, (b) population size threshold combined with several other criteria (population density, or the proportion of the population working in nonagricultural sectors), (c) administrative or political status, and (d) a list of settlements that are designated “urban” or “rural” in the national census. Traditionally, in developing countries, where the economy is based predominantly on agricultural activities, population size is still used to distinguish small towns from the surrounding rural areas. However, there is no consensus regarding how many people in a single region can be defined as either rural or urban, because the operational definition of the countryside varies from country to country and even between official bodies within the same country (Ocana-Riola & Sanchez-Cantalejo, 2005). Thus, among developing countries, the definition and level of rurality between regions vary considerably.

Despite rurality being a term long used by researchers worldwide to indicate that different rural areas cannot be defined homogeneously, the actual definition of rurality is highly variable across countries (Rousseau, 1995). In developed countries, researchers and international organizations have developed different types of village typologies and indicators to enable a better understanding of village dynamics and to develop policies that are relevant to rural areas. According to Li, Long, and Liu (2015), variations in methods of classifying and defining rural areas in the literature are derived from measuring aspects such as differences in the degree of rurality, including the level of population density, the rate of population loss or gain, settlement size, local economic structure, accessibility, and landscape across

regions and countries. However, the lack of reliable statistical data at the micro level makes it a challenge for developing countries such as Indonesia to classify rural and urban function at the micro level.

According to Douglass (1998), in most countries, the sub-district scale is the most appropriate unit of development because it is sufficiently small to allow rural households frequent access to urban functions, yet large enough to expand the scope of economic growth and diversification to overcome the limitations of using villages as a development unit. This study uses the sub-district as the unit of observation because, in the Indonesian spatial hierarchy, the sub-district is the smallest cluster unit consisting of a group of villages in which there are “urban” and “rural” functions in the context of spatial structure. However, the role of the sub-district in regional development planning received less attention in the Indonesian legal system. Sub-districts are torn between being a territorial unit representing a number of villages and being a regional apparatus working units, representing the district government (Antlov and Eko, 2012). There is no rural and urban classification of spatial structure at the sub-district level in Indonesia’s spatial system.

When establishing rurality indicators for the classification of sub-districts, these variables must essentially represent the concept of rural areas in Indonesia. At the same time, they can be measured and quantified. The method of measuring rurality in this study differs from those that are used in existing studies in developed countries, which, to a large extent, use demographic characteristics as an indicator of rurality. Demographic characteristics at the sub-district level in rural Indonesia are relatively similar. Most people make a living in the agricultural sector, while

nonagricultural activities are usually concentrated in sub-district capitals. The spatial disparity between sub-districts is reflected in the size of settlements, the availability of public facilities (administrative, health, education, and markets), and road network connectivity. Instead of using demographic characteristics as an indicator of rurality, this study uses population size, availability of public facilities, and road network connectivity as variables for sub-district classification.

The notion of centrality in classic urban geography and, specifically, location theory is generally defined according to location attractiveness. The distance to one or more centres and the size of the centre are used to obtain various “gravity” models. In spatial interaction models, accessibility coincides with gravitational potential, with the aim of each activity being the achievement of a location in the highest value place (Chiaradia, Hillier, Schwander, & Wedderburn, 2009). Meanwhile, in the social networking literature, centrality is defined as the extent to which agents are connected to other agents (Firgo, Pennerstorfer, & Weiss, 2015). In this study, centrality is defined as the role and function of one or more sub-districts in regard to the surrounding sub-districts based on the interaction index calculated by applying the gravity model.

The purpose of classifying sub-districts based on their rurality and centrality in this study is to illuminate the spatial structure of the rural area, which differs from the usual relationship between “urban” and “rural” in existing studies. The classification is also used to formulate indicators of analysis in this study. In the assessment of sub-district rurality, the main aspects considered are population, public service facilities, and road network connectivity. The population in each sub-district was taken from the 2017 Indragiri Hulu Statistics. Spatial data were

collected from August 1 to September 21, 2017. All public service facilities and road networks in the case study area were identified and mapped using ArchMap 10.2.2. Mapping was carried out simultaneously to direct observations and surveys with locals regarding the quality and coverage of services provided to each sub-district. The collected data were then used to classify the rurality of sub-districts.

For the public facilities data pool, scalogram analysis¹⁶ was chosen to weigh each available public service facility at the sub-district level (Huisman & Stoffers, 1998). The public service facility variables considered in this study were administrative, health, education, and marketplace facilities. Each facility obtained a score of “1” if it was present, and a score of “0” if it was absent. When various levels were distinguished in certain service groups, a simple weighting system was applied, whereby some scores were added to each subsequent level of service by considering the hierarchy and range of functions (Appendix 1).

The hierarchy of rurality of the sub-districts was determined by the results of the “mass” calculation of each sub-district, which was identified by the population, the weighted score of the public service facilities, and road network connectivity:

$$m = p \times s \times c \quad (1),$$

where m is the sub-district’s mass, p is the population, s is the weighted score of a public service facility, and c is defined as follows:

$$c = r_d \times r_l \times \gamma \quad (2),$$

¹⁶ Scalogram analysis, also known as Guttman scaling, is a technique used to examine whether a set of items is consistent, in the sense that they all measure the same thing.

where c is road network connectivity, r_d is road density, and r_l is the length of a road that is in good condition. The degree of connectivity is indicated by γ (Taaffe et al., 1996):

$$\gamma = \frac{l}{l_{max}} = \frac{l}{3(v-2)} \quad (3),$$

where l is the number of road links between villages within a sub-district area, v is the number of villages in a sub-district, and l_{max} is the maximum possible number of road links. The γ index ranges from 0, indicating that none of the villages are linked, to 1, which indicates that every village is linked to every other possible village.

Based on the mass calculation results, 14 sub-districts in Indragiri Hulu were grouped into five levels of rurality. Rengat had the highest mass score of the sub-districts and was, thus, classified as level 1. The second group consisted of one sub-district (level 2) with a mass score between 51 and 100 points. The third group consisted of three sub-districts (level 3) with a score between 26 and 50 points. Six sub-districts that had mass scores between 11 and 25 were grouped into level 4, and three sub-districts with the lowest mass scores (below 11 points) were grouped into level 5. The rurality hierarchies of each sub-district are listed in Table 3.4.

The centrality of the sub-districts was measured by applying the gravity model derived from Newton's Gravity Law. Newton's Gravity Law has long been developed and used by the social and economic sciences to explain the phenomenon of the flow of interactions between regions (Anderson, 2011). This study used the population, the weighted scores of public service facilities, and road networks as masses of sub-districts. It also used travel time between sub-districts as obstacles to

the interaction between sub-districts as an analogy of Newton's Gravity Law; this was formulated as follows:

$$T_{ij} = (m_i m_j) / t_{ij}^2 \quad (4),$$

where T_{ij} is the interaction index between sub-districts i and j , m_i is the mass of sub-district i , m_j is the mass of sub-district j , and t_{ij} is the travel time from sub-district i to sub-district j .

Table 3.4 Rurality hierarchies across sub-districts in Indragiri Hulu

Rurality Level ¹	Sub-District	Population ² (<i>p</i>)	Weighted Score of Public Service Facility				Total (<i>s</i>)	Road Connectivity (<i>c</i>)	Mass ($m = p \times s \times c$)
			Administrative ³	Education ⁴	Health ⁵	Market ⁶			
1	Rengat	5.214	40.48	81.43	68.25	27.83	217.99	0.099	112.52
2	Rengat Barat	4.553	73.81	41.43	68.25	14.03	197.53	0.110	98.92
3	Seberida	5.407	7.14	21.43	18.25	24.38	71.21	0.106	40.81
3	Pasir Penyu	3.546	7.14	41.43	18.25	20.93	87.76	0.107	33.29
3	Peranap	3.211	7.14	21.43	18.25	17.48	64.31	0.130	26.84
4	Batang Cenaku	3.241	7.14	21.43	18.25	10.59	57.42	0.102	18.98
4	Batang Gansal	3.351	7.14	21.43	7.14	10.59	46.31	0.101	15.67
4	Lubuk BatuJaya	2.084	7.14	21.43	18.25	10.59	57.42	0.115	13.76
4	Lirik	2.662	7.14	21.43	18.25	10.59	57.42	0.088	13.45
4	Rakit Kulim	2.301	7.14	21.43	18.25	10.59	57.42	0.099	13.08
4	Kelayang	2.387	7.14	21.43	7.14	10.59	46.31	0.103	11.38
5	Sungai Lala	1.466	7.14	21.43	7.14	10.59	46.31	0.073	4.95
5	Kuala Cenaku	1.326	7.14	21.43	7.14	10.59	46.31	0.073	4.48
5	Batang Peranap	1.025	7.14	21.43	7.14	10.59	46.31	0.092	4.36

Note: ¹ Rurality level: level 1 (sub-district mass >100), level 2 (51–100), level 3 (26–50), level 4 (11–25), level 5 (0–10)

² Population in tens of thousands

³ Administrative Facility: Sub-District Head Office and District Head Office

⁴ Education Facility: Primary School, Junior High School, Senior High School, and College/University

⁵ Health Facility: Community Health Centre, Clinic, and Hospital

⁶ Marketplace: Village Market and Sub-District Market

Source: Statistics of Indragiri Hulu (2016) and Author's calculations.

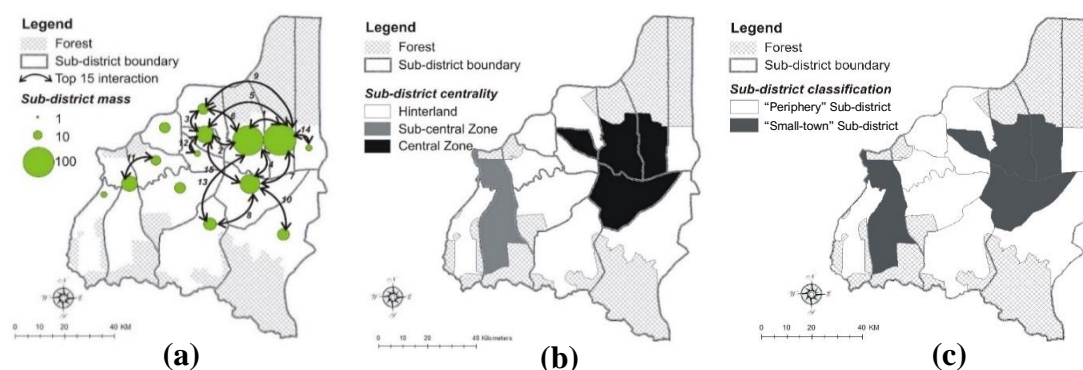


Figure 3.11 (a) Major interaction, (b) centrality, and (c) classification of sub-districts

Source: The Author.

Figure 3.11 shows the major interaction, centrality, and classification of the sub-districts in Indragiri Hulu based on the gravity model's interaction index (Appendix 2). The interaction index table shows that the role of sub-districts with a higher rurality hierarchy (levels 1 to 3) is very significant to the flow of interaction across sub-districts in Indragiri Hulu. The top 10 interactions occur between these sub-districts, especially among four sub-districts located nearby: Rengat, Rengat Barat, Pasir Penyau, and Seberida. Based on the interaction index, sub-district centrality vis-à-vis the surrounding sub-districts can be grouped as follows: Rengat, Rengat Barat, Pasir Penyau, and Seberida in the central zone; Peranap in the sub-central zone; and nine other sub-districts in the hinterland.

For the purposes of this study, the sub-district classification in Indragiri Hulu is divided into two: "small-town" sub-districts (central and sub-central zones) and "periphery" sub-districts (hinterland). From field observations, it was confirmed that the "small-town" sub-districts serve as the urban activity centers for the surrounding rural communities. Better public facilities (administrative,

education, health, and market) in the capitals of “small-town” sub-districts attract many people from “periphery” sub-districts, who commute to “small-town” sub-districts to obtain better services and obtain their daily necessities.

The questionnaire survey of 140 randomly selected locals also supported the study findings that spatial inequality exists between sub-districts. Table 3.5 shows the profile of the respondents. According to the respondents, several sub-districts, namely Rengat, Pasir Penyu, Rengat Barat, Seberida, and Peranap, are more “urbanized” than other sub-districts. These five sub-districts emerged from all respondents when they were asked to name sub-districts that are more “urbanized” than others.

Table 3.5 Profile of respondents (140 samples).

No	Category	Total		
		Frequency	Percentage	
1	Gender	Male	26	18.57
		Female	114	81.43
2	Education level	Not past elementary	12	8.57
		Elementary school	51	36.43
		Junior high school	49	35
		Senior high school	22	15.71
		Diploma/higher	6	4.29
3	Location	“Small-town” sub-districts	50	35.71
		“Periphery” sub-districts	90	64.29

Source: The Author (Survey in August 2017).

3.3 Characteristics of “Small-town” Sub-Districts and “Periphery” Sub-Districts in Indragiri Hulu Regency

The characteristics of area, population, and distribution of public service facilities at the village level in “small-town” and “periphery” sub-districts can be illustrated as follows. Villages in “small-town” sub-districts are relatively more populous than “periphery” sub-district villages. Villages with a population of over 3,000 are more commonly found in the “small-town” sub-districts than the “periphery” sub-

districts of Indragiri Hulu Regency. The average population in the “small-town” sub-district villages is 3,194, while in the “periphery” sub-district villages, it is 1,631. Figure 3.12 illustrates the significant weak positive relationships between village area and population in “small-town” sub-districts ($r = 0.38$, $p < 0.005$) and “periphery” sub-districts ($r = 0.36$, $p < 0.001$). This means that, statistically, villages that have more extensive areas also tend to have larger populations than other villages. Relationships between village area and population in “small-town” sub-districts is stronger than in “periphery” sub-districts.

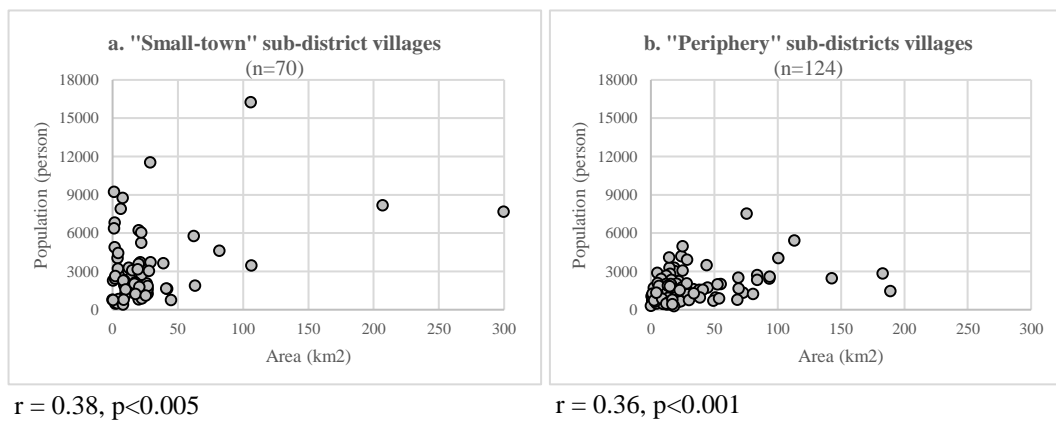


Figure 3.12 Scatter plot of village area and population in (a) “small-town” and (b) “periphery” sub-district villages

Source: The Author.

In general, villages in “small-town” sub-districts have more public facilities than “periphery” sub-district villages. The average number of public facilities in “small-town” sub-district villages is 5.4 units, while in “periphery” sub-district villages, it is 4.2 units. A significant weak positive relationship exists between village population and the number of public service facilities in both groups of sub-districts. There is a tendency that the larger the population of a village, the more likely it is that more public facilities are available there, and vice versa. As

illustrated in Figure 3.13, the relationships between population and public facilities in “small-town” sub-district villages ($r = 0.82$, $p < 0.001$) is stronger than in “periphery” sub-district villages ($r = 0.63$, $p < 0.001$).

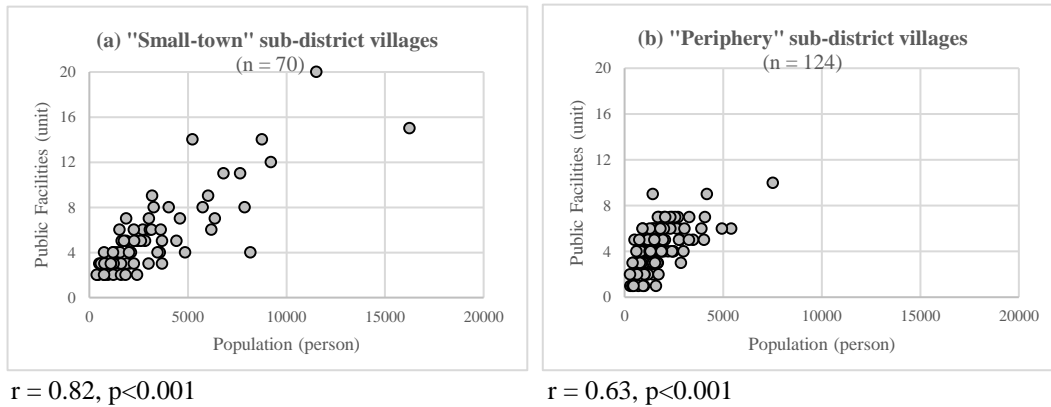


Figure 3.13 Scatter plot of village population and number of public facilities in (a) “small-town” sub-district and (b) “periphery” sub-district

Source: The Author.

On average, the area of villages in “small-town” sub-districts and in “periphery” sub-district is the same—26.96 kilometers². Figure 3.14 presents the relationships between village areas and public service facilities across villages in Indragiri Hulu Regency. The relationships between the two variables is not significant in “small-town” sub-district villages ($r = 0.20$, $p > 0.05$), while in “periphery” sub-district villages, there is a significant weak positive relationship ($r = 0.28$, $p < 0.005$). The analysis result indicates that the area of a village is only minimal affecting the number of public facilities in the villages of Indragiri Hulu Regency.

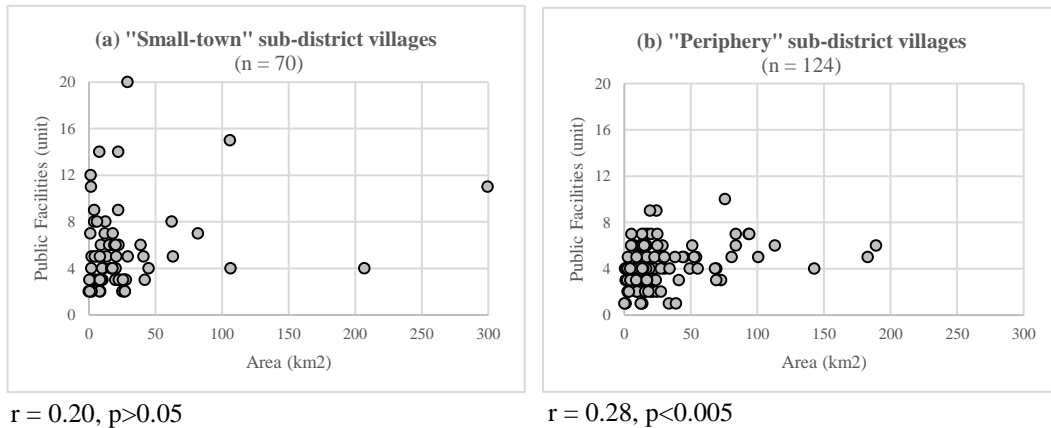


Figure 3.14 Scatter plot of village area and number of public facilities in (a) “small-town” sub-district and (b) “periphery” sub-district

Source: The Author.

The above findings show that despite having the same average area, villages in “small-town” sub-districts are more populated and have more public facilities than “periphery” sub-district villages. In both sub-district groups, the population has a positive though weak correlation with the area and the number of public service facilities. Populous villages tend to have larger areas and more public service facilities than other villages. However, a positive relationship between the area and the number of public facilities occurs in “periphery” sub-district villages only, while in the “small-town” sub-district villages, the relationship between area and public facilities is not significant. In this case, the provision of public service facilities in “small-town” sub-district villages was not based on area size but on population.

3.4 The Agglomeration Pattern of Population and Public Service Facilities at the Sub-District Level

Small towns are connectors and intermediaries between rural and urban areas and play an essential role in equitable regional development with sound planning and management practices (Firman, 2016; Hinderink & Titus, 2002; Tacoli, 2003). Small towns play the following roles in regional development: service centers and consumer shopping centers, support and marketing centers for agriculture, and antipodes of population migration from rural to metropolitan and megapolitan cities (Douglass, 1998). According to Lynch (2004), the linkages between small towns and rural areas are a significant factor in regional development equity strategy, especially in developing countries, because most cities in developing countries depend heavily on rural areas, compared to cities in developed countries.

In the context of Indonesia, sub-district capitals play a significant role as small towns, given their urban function as administrative centers, as well as their public services and economic activity in the sub-district area. Facilities and infrastructure are developed in sub-district capitals as a service cluster for the surrounding countryside. Thus, the sub-district capital serves as the nearest urban activity center for people in rural areas. This practice is in line with the concept put forth by Rondinelli (1985), who suggested the importance of grouping services, facilities, and infrastructure in a centralized place that may be easily accessed by a widely dispersed population in rural areas. Hence, the distribution of small towns across sub-districts is expected to spur the development of surrounding rural areas and increase the flow of population, capital, commodities, and information between the two. Strengthening the urban function of the sub-district capital is an essential

factor in creating reciprocal linkages between rural and urban areas to encourage regional development equality efforts. However, as Hinderink and Titus (2002) found, reinforcing the structure and function of small towns would have a positive impact on the countryside only if the rural areas have been able to meet their own needs.

In the previous subchapter, the classification and characteristics of sub-districts in Indragiri Hulu Regency based on the level of rurality have been discussed. In general, despite having the same average area, villages in the “small-town” sub-districts are more populous and have more public service facilities than “periphery” sub-district villages. This sub-chapter discusses the role of sub-district capitals in the distribution pattern of population and public service facilities at the village level.

Villages in “small-town” sub-districts are relatively closer to the sub-district capital than “periphery” sub-district villages. The average travel time from villages in the “small-town” sub-district to the sub-district capital is 13.5 minutes, while in “periphery” sub-districts, it is 24.3 minutes. The most remote villages in “small-town” sub-districts can be reached within 35 minutes, whereas in “periphery” sub-districts, they are within two hours by motorcycle. Figure 3.15 is a scatter plot diagram of village population and proximity to sub-district capitals among “small-town” and “periphery” sub-districts. Regarding village proximity to sub-district capital and population in “small-town” sub-districts, there is a significant weak negative relationship ($r = 0.48$, $p < 0.001$). Statistically, the proximity factor affects the population level of 22.3% in the “small-town” sub-districts. There is a tendency that the farther the “small-town” sub-district village from the sub-district capital,

the smaller the population, and vice versa. Meanwhile, there is no relationships between the two variables in “periphery” sub-district villages ($r = 0.12, p > 0.05$).

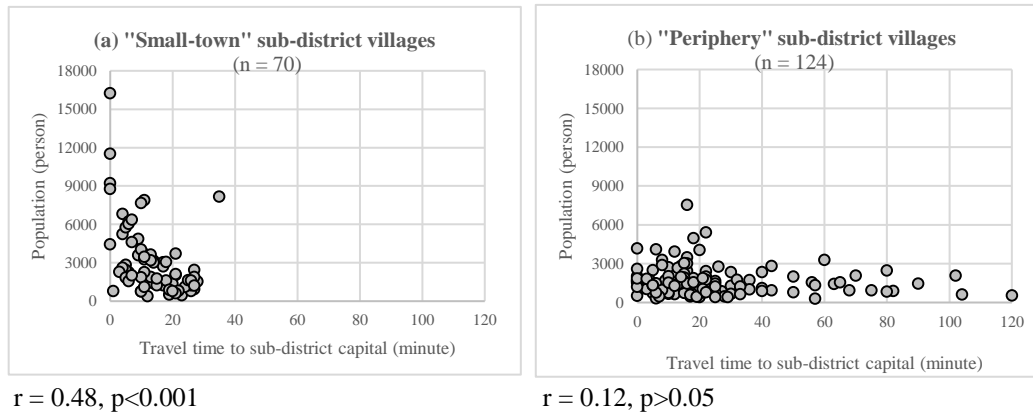


Figure 3.15 Scatter plot of village population and proximity to sub-district capital in (a) “small-town” sub-district and (b) “periphery” sub-district

Source: The Author.

Figure 3.16 shows the scatter plot of village proximity to sub-district capital and the number of public service facilities across sub-districts. There is a significantly weak negative relationship between village proximity to sub-district capital and the number of public service facilities in “small-town” sub-districts ($r = 0.48, p < 0.001$). The proximity factor affects the number of public service facilities of 23.3% in the “small-town” sub-districts. There is a tendency that the farther a village is located from a sub-district capital, the fewer the public service facilities, and vice versa. Meanwhile, there is no relationship between the two variables in “periphery” sub-district villages ($r = 0.07, p > 0.05$). This finding illustrates that regardless of the proximity of a village to the sub-district capital, there is no significant variation across villages in “periphery” sub-districts with respect to the availability of public service facilities.

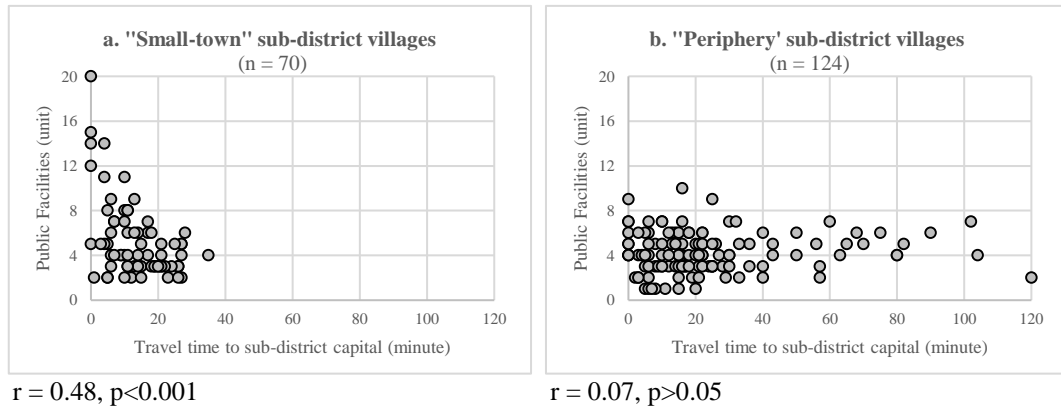


Figure 3.16 Scatter plot of public facilities and proximity to sub-district capital in (a) “small-town” sub-district and (b) “periphery” sub-district

Source: The Author.

Villages in “small-town” sub-districts are relatively closer to the sub-district capital, compared to “periphery” sub-district villages. The agglomeration of the population and public service facilities in sub-district capitals and neighboring villages is more pronounced in “small-town” sub-districts than in “periphery” sub-districts. Most public service facilities in “small-town” sub-districts are within a 10-minute radius of travel time from the sub-district capital. In contrast, most public service facilities in “periphery” sub-districts are over 10 minutes travel time from the sub-district capital (Figure 3.17). The agglomeration pattern of public service facilities is similar to the pattern of population distribution in Figure 3.18.

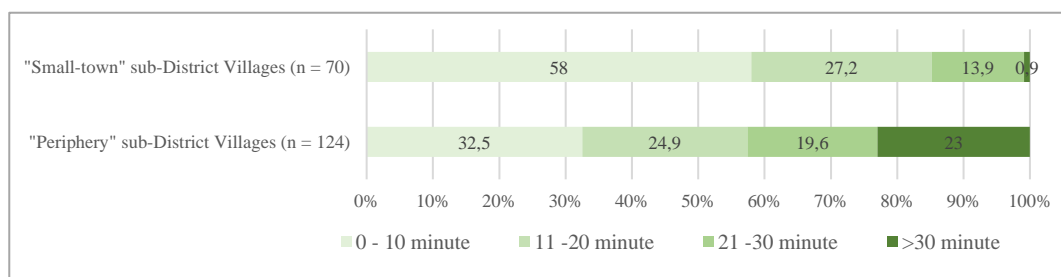


Figure 3.17 Agglomeration of public service facilities

Source: The Author.

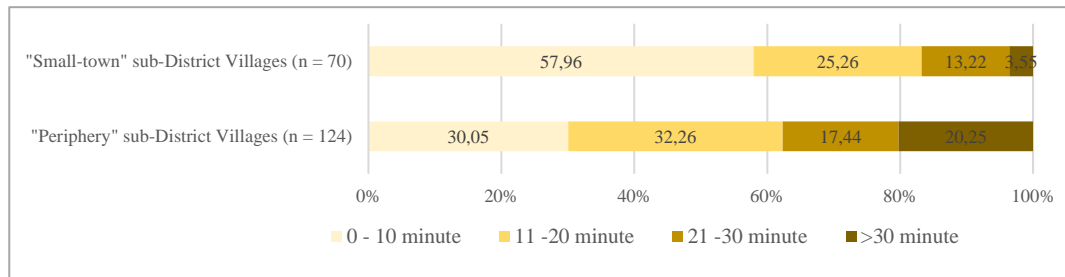


Figure 3.18 Agglomeration of population

Source: The Author.

The case study at the sub-district level shows that the agglomeration of the population and public service facilities does not occur solely in big cities or metropolitan areas, as illustrated by Loibl et al. (2018); rather, it also occurs to some extent at local activity centers at the micro level. This study shows that the agglomeration of the population and public service facilities in sub-district capitals and neighboring villages is more pronounced in “small-town” than in “periphery” sub-districts.

3.5 Chapter Conclusion

The objective of this chapter is to identify spatial disparities at the sub-district level and classify sub-districts within the spatial structure of a rural area. Based on this aim, the research question for this chapter is, how should sub-districts be classified within the spatial structure of a rural area? The hypotheses are as follows:

1. Sub-districts can be classified based on their rurality and centrality within the spatial structure of a rural area;
2. There is a discrepancy in the agglomeration of the population and public service facilities between sub-district groups.

This chapter discusses the results of spatial disparities in terms of population, public service facilities, and road network connectivity between sub-districts in a hierarchy of rurality and centrality. The rurality and centrality of sub-districts determine their role in the region's spatial structure. Based on their rurality and centrality, sub-districts can be classified into "small-town" and "periphery." There are discrepancies in the spatial characteristics of sub-district groups. The agglomeration of the population and public service facilities in the sub-district capital and neighboring villages is more pronounced in "small-town" than "periphery" sub-districts. Therefore, the hypotheses are confirmed.

Chapter 4

Village Decentralization and Its Implications for Regional Development at the Sub-District Level

This chapter presents an empirical analysis of the sub-district level, outlining the implications of village decentralization policy for regional development equity. These implications are investigated by comparing the impacts on “small-town” and “periphery” sub-districts (Wijaya, 2019). This chapter first analyzes the implications of the village decentralization policy for community involvement in rural development. Furthermore, the impact of the village decentralization policy for the equitable development of infrastructure and public facilities at the sub-district level is analyzed. The final section concludes the analysis.

4.1 Community Involvement in Decision-making and Supervision of Development

Before village decentralization, there were two formal components of the budget formulation for village-scale infrastructure and facilities development projects in Indonesia: a top-down budget-planning process executed by the district government and a bottom-up planning process called the *musrebang*. The *musrebang* is a development planning meeting at the village, sub-district, district, provincial, and national levels that consists of a series of public consultations on development planning and budgeting, as regulated by Law 25/2004 of the Development Planning System.

Although the *musrembang* is an attempt by the Indonesian government to promote community participation in the bottom-up development planning process, there are several issues with its implementation. Sindre (2012) summarized some general criticisms of the implementation of the *musrembang*: The first is that the deliberation process is dominated by local elites, politicians, and bureaucrats; the second is that the *musrembang* is only the initial stage in identifying development planning and does not involve budget planning; and the third is that a limited impact results from the development of the proposed small-scale infrastructure in the *musrembang*. Meanwhile, Purba (2011) highlighted the need for policy formulations to ensure that the voices of women and poor people are considered in *musrembang* decision-making.

In addition to the two formal components of budget planning for rural development noted above, community-driven development (CDD) projects have played a significant role in providing village-scale infrastructure and public facilities in Indonesia. While the *musrembang* is the process of increasing government budget participation and transparency to improve infrastructure and public services, CDD projects have become a key to allocating state funds for rural development at the sub-district level. The implementation of the Kecamatan Development Program (KDP) in 1998 marked the beginning of the CDD project in Indonesia. In general, the KDP aims to alleviate poverty through community empowerment by providing block grants to the poorest sub-districts in Indonesia for the promotion of small-scale infrastructure development and for social and economic activities. Block grants are distributed directly to the sub-districts, while villages compete by proposing projects to obtain funds. Continuing the successful

implementation of the KDP, the government launched the PNPM, or National Program for Community Empowerment, in 2006. The implementation of the PNPM (2006–2014) has made the CDD project a national strategy for poverty alleviation.

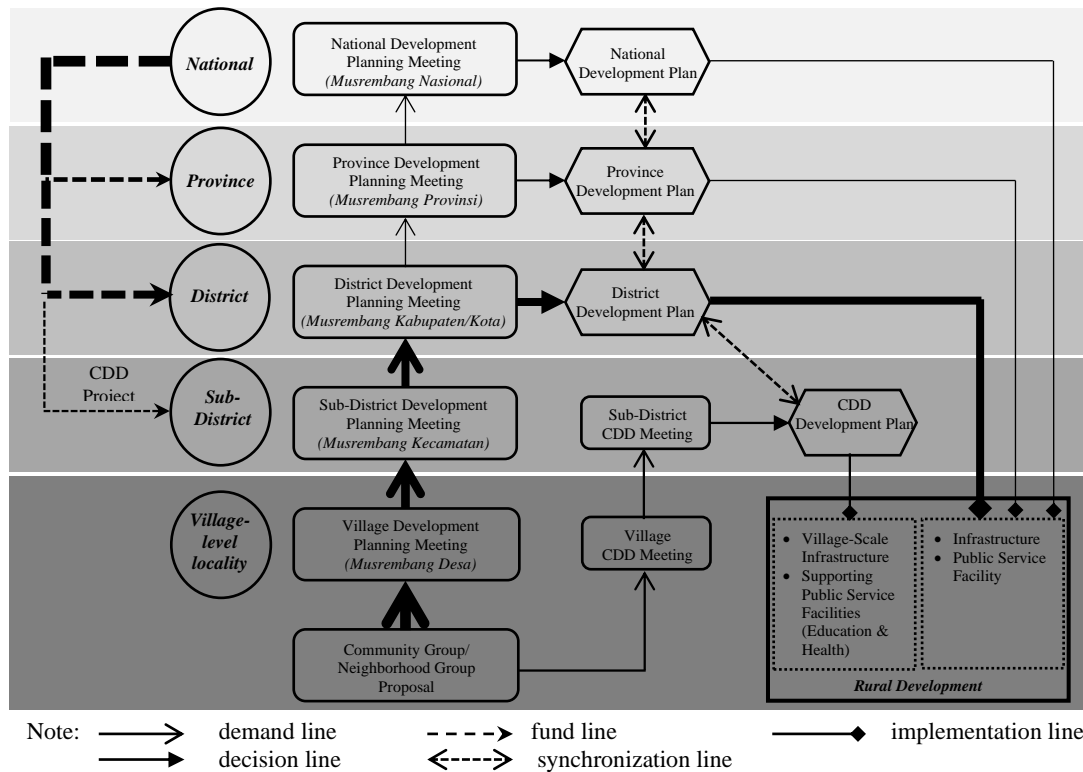


Figure 4.1 Rural development framework before village decentralization

Source: The Author.

Figure 4.1 illustrates the demand, decision-making, and funding processes for rural development before village decentralization. Although the Indonesian government introduced a bottom-up development planning process in 2004, most decisions are still made through a top-down approach at the district level. Communities submit infrastructure and public facility development proposals through two channels: the village *musrembang* and CDD project meetings. Priority projects that are agreed upon at the village *musrembang* are delivered at the sub-district *musrembang* and compete with development proposals from other villages.

Priority projects that are decided upon at the sub-district level are then discussed at the district *musrembang* and district agencies' technical meetings before being jointly agreed upon by the legislative and executive parties at the district level. Village communities can also submit development proposals through CDD projects. Priority projects that are agreed upon at the village level are delivered at the sub-district level to compete with proposals from other villages before they are selected as part of the CDD's project development plan.

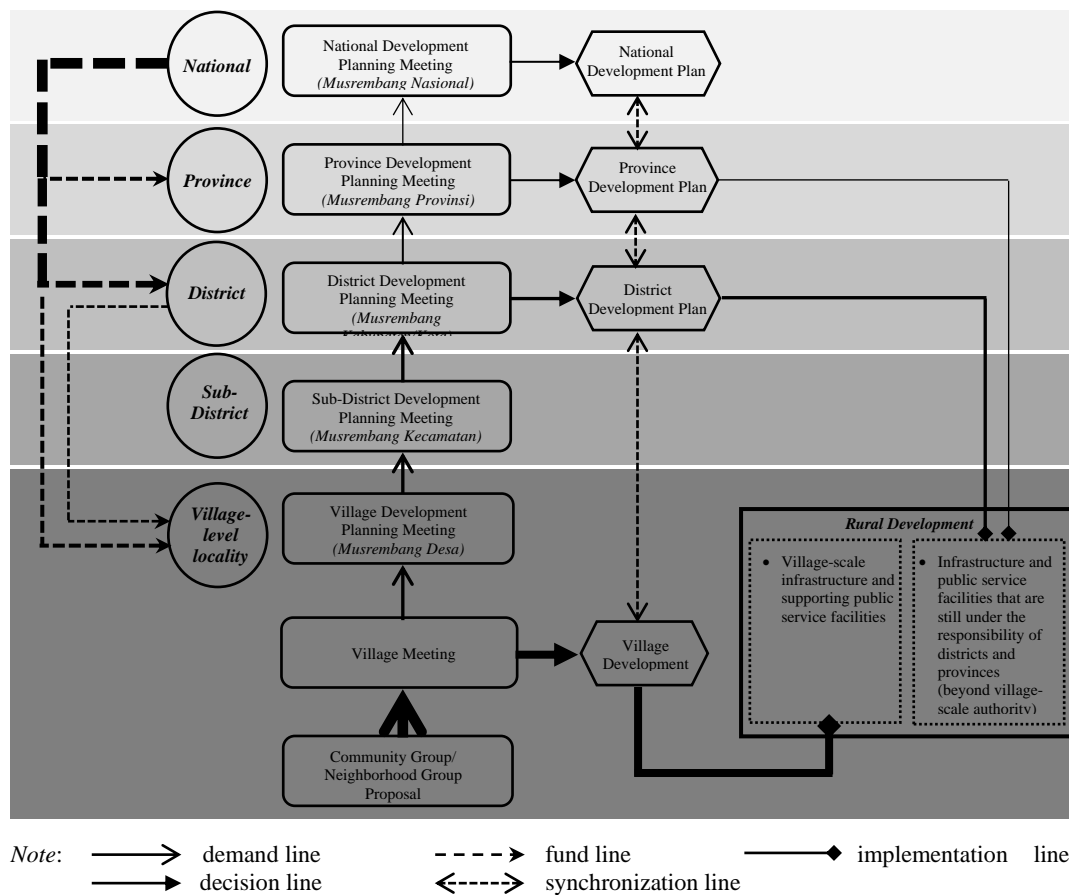


Figure 4.2 Rural development framework under village decentralization.

Source: The Author.

Under village decentralization, the bottom-up approach to rural development planning is stronger than ever. The delegation of authority and the

support of financial transfers from the central government to village governments strengthen community involvement in the bottom-up development approach initiated by CDD projects. Rural communities can plan and become directly involved in the construction of infrastructure and public facilities in their villages. The decision-making process for the provision of village-scale infrastructure and public facilities is carried out at the village meeting. The village meeting agreement concerning priority projects and budgeting is set out in the village development plan. Proposals for infrastructure and public service provisions that are still the responsibility of the district are made to the district government through the *musrembang* mechanism (Figure 4.2).

Table 4.1 Profiles of respondents in Indragiri Hulu

No	Category	Total		
		Frequency	Percentage	
1	Gender	Male	601	86.85
		Female	91	13.15
2	Education level	Not past elementary	69	9.97
		Elementary school	276	39.88
		Junior high school	201	29.05
		Senior high school	130	18.79
		Diploma/higher	16	2.31
3	Location	“Small-town” sub-districts	367	53
		“Periphery” sub-districts	325	47

Source: The Author (Survey, February to March 2019).

A questionnaire survey was conducted to investigate the implications of the village decentralization policy for community participation in the decision-making process at the village level. Table 4.1 shows the profiles of the survey participants in Indragiri Hulu to help further our understanding of their characteristics. The total number of respondents is 692, of whom 87% are male and 13% female. In terms of education level, 10% of the participants have no education or did not graduate from elementary school, 40% graduated from elementary school, 29% from junior high

school, and 21% from senior high school or higher. In terms of location, 53% of the respondents live in “small-town” sub-districts and 47% in “periphery” sub-districts.

As many as 75% of all respondents involved in the data collection process have participated in village meetings at least once since the implementation of village decentralization. Most of the respondents who had participated in a village meeting, in both “periphery” and “small-town” sub-district villages admitted that they had attended village meetings more frequently since the village decentralization (Table 4.2). The chi-square value is 8.817, which is significant with $p < 0.05$. The result indicates that there is a statistically significant association between the sub-district group and attendance at village meetings.

Table 4.2 Community participation in decision-making process and development supervision

		Attendance (more frequent after VD)			Total
		No	Yes	Never attended	
Group	“small-town” sub-district	78 (21.2%)	187 (51%)	102 (27.8%)	367 (100%)
	“periphery” sub-district	52 (16%)	202 (62.2%)	71 (21.8%)	325 (100%)
Total		130 (18.8%)	389 (56.2%)	173 (25%)	692 (100%)
Chi sq. (2) = 8.817, $p = 0,012 < 0.05$					

Source: The Author.

Community involvement in decision-making process and supervision of rural development in “periphery” sub-districts was higher than the percentage of respondents in “small-town” sub-districts: 78.2% and 72.8%, respectively. Increased community participation in the decision-making process at the village level after the implementation of village decentralization is in line with the findings of Haryanto and Fahmi (2018), who concluded that the level of village community participation in planning, community empowerment, and development supervision

under village decentralization was relatively better than in the previous period. The findings of this study reveal that in regard to the level of participation, there is a variation between communities in “periphery” and “small-town” sub-districts. Community involvement in the decision-making process and development supervision is higher in the “periphery” sub-districts than in the “small-town” sub-districts.

Table 4.3 Determinant aspects of community participation and the significance of village decentralization

			Significance of Village Decentralization			Total
			Fund Transfer	Division of Authority	Decision-Making Process	
District Official (n = 6)	The most influential aspect of community participation in village meeting	Public Awareness	3 (75%)		1 (25%)	4 (100%)
		Village Head Capability		2 (100%)		2 (100%)
		Total	3 (50%)	2 (33.3%)	1 (16.7%)	6 (100%)
Sub-District Official (n = 12)	The most influential aspect of community participation in village meeting	Public Awareness	8 (100%)			8 (100%)
		Village Head Capability	2 (50%)	2 (50%)		4 (100%)
		Total	10 (83.3%)	2 (16.7%)		12 (100%)
Community Leader (n = 12)	The most influential aspect of community participation in village meeting	Public Awareness	10 (100%)			10 (100%)
		Village Head Capability	2 (100%)			2 (100%)
		Total	12 (100%)			12 (100%)
Community Facilitator (n = 4)	The most influential aspect of community participation in village meeting	Public Awareness	2 (66.7%)		1 (33.3%)	3 (100%)
		Village Head Capability	1 (100%)			1 (100%)
		Total	3 (75%)		1 (25%)	4 (100%)
Total (n = 34)	The most influential aspect of community participation in village meeting	Public Awareness	23 (92%)		2 (8%)	25 (100%)
		Village Head Capability	5(55.6%)	4 (44.4%)		9 (100%)
		Total	28 (82.3%)	4 (11.8%)	2 (5.9%)	34 (100%)

Source: The Author.

Table 4.3 presents a summary of the semi-structured interviews that were conducted with rural development stakeholders in Indragiri Hulu: six district officers, 12 sub-district officers, 12 community leaders, and four community facilitators. Two main topics were explored during the interview: (a) factors that

influence community involvement in village meetings and (b) the significance of village decentralization policy. The participants' answers were grouped based on the main topic. Regarding the most influential aspect of community participation in the decision-making process, the participants' answers can be grouped into two: community awareness and capability of village heads.

According to most of stakeholders in Indragiri Hulu, increased participation in the decision-making process since the implementation of village decentralization has been a direct result of community awareness of village development. Twenty-five participants highlighted this aspect of public awareness. In addition to increasing public awareness, the capability of village heads has also influenced the level of community participation in the decision-making process. Nine participants emphasized the importance of the capabilities of village heads in the implementation of village meetings. Village heads who have managerial, communicative, and democratic abilities tend to attract more community members to village meetings than those who are authoritarian and less communicative with the community.

The closeness of the village government and the community under village decentralization is expected to increase the transparency and accountability of the government compared to a centralized system. However, at the same time, it can have a negative effect because of the nature of the local elites or because they lack the capacity and incentives to act as expected. The role of local elites is very significant in implementing development projects under the decentralization policy. The dominance of local elites in the decision-making process is often regarded as the main problem in decentralization development programs. However, there is a

difference between “elite control” of the development decisions, which ensures that access to the project benefits the community, and “elite capture,” which refers to local elites dominating and corrupting community planning and governance (Dasgupta & Beard, 2007; Lucas, 2016; Warren & Visser, 2016).

According to district government officials, in some cases, “elite control” and “elite capture” were still found in Indragiri Hulu. Education level and access to information seemed to contribute to the dominance of village heads, in addition to the nature of the local elites in the village. One interviewee stated the following:

We still find that in some villages, the village head collaborates with private contractors on simple infrastructure projects that should be done independently by the local community ... in some cases, it causes conflicts in the village; some even become legal issues (Erlina Wahyuningsih, Division Head of the Village Administration, District Secretariat Office, Interview).

According to another interviewee,

In some remote villages, community participation and awareness in rural development are still low ... the level of education and access to information seem to contribute to that ... as a result, the planning and implementation of rural development in these villages are still dominated by the village head ... village head domination is not always adverse; in some cases, domination and strong leadership from the village head are needed to ensure the achievement of policy objectives (Rianto, Division Head of Settlements, Indragiri Hulu’s Housing and Settlements Agency, Interview).

According to stakeholders in Indragiri Hulu, increased participation in the decision-making process since the implementation of village decentralization has been a direct result of community awareness of village development. Of the 34 participants, 23 stated that the community has become more concerned about rural development since the village government was given the authority to manage significant amounts of finances geared toward development. Furthermore, in the opinions of community leaders, the public wants to ensure that it benefits from the policy by being involved in the decision-making process. The community leaders' perspectives regarding community participation can best be represented by the following statement:

The community is more eager to come to the village meeting since the opportunity to realize development proposals is greater than ever, especially in remote villages that lacked development before the implementation of the village decentralization policy (Jaharan, community leader of Sungai Akar, "periphery" sub-district village, Interview).

Financial transfers, the division of authority, and decision-making processes are significant values of village decentralization from the perspective of stakeholders in Indragiri Hulu. Nevertheless, 82.3% of the participants considered financial transfers to be more fundamental than the other two factors. One sub-district official reinforced this view:

The division of authority and changes in the decision-making process will not have a significant impact on rural development if adequate development funds do not support it ... The decentralization fund transfer aims to reduce

rural poverty and development inequality (Gandhi Hernawan, sub-district official in Batang Gansal, “periphery” sub-district, Interview).

Since the implementation of village decentralization, there has been a significant increase in village budgets sourced from village funds and village allocation funds in Indragiri Hulu Regency (Table 4.4). There has also been a drastic increase in the average budget per village, from USD 9,017 before the implementation of village decentralization in 2014 to USD 86,700 in the third year of village decentralization. Significant improvements in the village financial resources derived from the village fund and village fund allocation provide greater opportunities for communities and village governments to participate in rural development.

Table 4.4 Village budget in Indragiri Hulu Regency (2014–2017)

No.	Source	Budget (USD)*			
		Before	After Village Decentralization		
		2014	2015	2016	2017
1.	Village Fund (State Budget)	0	3,513,831.10	8,060,899.58	10,198,843.80
	Average per Village	0	18,115	41,550	52,574
2.	Village Fund Allocation (District Budget)	1,749,214	6,443,581.01	6,198,255.77	6,620,524.34
	Average per Village	9,017	33,215	31,953	34,126
	Total Average per Village	9,017	51,330	73,503	86,700.05

Note: *Budget figures were initially provided in Indonesian rupiah and were then converted to US dollars using the exchange rate at the year of implementation.

Source: Indragiri Hulu’s Financial and Asset Management Agency (2017).

The significant increase in village funds since the implementation of village decentralization has not only resulted in increased community participation in rural development but also raises concerns regarding village officials’ financial management capabilities. For example, Husna and Abdullah (2016) highlighted the

issue of lack of quality human resources and financial management capabilities, leading officials to favor the use of third-party services for the preparation of required reports. Meanwhile, Husin (2016) proposed that modification of the financial accounting system was necessary due to the complexity of procedures and village officials' limited understanding of financial accounting under the village decentralization policy. District government officials expressed similar concerns:

We realize that financial management under the village decentralization policy is quite complex and difficult for village officials to understand ... not to mention the wide variations in human resource capabilities at the village level ... Workshops and training have been carried out to enhance the capabilities of village officials in financial management. However, it still takes time to improve the capabilities of village officials (Kamaruzaman, Head Division of Village's Finance and Asset Development, Community Empowerment Agency of Indragiri Hulu Regency, Interview).

Another interviewee stated,

Problems that often arise in the implementation of village decentralization in Indragiri Hulu are mostly due to the inability of village government officials to prepare work plans and budget costs ... In my opinion, increasing the capability of the government apparatus in financial management is key to the successful implementation of village decentralization (Erlina Wahyuningsih, Division Head of the Village Administration, District Secretariat Office, Interview).

Based on the interviews with stakeholders in Indragiri Hulu, it can be concluded that the implementation of village decentralization has increased community participation in rural development. Increased community participation in decision-making and development supervision is due primarily to increased public awareness regarding involvement in rural development. The substantial increases in village budgets since the implementation of village decentralization have also contributed significantly to increased community awareness regarding active involvement in rural development. However, village officials' lack of financial management capabilities remains a significant issue. Enhancing the capability of village officials is the next step that must be considered by the government to improve the implementation of the village decentralization policy.

4.2 The Provision of Village-Scale Infrastructure and Public Facilities

The implementation of village decentralization in Indragiri Hulu Regency has not only resulted in a significant increase in village budgets but has also promoted equal opportunities between sub-districts in regard to village-scale development. Village decentralization provides village-scale authority¹⁷ to village governments to develop infrastructure (roads, drainage, irrigation channels, clean water and neighborhood sanitation, ponds, bridges, etc.) and public facilities, such as markets, health service posts, and nonformal education facilities (Figure 4.3).

¹⁷ Village-scale authority: the authority to regulate and manage the interests of the village community that has been run by the village or that arise due to the development of the village and the initiative of the village community, among others, boat moorings, village market, public baths, irrigation, sanitation, health posts, art galleries and learning, as well as village library, village ponds and village roads (Village Law 6/2014).



Figure 4.3 Village-scale infrastructure and public service facilities

Source: The Author.

Figure 4.4(a) shows the distribution of the annual average budget per village for the construction of village-scale infrastructure and public facilities before village decentralization. From 2011 to 2014, the distribution of the district government budget for village-scale infrastructure and public service facilities development was uneven across sub-districts. A considerable portion of development funding during this period was concentrated in “small-town” sub-districts. Meanwhile, “periphery” sub-districts received a small portion of the overall development funds. Figure 4.4(b) shows the distribution and composition of the village-scale infrastructure and public facilities development budget from 2015 to 2017.

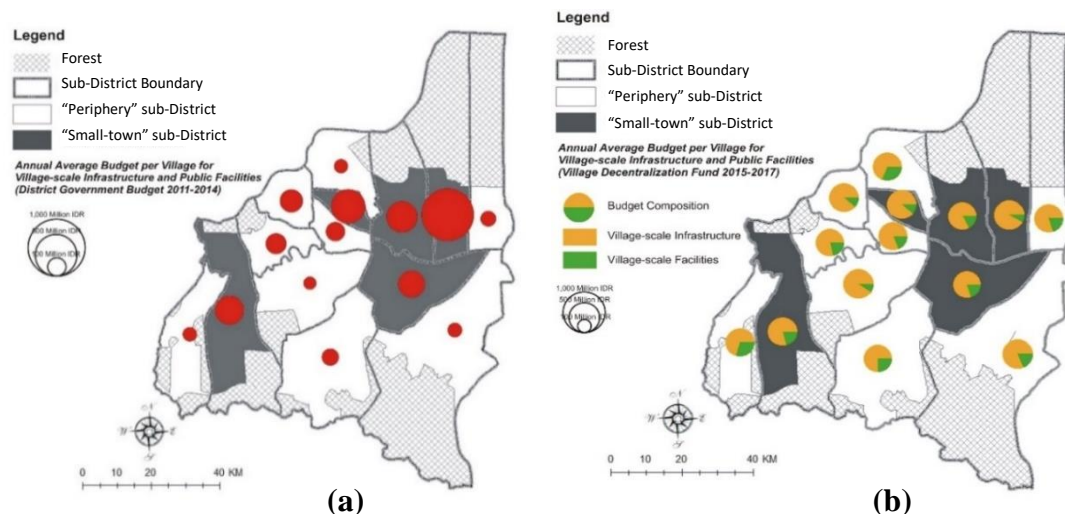


Figure 4.4 The budget for village-scale development across sub-districts (a) before and (b) after village decentralization

Source: Author's calculations using data from Indragiri Hulu Agencies (2017).

Table 4.5 shows that there is an increase in the average annual budget for the development of village-scale infrastructure and public facilities in the two sub-district groups after the implementation of the village decentralization. However, statistically, there is no significant difference in the average annual budget per village in the “small-town” sub-district before and after village decentralization. Meanwhile, in “periphery” sub-districts there is a significant difference in the annual budget per village after the implementation of village decentralization; the value of sig. (2-tailed) is 0.000, which is less than 0.05. The result indicates that the implementation of the village decentralization policy has a significant positive impact on increasing the budget for village-scale infrastructure and public facilities development in the “periphery” sub-districts.

Table 4.5 Paired samples test of average annual budget per village before and after village decentralization

Group of Sub-Districts	Average Annual Budget		Number of Sub-district	Result of T-test
	Before VD	After VD		
“Small-town” sub-district	341,493,865.00	464,602,249.00	5	t = -2.436 df = 4 p = 0.072 > 0.05
“Periphery” sub-district	92,099,102.00	469,902,090.30	9	t = -22.255 df = 8 p = 0.000 < 0.05

Source: The Author.

Between 2015 and 2017, 81% of village development funds in Indragiri Hulu were utilized for village-scale infrastructure development. The remainder was for the provision of village-scale public service facilities. In both “small-town” and “periphery” sub-district villages, roads are the primary preference of communities when it comes to rural development. More than 50% of the physical development budget in both “small-town” and “periphery” sub-districts has been used to construct 628.57 kilometers of village roads since the implementation of village decentralization (Figure 4.5).

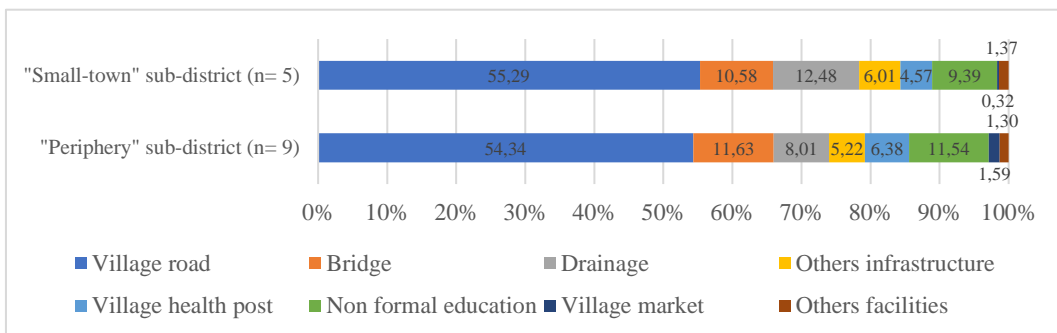


Figure 4.5 Village budget utilization based on type of infrastructure and public facilities

Source: Author’s calculations using data from Indragiri Hulu Agencies (2017).

In Indragiri Hulu Regency, most roadways that provide access to agricultural land are made of dirt and gravel, which can be traversed by foot or

motorcycle only. Narrow and unpaved roads are burdensome to rural communities as they hinder the transportation of crops to be sold, particularly during rainy seasons. Poor roadway conditions result in higher transportation costs for agricultural products, which, in turn, reduces farmers' incomes.

Communities in both “small-town” and “periphery” sub-district villages argue that village road infrastructure projects are more important than other village-scale infrastructure and public service facilities. The following statements illustrate why village road infrastructure is a priority of the communities in both sub-district groups:

Village road infrastructure projects are still a development priority in our village because many village road surfaces have been degraded, and some plantation areas do not yet have access to transport agricultural products ... Existing road improvement and new road construction projects are expected to improve the community's economy (Yoto, village official of Sungai Dawu, “small-town” sub-district village, Interview).

Village decentralization funds in our village have been used to provide various types of village-scale infrastructure and public facilities, but the most significant proportion is for village road infrastructure projects ...Village road infrastructure projects are the most popular proposals among villagers in village meetings (Ahmad Maibun, village official of Bukit Meranti, “small-town” sub-district village, Interview).

Finally, *“In my opinion, in the next few years, village road infrastructure projects will still be needed in this village, especially to facilitate access to plantation areas”* (Agus Surojo, community leader of Sungai Akar, “periphery” sub-district village, Interview).

In February 2019, field observations were carried out in six villages to investigate development planning at the village level after the implementation of village decentralization. Sungai Guntung Hilir, Sungai Dawu, and Bukit Meranti represent villages in the “small-town” sub-district, while Sungai Akar, Simpang Koto Medan, and Rawa Sekip represent “periphery” sub-district villages. The villages were randomly selected from the 12 that were previously surveyed.

In general, road infrastructure projects are the most popular rural development projects at the village level in both “small-town” and “periphery” sub-district villages. These road infrastructure projects can easily be found in all villages that were visited for this study. However, based on field observations, it was found that there was a difference in characteristics between infrastructure projects in the “small-town” and “periphery” sub-district villages.

In regard to infrastructure projects in “small-town” sub-district villages, road maintenance¹⁸ projects were more predominant than new road construction. For example, Figure 4.6 illustrates the village road network in Bukit Meranti in 2014 and 2017. Bukit Meranti is located in the central part of Seberida, which is located 6 kilometers from the sub-district capital and 31 kilometers from the district capital. Bukit Meranti is a typical village in a “small-town” sub-district that has

¹⁸ In this study, village road maintenance refers to activities to keep the road surface, which is mostly dirt and gravel, in usable condition.

better village road infrastructure in terms of connectivity and road surface quality than villages in “periphery” sub-districts. Like most village roads in Indragiri Hulu, the ones in Bukit Meranti are predominantly gravel roads that are easily eroded, especially during the rainy seasons. Thus, routine maintenance projects are essential to support community activities. During the three years of village decentralization, eight kilometers of village roads were maintained using village decentralization funds.

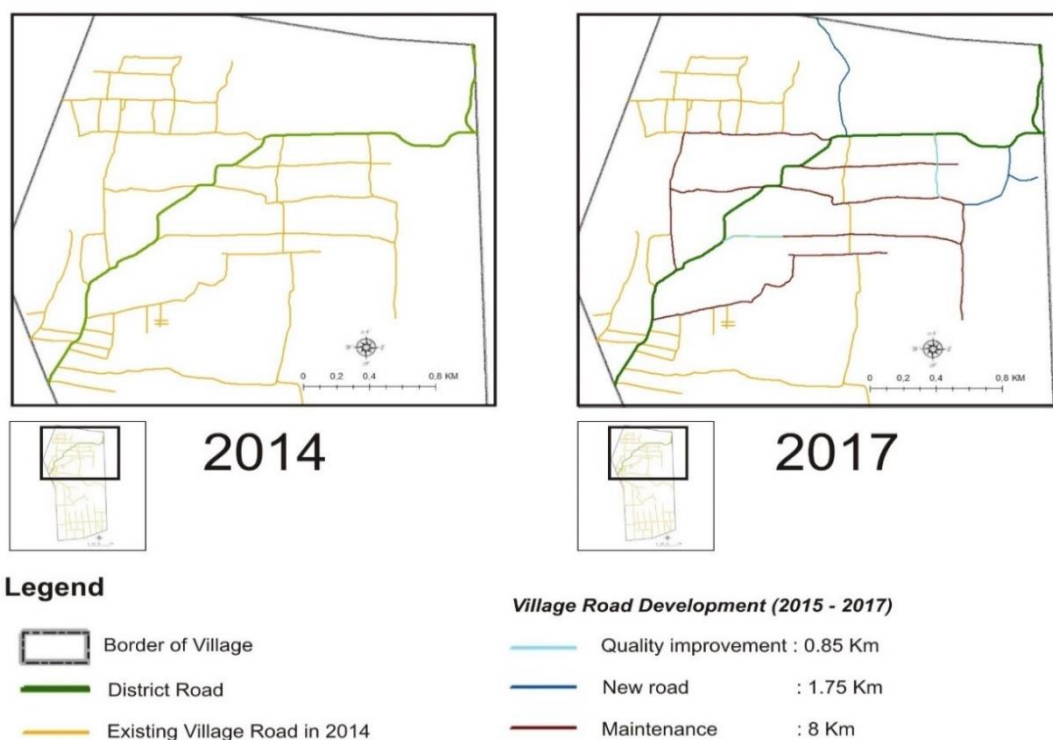


Figure 4.6 Village road development in Bukit Meranti (“small-town” sub-district village)

Source: The Author.

Meanwhile, in “periphery” sub-district villages, village road infrastructure projects are dominated by new road construction, rather than by road maintenance

and quality improvement.¹⁹ In regard to village road infrastructure projects, Sungai Akar was taken as a representation of villages in “periphery” sub-districts. Sungai Akar is located in southern Batang Gansal, which is 15.5 kilometers from the sub-district capital and 76 kilometers from the district capital. Sungai Akar is a typical village in a “periphery” sub-district that has relatively poor road network connectivity.

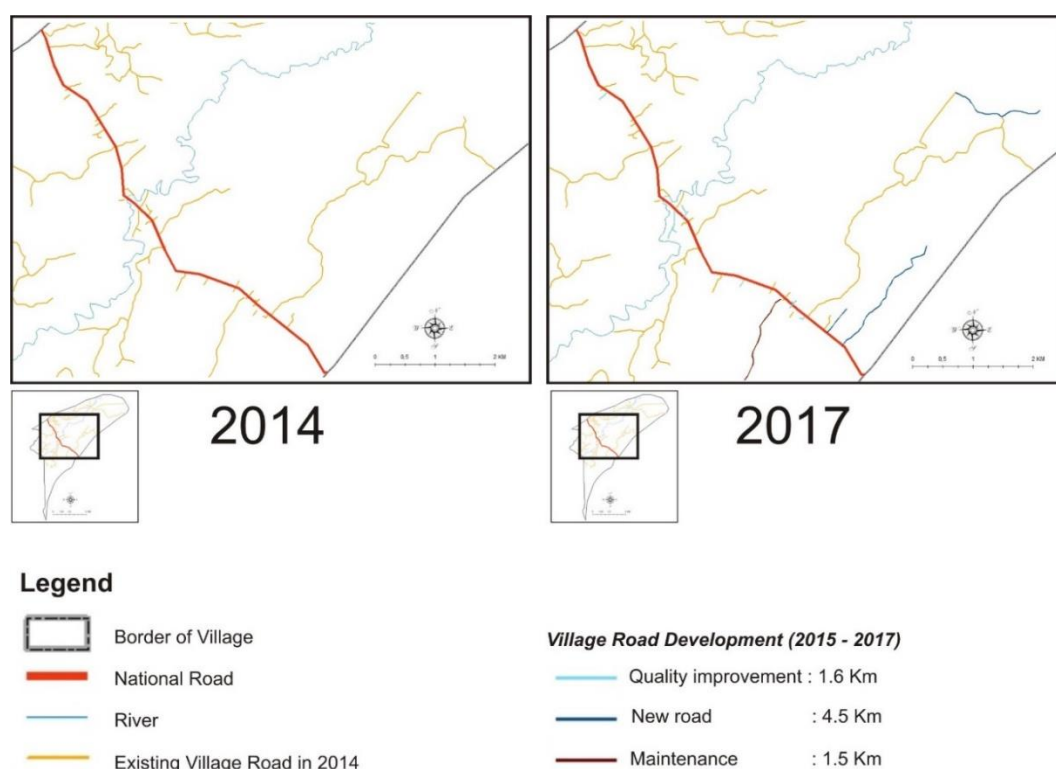


Figure 4.7 Village road development in Sungai Akar (“periphery” sub-district village)

Source: The Author.

Figure 4.7 shows the village road network in Sungai Akar before and after village decentralization (2014–2017). The existing village roads in “periphery” sub-

¹⁹ The quality improvement of village roads in this study refers to activities to upgrade the surfaces of dirt and gravel roads to concrete.

district villages are primarily road segments that have not been connected. Most of the village roads in Sungai Akar are dirt and gravel ones that once served as the operational paths for logging companies in the area. After these companies ceased their operations in the early 1990s, the community used the abandoned logging areas and roads for plantation purposes. At present, most of the plantation roads are in poor condition, and only 1.5 kilometers of these roads have been repaired since 2015. The construction of 4.5 kilometers of new road from 2015 to 2017 was intended to support community plantation activities, especially for the transportation of crops from agricultural land via village roads and national roads.

Based on field observations at the village level, it was found that before the implementation of village decentralization, road network connectivity was relatively better in “small-town” than in “periphery” sub-district villages. The disparity in road network connectivity has an impact on the variation of road infrastructure development priorities between the two groups of villages after the implementation of village decentralization.

“Small-town” sub-district villages that have relatively better road network connectivity focus on road maintenance and repair projects, while “periphery” sub-district villages prioritize increasing road network connectivity through new road construction projects, rather than road maintenance and repair projects. The construction of new roads is expected to facilitate community accessibility. However, due to limited funds, new road construction projects that have been constructed in the “periphery” sub-district villages are still segmented and have not been connected to other roads. Figure 4.8 illustrates village roads before and after the implementation of road infrastructure projects.



Figure 4.8 Village roads before and after road infrastructure projects

Source: Indragiri Hulu's Public Works Agency (2017).

Inter-village connectivity remains an issue in the villages that were visited for this study. Although the villages in Indragiri Hulu have been connected through district roads, the road network connectivity between sub-districts varies. Village decentralization provides an opportunity for villages to improve the connectivity of the road network within the sub-district area through the synergy of development between villages. However, this opportunity has not yet been utilized by the villages, which focus on improving road network connectivity within their respective areas. No collaboration and coordination were found between neighboring villages in regard to the planning of road infrastructure development. Thus, with regard to village decentralization, the impact of three years of implementation has been limited to the increasing connectivity of the road network within the village area; the connectivity between villages within the sub-district area has not increased.

According to village officials, village road infrastructure projects were planned based on proposals from the community in keeping with their preferences

and needs; village connectivity with neighboring villages has not been a concern of the community, as evidenced by the following statements:

Most of the villagers proposed road maintenance and repair at village meetings since in some areas, the road surface has been damaged. The rest proposed the construction of agricultural roads to facilitate transportation to the plantation area ... The accessibility of this village to neighboring villages is quite easy, and in recent years, the condition of district roads has been good (Suparman, village official of Sungai Dawu, “small-town” sub-district village, Interview).

Infrastructure development planning in this village was carried out independently and was not affected by development plans from neighboring villages ... The focus of road infrastructure projects in this village is to increase community access to plantation land to improve the community’s economy ... Connectivity between villages is the responsibility of the district government (Rizki Ade Chandra, village official of Sungai Akar, “periphery” sub-district village, Interview).

There has been some fact finding from the field observations regarding development planning in rural areas. The findings can be summarized as follows:

1. Villages in the “small-town” sub-district have relatively better public facilities and road network connectivity compared to “periphery” sub-district villages both in terms of connectivity within the village area and between villages within the sub-district area.

2. Under village decentralization, development planning at the village level has been more responsive to community needs and problems. However, there is no village spatial plan that can be used as a guide in village development planning.
3. There is no synergy in inter-village development planning within the sub-district area. Villages focus solely on physical development within their respective administrative areas and ignore opportunities to collaborate with surrounding villages. For example, this study did not find collaboration between villages in village road development planning that connects neighboring villages.
4. The role of the sub-district government as an intermediary between the district and village governments is significant in aligning village development plans with district development and spatial plans. However, at present, the role of the sub-district government is limited to administrative affairs in village development planning.

The above findings indicate that village decentralization has contributed to the equitable development of village-scale infrastructure and public service facilities at the sub-district level. In regard to village-scale physical development, “periphery” sub-district villages have had opportunities that are relatively equal to those of “small-town” sub-district villages. Currently, villages focus solely on physical development within their respective administrative areas, ignoring opportunities to collaborate with surrounding villages. Synergy in inter-village development planning within the sub-district area and synchronization with district

development and spatial planning are the next steps that the government needs to consider to improve policy implementation.

4.3 The Provision of Infrastructure and Public Facilities Beyond Village Government Authority

In the three years of village decentralization, villages in Indragiri Hulu Regency have experienced unprecedented progress in the provision of village-scale infrastructure and public service facilities. The provision of infrastructure and public facilities beyond the village-scale authority—such as district roads, sub-district markets, sub-district administrative offices, formal education facilities (elementary, junior high, and senior high school), and health facilities (hospitals and community health centers at the sub-district level)—remains under the authority of the district government. The village governments must propose the provision of such infrastructure and public facilities to the district government through the *musrembang* mechanism as a public policy process at the district level.

According to district government officials, the priority of the development policy in Indragiri Hulu is the provision of infrastructure and public service facilities to support the development of agriculture and plantations.

Agriculture and plantations are the sectors that contribute most to Indragiri Hulu's economy. Infrastructure and public service facilities development projects are prioritized to support the development of these sectors ... Provision of infrastructure and public facilities following the economic

potential of the sub-districts (Rianto, Head Division of Settlement, Indragiri Hulu's Housing and Settlements Agency, Interviews).

It was also stated that *“in general, the sub-districts in Indragiri Hulu still lack infrastructure, especially roads and bridges ... Roads and bridges are vital to encourage the community's economy”* (Zulkarnain, Head Division of Infrastructure and Facilities, Indragiri Hulu's Regional Development Planning Agency, Interview).

Additionally,

“The district government has allocated significant funds for road and bridge infrastructure projects ... road and bridge construction projects aimed at opening access to remote areas to encourage economic growth across the sub-districts” (Nafriandi, Head Division of Regional Roads, Indragiri Hulu's Public Works Agency, Interview).

Figure 4.9 shows district roads based on the type of surface in “small-town” and “periphery” sub-districts of Indragiri Hulu Regency in 2012, 2014, and 2017. District roads are a vital component of infrastructure at the local level in Indonesia's road network system, as they connect the district capital with sub-district capitals, link sub-district capitals, connect district capitals and local activity centers, and integrate local activity centers within the district area.²⁰ The length of the regency road in Indragiri Hulu is 1,737,050 kilometers, which consist of asphalt, gravel, and

²⁰ According to Law number 38 of 2004 on Roads.

dirt. No additional district roads were built between 2011 and 2017. Although the total length of roads in “small-town” sub-districts is shorter than in “periphery” sub-districts, the road surface in “small-town” sub-districts is relatively better than in “periphery” sub-districts. The length of paved roads in “small-town” sub-districts is almost double that in “periphery” sub-districts.

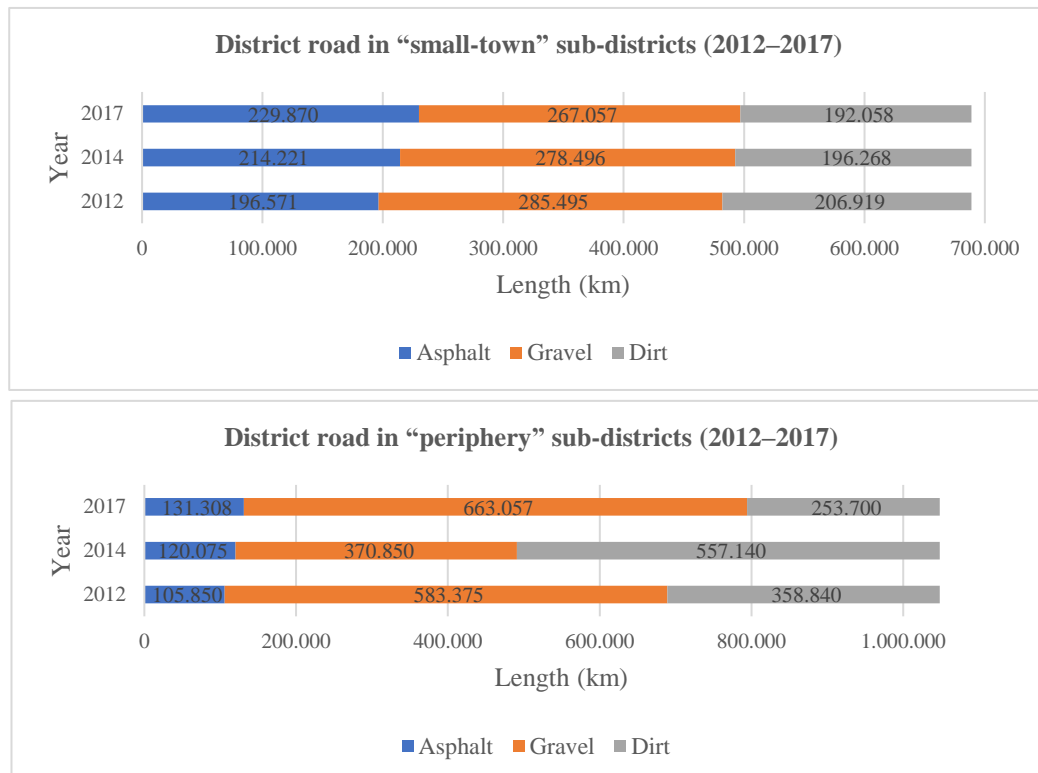


Figure 4.9 Comparison of district roads across sub-district groups by surface types

Source: Calculated from Indragiri Hulu Statistics (2015, 2018).

District roads in “small-town” sub-districts experienced a steady increase in surface types both before (2012–2014) and after (2015–2017) village decentralization. The lengths of dirt and gravel roads in “small-town” sub-districts have been steadily decreasing, being upgraded over time to gravel and asphalt roads, respectively. Meanwhile, in “periphery” sub-districts, a steady increase has

occurred solely on asphalt roads both before and after village decentralization. In the period from 2012 to 2014, more than one-third of the gravel roads in “periphery” sub-districts deteriorated, becoming dirt roads. In the three years of village decentralization (2015–2017), there was a significant increase in the length of gravel roads in “periphery” sub-districts, where more than half of the total length of dirt roads has been upgraded to gravel roads.

These data indicate that the village decentralization policy has a positive impact on district development policy for district road infrastructure projects. Since the implementation of the village decentralization policy, district road infrastructure projects are no longer concentrated only in “small-town” sub-districts but also occur in “periphery” sub-districts. “Periphery” sub-districts, which previously received only a relatively small proportion of the budget for district road infrastructure projects, have received significant budget increases since village decentralization; this has, in turn, led to improvements in the surface quality of district roads in “periphery” sub-districts. However, “small-town” sub-districts continue to benefit from the steady increase in district road infrastructure projects, just as they did prior to the implementation of village decentralization.

Figure 4.10 illustrates the distribution of district government spending for the provision of public facilities beyond the village-scale authority across sub-districts before (2012–2014) and after (2015–2017) village decentralization. Some “small-town” and “periphery” sub-districts experienced a decrease in budget allocation since the implementation of village decentralization, while others experienced the opposite trend.

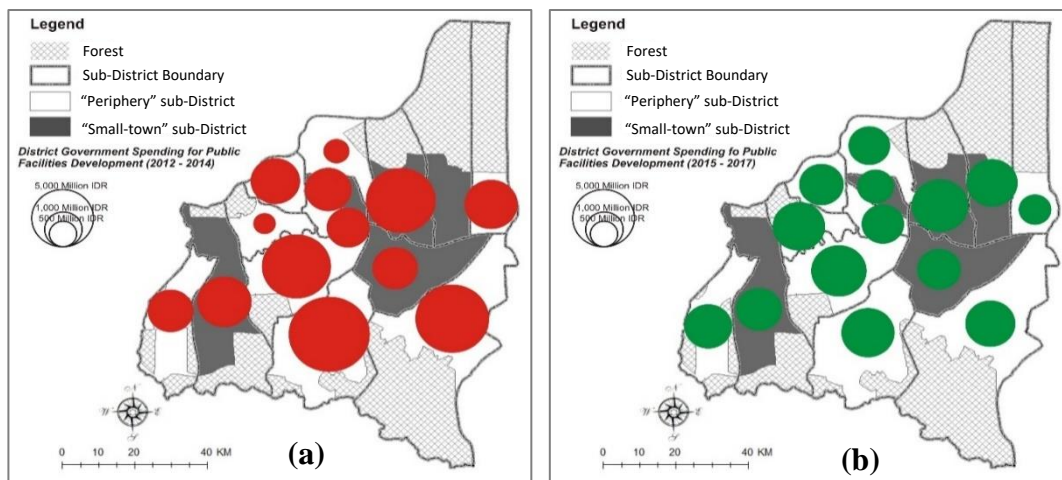


Figure 4.10 The distribution of district spending for public facilities beyond the village-scale authority (a) before and (b) after village decentralization

Source: Author's calculations using data from Indragiri Hulu Agencies (2017).

Table 4.6 shows that there is a decline in the average annual district spending for the provision of public facilities beyond the village-scale authority after the implementation of village decentralization. The average annual district spending in "small-town" sub-districts is relatively higher than in "periphery" sub-districts, before and after village decentralization. However, statistically, the implementation of village decentralization has no implications for district spending variation in the two sub-district groups. The p value in the two village groups is higher than 0.05, which indicates that there were no significant differences in the average annual district spending on the provision of public facilities beyond the village-scale authority in the two sub-district groups before and after village decentralization.

Table 4.6 Paired samples test of average annual district spending before and after village decentralization

Group of Sub-Districts	Average Annual District Spending		Number of sub-district	Result of T-test
	Before VD	After VD		
“Small-town” sub-district	2,996,000,000.00	2,512,000,000.00	5	t = 0.491 df = 4 p = 0.649 > 0.05
“Periphery” sub-district	3,412,222,222.22	2,085,555,555.56	9	t = 1.868 df = 8 p = 0.099 > 0.05

Source: The Author.

District officials acknowledge that there is a hierarchy of rurality between sub-districts in Indragiri Hulu, and the district’s development policy has taken into account the principle of equitable development among sub-districts. However, stakeholders at the sub-district level have different views on this topic. According to sub-district officials, the development gap occurs because the district government prioritizes certain sub-districts over others. The following statement from a sub-district official illustrates the disparities between sub-districts in regard to development budgets:

“Rengat and several other sub-districts, such as Rengat Barat and Pasir Penyau, get a bigger proportion of the development budget compared to other sub-districts in Indragiri Hulu” (Abdul Hayat, sub-district official of Seberida, “small-town” sub-district, Interview).

From the sub-district official’s perspective, political representation is considered a significant factor in decision-making at the district level. The following statement highlights the significant role of legislators in district-level decision-making:

“There is a political interest in development planning at the district level. Sub-districts that have more legislative members have relatively larger portions of the development budget ... legislative members have authority in planning district development budgets” (Azazi Kudus, sub-district official of Batang Gansal, “periphery” sub-district, Interview).

The planning and decision-making process for the provision of infrastructure and public service facilities beyond the village-scale authority takes place at the district level. The public policy process at the district level is a complex activity that involves parties with various respective interests. The most influential parties in the process of planning and implementing public policy at the district level are the district government (executive) and the representative council (legislative). According to Johnson (2016), executive and legislative relations constitute a self-interest model: Legislators want to be reelected in the next election, and executives want to maximize the budget. Meanwhile, the public wants to maximize the benefits of development. In order to be reelected, legislators are looking for programs and projects that will make them popular, while the executive proposes new programs so that the agencies develop, and the community believes that it is benefiting from the government’s policies. Because all parties can “meet” on the same action, consensus between the legislator and the district government is a necessity. In the discussion of the district budget, the executive and legislature make agreements that are reached through bargaining before the budget is determined as public policy (Abdullah & Asmara, 2007).

This study found that the personal closeness or similar political views of village heads and decision-makers at the district level are often more decisive in the provision of infrastructure and public facilities that are built by the district. For example, some villages in “small-town” sub-districts that have relatively better infrastructure and public facilities than villages in “periphery” sub-districts remain a preference for the implementation of development projects. Conversely, despite having submitted proposals through *musrembang*, villages in the “periphery” sub-districts that still lack infrastructure and public facilities have not received the attention of the district. Based on the interviews that were conducted with locals, it was evident that there was a personal closeness between the “small-town” sub-district villages and either legislative members or regional officials. Thus, the development project proposals in these villages are implemented more quickly than in those villages in which there is no personal closeness with decision-makers at the district level. In general, villages in “small-town” sub-districts benefit more from personal closeness to decision-makers at the district level because most legislative members and executives reside in “small-town” sub-districts.

Disparities between the two sub-district groups in regard to infrastructure and public facilities beyond the village-scale authority are reflected in the communities’ assessments of the capacity of the available public service facilities to meet their needs. The results of the questionnaire survey show that villagers in “small-town” sub-districts benefit more from the availability of public service facilities than those in “periphery” sub-districts. When responding to the question of whether the public service facilities (administration, health, education, and marketplace) that were available in the sub-district capital met their needs, more

than 90% of respondents in the “small-town” sub-district villages indicated that their needs had been met both in large part and as a whole. This figure is higher than for the respondents in “periphery” sub-district villages, 69% of whom indicated that their needs had been met (Figure 4.11).

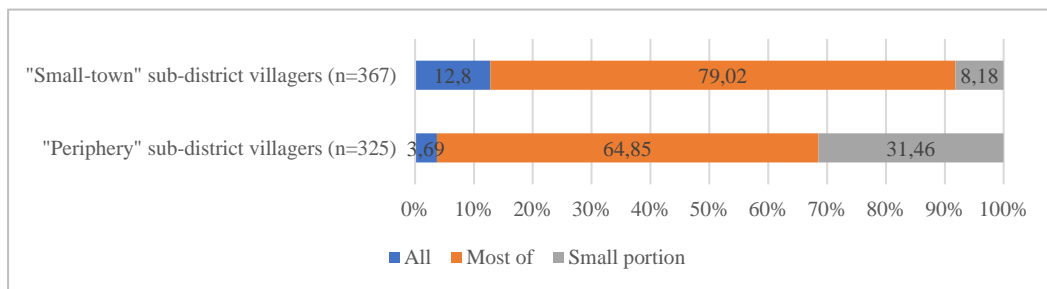


Figure 4.11 Community assessment of public service facilities in the sub-district for the fulfillment of public service needs

Source: The Author.

The above findings suggest that village decentralization has not yet had a significant impact on the equal distribution of infrastructure and public facilities beyond the village-scale authority between the two sub-district groups. Compared to the “periphery” sub-district, the “small-town” sub-district is in an advantageous position due to the availability of better infrastructure and public facilities, as well as the personal closeness to decision-makers at the district level. The implementation of village decentralization has had a positive impact on reducing the disparity in village-scale physical development between the two sub-district groups. However, equitable regional development cannot be achieved solely through the implementation of the village decentralization policy. Village decentralization needs to be supported by district government development policies to reduce development disparities at the sub-district level. The role of district governments is critical in regional development strategies because they are in the

best position to formulate and implement policies to reduce development gaps in their administrative areas (Tacoli, 2019).

This study suggests that district expenditure policy for the provision of public facilities beyond the village-scale authority considers equitable development between sub-district groups. “Periphery” sub-districts that still lack public service facilities need to get priority in district development policy to reduce the gap with the “small-town” sub-districts.

4.4 Chapter Conclusion

The objective of this chapter is to investigate the implication of the village decentralization policy at the sub-district level. The research question is, what are the implications of the village decentralization policy for regional development at the sub-district level? The hypotheses are as follows:

1. There is a discrepancy in the level of community participation in decision-making and supervision of development between “periphery” sub-districts and those in “small-town” sub-districts;
2. A significant increase in the village-scale development budget has only occurred in “periphery” sub-districts, there was no significant difference in “small-town” sub-districts;
3. There is a significant difference in district spending for the provision of public facilities beyond the village-scale authority in the two sub-district groups.

This chapter shows that there is a discrepancy in the level of community participation in decision-making and development supervision between “periphery”

sub-districts and those in “small-town” sub-districts, confirming Hypothesis 1. The finding suggests that the village decentralization policy has increased community involvement in rural development at the sub-district level. The level of community involvement in the “periphery” sub-districts was higher than those in the “small-town” sub-districts. Substantial increase in village budgets from the central government has contributed significantly to increasing community awareness of the importance of active involvement in decision-making and supervision of development. However, the analysis indicates that the implementation of the village decentralization only has a significant impact on increasing the budget for village-scale development in the “periphery” sub-districts. Meanwhile, there was no significant difference in the average annual budget per village in the “small-town” sub-district, thereby confirming Hypothesis 2. Hypothesis 3 is rejected. There has been a decrease in the average district spending for the provision of public facilities beyond the village-scale authority in both sub-district groups since the implementation of village decentralization. However, there is no significant difference in the variation of district spending in the two sub-district groups before and after the implementation of village decentralization policy.

Chapter 5

Conclusion

The last chapter of this dissertation presents conclusions and contributions of the study. The chapter then concludes the study by recommending issues to be addressed in future research.

5.1 Summary

The main objective of this study was to investigate the impact of village decentralization, a government policy aimed at addressing regional development inequality in Indonesia, at the micro (sub-district) level. The focus of the study was the extent to which village decentralization policies affect spatial equity in the provision of infrastructure and public service facilities within a rural region.

In many previous studies, discussions of Indonesia's village decentralization have focused primarily on financial transfer systems, community satisfaction and participation, and the changing nature of village governance. Few, if any, studies have examined how the policy impacts spatial equity from the perspective of regional planning. Moreover, empirical evidence regarding regional disparities in developing countries is relatively scarce in the regional planning literature. The first chapter introduced the art of study, the study objectives and questions, and, most importantly, the significance of the study.

Chapter 2 discussed the implications of Indonesia's village decentralization for the regional development framework at the sub-district level. The hypothesis is village decentralization introduced a new framework to encourage equitable regional development within the district area. The review of the literature and

regulations has shown that, Indonesia's village decentralization introduced a new framework and potentially encouraged regional development equity within the district area. The new framework has, to some extent, reversed the national development paradigm in which rural areas were the last to benefit from development. As a result, rural areas are now at the forefront of regional development policy in Indonesia. The implementation of village decentralization policy has encouraged rural development equity through the devolution of authority and the budget for village-scale infrastructure and public service facilities to the rural village. This finding confirmed the hypothesis. However, this study found that it was inappropriate to determine the target location of the village decentralization policy solely based on village-level locality's administrative status. This study proposed that the determination of target locations for the implementation of village decentralization policy uses rural-urban classification based on geographical functions established by the central bureau of statistics. The classification based on geographical functions could illustrate the actual condition of a village-scale locality because it considers technical criteria such as population density, agricultural livelihoods, urban facilities, formal education facilities, and public health facilities.

Chapter 3 identified sub-district classifications based on the spatial disparity that occurs at the sub-district level. The aim of the classification was to explain the structure of a rural area, which differs from the notions of "urban" and "rural" in existing studies. Furthermore, the classification was also used to formulate indicators of analysis in this study. The hypotheses were as follows:

1. Sub-districts can be classified based on their rurality and centrality within the spatial structure of a rural area;
2. There is a discrepancy between sub-district groups in regard to the agglomeration of the population and public service facilities.

In developed countries, researchers and international organizations have developed different types of village typologies and indicators to better understand village dynamics and develop policies that are relevant to rural areas. The method of measuring rurality in this study is different from that used in existing studies in developed countries, which, to a large extent, use demographic characteristics as an indicator of rurality. This study used the variables of public facilities availability, population, and network connectivity as indicators to determine the rurality and centrality of sub-districts. The rurality and centrality of sub-districts determine their role in the spatial structure of the region. Based on their rurality and centrality, sub-districts can be classified into “small-town” and “periphery.” There are discrepancies in the spatial characters of sub-district groups. The agglomeration of the population and public service facilities in sub-district capitals and neighboring villages was more pronounced in “small-town” than in “periphery” sub-districts. Therefore, the hypotheses were confirmed.

Chapter 4 investigated the implication of the village decentralization policy at the sub-district level. In this chapter, the hypotheses were as follows:

1. There is a discrepancy in the level of community participation in decision-making and supervision of development between “periphery” sub-districts and those in “small-town” sub-districts;

2. A significant increase in the village-scale development budget has only occurred in “periphery” sub-districts, there was no significant difference in “small-town” sub-districts;
3. There is a significant difference in district spending for the provision of public facilities beyond the village-scale authority in the two sub-district groups.

The first part of Chapter 4 discussed the impact of village decentralization on the rural development planning process. Under village decentralization, rural communities are given more extensive opportunities to be involved in the process of planning, implementing, and monitoring village-level development. The implementation of village decentralization has increased community involvement in rural development at the sub-district level. The finding showed that there is a discrepancy in the level of community participation in decision-making and development supervision between “periphery” sub-districts and those in “small-town” sub-districts. This finding confirmed the hypothesis 1. The level of community involvement in the “periphery” sub-districts was higher than those in the “small-town” sub-districts. Substantial increases in village budgets from the central government have contributed significantly to an increase in community awareness of the importance of being actively involved in decision-making and supervision of development. The impact of village decentralization on the budget for village-scale development in “small-town” and “periphery” sub-districts was discussed in the second part of the chapter. There is an increase in the average annual budget for village-scale development in the two sub-district groups after village decentralization. However, the implementation of the village

decentralization only has a significant impact on increasing the budget for village-scale infrastructure and public facilities development in the “periphery” sub-districts. Meanwhile, there is no significant difference in the average annual budget per village in the “small-town” sub-district before and after village decentralization. Therefore, the hypothesis 2 was confirmed. Finally, Chapter 4 discussed the implications of village decentralization on district spending for the provision of public facilities beyond the village-scale authority in the two sub-district groups. There has been a decrease in the average district spending for the provision of public facilities beyond the village-scale authority in both sub-district groups since the implementation of village decentralization. However, there is no significant difference in the variation in district spending in the two sub-district groups before and after the implementation of village decentralization; thereby, hypothesis 3 was rejected. In other words, the village decentralization policy has not yet had implications for district budget policy regarding the provision of public facilities at the sub-district level.

To conclude, the implementation of village decentralization has had a positive impact on reducing the disparity in village-scale development between the two sub-district groups. However, equitable regional development cannot be achieved solely through the implementation of the village decentralization policy. Village decentralization needs to be supported by district government development policies to reduce development disparities at the sub-district level. This study recommends that district expenditure policy for the provision of public facilities beyond the village-scale authority needs to consider equitable development between sub-district groups. “Periphery” sub-districts that still lack public service

facilities need to get priority in district development policy to reduce the gap with the “small-town” sub-districts.

5.2 Research Contributions

5.2.1 Contributions to Academia

Some studies have discussed government policies to address spatial gaps between rural and urban areas in developing countries by implementing agricultural sector policies (Tiffen, 2003), strengthening the role and function of small urban centers in regional development (Hinderink & Titus, 2002; Satterthwaite & Tacoli, 2003), and putting in place regional development strategies using cluster approaches (Douglass, 1998). However, the abovementioned studies focused primarily on spatial issues between large cities and rural areas at the macro and mezzo levels, with little, if any, discussion of spatial issues and planning systems at the micro level. The contributions of this study to regional planning studies are as follows:

- This study covers the limitations of the existing regional planning literature regarding the spatial structure and development planning system of rural areas at the micro level. Traditionally, regional development policies and studies have adopted a simplified concept of rural and urban areas, with rural referring to more remote farming areas and urban to cities (Lynch, 2004). This study provides a new discussion of the terms of “small-town” and “periphery” in the spatial structures of rural areas, which differ from the usual relationship between urban and rural in existing studies. It proposes a simple classification method to illuminate the spatial structure of a rural area based on their rurality and centrality.

- Previous studies on the topic of government policies in developing countries to address spatial disparity have tended to focus on regional planning issues at the macro and mezzo levels, overlooking the issue at the micro-level. This study fills a gap in the micro-planning system by illuminating the spatial structure of rural areas, its characteristics, and the real situation of rural area planning at the micro-level, which provides a foundation for the micro-planning system in regional planning studies.

Despite growing discussions of Indonesia's village decentralization policy in the literature, the existing studies are focused primarily on financial transfers, community satisfaction and participation, and the changing nature of village governance from the state administration perspective. Few, if any, studies examine the spatial structure of rural areas and how the policy affects the regional development in the spatial context. This study examines Indonesia's village decentralization policy at the sub-district level to overcome limitations in existing studies at the district and provincial levels that have tended to generalize the characteristics of rural areas and overlook the spatial structure within rural areas. This study shows that there is a considerable spatial gap between rural areas themselves, and village decentralization policy has varying implications within the spatial structure of the rural regions. The contributions of this study to Indonesia's village governance studies are as follows:

- This study shows that the village decentralization policy does not only have implications for increasing community participation in decision-making and development supervision as expressed by Hartoyo et al. (2018) but also

demonstrate that there is a discrepancy in the level of community participation between “periphery” sub-districts and “small-town” sub-districts. Substantial increases in village budgets from the central government have contributed significantly to an increase in community awareness of the importance of being actively involved in decision-making and supervision of development.

- Previous studies that discussed policy implications for village-scale development budget (Gonschorek & Schulze, 2018; Anshari, 2017; Lewis, 2015) tended to focus on methods for budget allocation under village decentralization, few, if any, discussed policy implications for village-scale development budget equity within the spatial structure of a rural area. This study shows that, before village decentralization, the distribution of budgets for village-scale development between sub-district groups was uneven. There was a gap between “small-town” sub-districts and “periphery” sub-districts. Therefore, the implementation of village decentralization only has a significant impact on increasing the budget for village-scale development in “periphery” sub-districts. Meanwhile, there is no significant difference in the average annual budget per village in the “small-town” sub-district.
- A previous study conducted by Irawan (2017) has tended to focus on the implications of village decentralization on village-scale development, overlooking the policy implications on district budget policy for the provision of public facilities beyond the village-scale authority. This study found that the village decentralization policy has not yet had implications

for the district budget policy in regard to the provision of public facilities at the sub-district level.

5.2.2 Contributions to Policy

Drawing from the Indragiri Hulu Regency case, this study proposes several policies for the implementation of village decentralization in Indonesia. Within the scope of this study, the following policies are proposed to improve regional planning strategies and thereby reduce spatial disparity at the micro level:

1. This study found that it was inappropriate to determine the target location of the village decentralization policy solely based on village-level locality's administrative status. The government ignored the technical criteria set by the central bureau of statistics for the classification of urban and rural functions of a village-scale locality. This study proposes that the determination of target locations for the implementation of village decentralization policy uses rural-urban classification based on geographical functions established by the central bureau of statistics.
2. Although village decentralization has had an impact on reducing the disparity in village-scale physical development between "periphery" sub-districts and "small-town" sub-districts, the role of the district government remains vital in the strategy of equitable regional development in its administrative areas. District-level decision-makers need to consider spatial structure equity in their regional development planning. This study has shown that physical development and

population pattern tend to be concentrated in some “small-town” sub-districts, which are local activity centers at the district level. District governments need to pay attention to the development in “periphery” sub-districts and its activity centers to reduce spatial disparities between sub-districts.

3. The findings of this study show that the village decentralization policy has reduced the gap in the development of village-scale infrastructure and public service facilities across rural villages (*desa*). However, villages focus solely on physical development within their respective administrative areas, ignoring opportunities to collaborate with surrounding villages. In terms of development planning, coordination and collaboration between villages as a regional network cluster is the next step that the government must consider in regard to regional planning at the sub-district level.

5.3 Limitations and Future Research

This study has presented the implications of Indonesia’s village decentralization policy for regional development at the sub-district level from the perspective of spatial planning. However, the study has several limitations that require further investigation in future research. This section describes some of these limitations and suggests research that should be undertaken in the future.

First, if the data allow, applying the same method of data analysis over a more extended period may provide more reliable results. This study uses secondary data in a six-year time series (2011–2017). It may take some time for the village

decentralization policy to have an impact on the equitability of regional development. Analysis of a more extended period would not only provide more reliable results but also offer an opportunity to evaluate the effectiveness of the village decentralization policy in reducing regional disparities in Indonesia.

Second, due to the scarcity of reliable statistical data, the classification of spatial structures in the study was based primarily on aspects of infrastructure and public service facilities that are available at the sub-district level. If the data allow, demographic characteristics, such as age structure, level of education, occupation, migration, housing conditions, and so forth, can be added to evaluate the spatial structure and its dynamics in future research. Thus, regional spatial structure analysis could be more comprehensive by combining aspects of the built environment and demographic characteristics in both geographic information system and statistical analyses.

Third, the limited statistical data at the village and sub-district levels also posed challenges in investigating the impact of village decentralization on district government policies regarding the provision of infrastructure and public service facilities. This limitation was overcome by the use of surveys, interviews, and field observations. However, if the data allow, future research can add other statistical components to examine the determinant factors in the decision-making process at the district level in regard to the provision of infrastructure and public service facilities.

Fourth, this study found that village officials' lack of capabilities remains an issue in regard to the implementation of the village decentralization policy. A comparative study of the capacity of village officials in "small-town" and

“periphery” sub-district villages can be a subject of future research. Discussions of these topics will provide valuable recommendations for policy improvement.

Finally, this study examined the impact of village decentralization policy for spatial equity at the sub-district level by taking Indragiri Hulu Regency as a case study. Future research can apply the findings of this study to other districts by modifying some aspects or methods used in this study. Comparative studies of the impact of village decentralization on spatial equality at the sub-district level in selected districts could be an entry point for future policy research and could provide opportunities to formulate more effective policies.

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Appendix 1. Scalogram Analysis

Table A Public Service Facilities Availability

sub-District	Education Facility				Administrative Facility		Health Facility			Market Facility	
	1	2	3	4	5	6	7	8	9	10	11
Batang Peranap	√	√	√		√		√			√	√
Batang Cenaku	√	√	√		√		√	√		√	√
Batang Gansal	√	√	√		√		√			√	√
Kelayang	√	√	√		√		√			√	√
Rakit Kulim	√	√	√		√		√	√		√	√
Lubuk Batu Jaya	√	√	√		√		√	√		√	√
Kuala Cenaku	√	√	√		√		√			√	√
Sungai Lala	√	√	√		√		√			√	√
Lirik	√	√	√		√		√	√		√	√
Seberida	√	√	√		√		√	√		√	√
Peranap	√	√	√		√		√	√		√	√
Pasir Penyau	√	√	√	√	√		√	√		√	√
Rengat Barat	√	√	√	√	√	√	√	√	√	√	√
Rengat	√	√	√	√	√	√	√	√	√	√	√

Note: 1. Elementary School; 2. Junior High School; 3. Senior High School; 4. College/Academy; 5. sub-District Level Facility; 6. District Level Facility; 7. Community Health Centre; 8. Medical Clinic; 9. Hospital; 10. Village Market; 11. Sub District Market.

Source: The Author.

Table B Calculation of Weight for Public Service Facilities' Function

sub-District	Education Facility				Administrative Facility		Health Facility			Market Facility	
	1	2	3	4	5	6	7	8	9	10	11
Batang Peranap	1	1	1		1		1			1	1
Batang Cenaku	1	1	1		1		1	1		1	1
Batang Gansal	1	1	1		1		1			1	1
Kelayang	1	1	1		1		1			1	1
Rakit Kulim	1	1	1		1		1	1		1	1
Lubuk Bt. Jaya	1	1	1		1		1	1		1	1
Kuala Cenaku	1	1	1		1		1			1	1
Sungai Lala	1	1	1		1		1			1	1
Lirik	1	1	1		1		1	1		1	1
Seberida	1	1	1		1		1	1		1	5
Peranap	1	1	1		1		1	1		1	3
Pasir Penyu	1	1	1	1	1		1	1		1	4
Rengat Barat	1	1	1	1	1	2	1	1	1	1	2
Rengat	1	1	1	3	1	1	1	1	1	1	6
Total	14	14	14	5	14	3	14	9	2	14	29
Total weight	100	100	100	100	100	100	100	100	100	100	100
Weight	7.14	7.14	7.14	20	7.14	33.33	7.14	11.11	50.00	7.14	3.45

Note: 1. Elementary School; 2. Junior High School; 3. Senior High School; 4. College/Academy; 5. sub-District Level Facility; 6. District Level Facility; 7. Community Health Centre; 8. Medical Clinic; 9. Hospital; 10. Village Market; 11. Sub District Market.

Source: The Author.

Table C Weighted Score of Public Service Facilities

sub-District	Education Facility				Score	Administrative Facility			Score	Health Facility			Score	Market Facility			Total Score
	1	2	3	4		1	2	3		1	2	3		1	2	3	
Batang Peranap	7.14	7.14	7.14		21.43	7.14		7.14	7.14			7.14	7.14	3.44	10.59	46.31	
Batang Cenaku	7.14	7.14	7.14		21.43	7.14		7.14	7.14	11.11		18.25	7.14	3.44	10.59	57.42	
Batang Gansal	7.14	7.14	7.14		21.43	7.14		7.14	7.14			7.14	7.14	3.44	10.59	46.31	
Kelayang	7.14	7.14	7.14		21.43	7.14		7.14	7.14			7.14	7.14	3.44	10.59	46.31	
Rakit Kulim	7.14	7.14	7.14		21.43	7.14		7.14	7.14	11.11		18.25	7.14	3.44	10.59	57.42	
Lubuk Batu Jaya	7.14	7.14	7.14		21.43	7.14		7.14	7.14	11.11		18.25	7.14	3.44	10.59	57.42	
Kuala Cenaku	7.14	7.14	7.14		21.43	7.14		7.14	7.14			7.14	7.14	3.44	10.59	46.31	
Sungai Lala	7.14	7.14	7.14		21.43	7.14		7.14	7.14			7.14	7.14	3.44	10.59	46.31	
Lirik	7.14	7.14	7.14		21.43	7.14		7.14	7.14	11.11		18.25	7.14	3.44	10.59	57.42	
Seberida	7.14	7.14	7.14		21.43	7.14		7.14	7.14	11.11		18.25	7.14	17.24	24.38	71.21	
Peranap	7.14	7.14	7.14		21.43	7.14		7.14	7.14	11.11		18.25	7.14	10.34	17.48	64.31	
Pasir Penyau	7.14	7.14	7.14	20	41.43	7.14		7.14	7.14	11.11		18.25	7.14	13.79	20.93	87.76	
Rengat Barat	7.14	7.14	7.14	20	41.43	7.14	66.67	73.81	7.14	11.11	50	68.25	7.14	6.89	14.03	197.53	
Rengat	7.14	7.14	7.14	60	81.43	7.14	33.33	40.48	7.14	11.11	50	68.25	7.14	20.69	27.83	217.99	

Note: 1. Elementary School; 2. Junior High School; 3. Senior High School; 4. College/Academy; 5. sub-District Level Facility; 6. District Level Facility; 7. Community Health Centre; 8. Medical Clinic; 9. Hospital; 10. Village Market; 11. Sub District Market.

Source: The Author.

Appendix 2. sub-District Interaction Index Based on Gravity Model

	Rengat	Rengat Barat	Seberida	Pasir Penyu	Peranap	Batang Cenaku	Batang Gansal	Lubuk Batu Jaya	Lirik	Rakit Kulim	Kelayang	Sengai Lala	Kuala Cenaku	Batang Peranap
Rengat	0													
Rengat Barat	30.8361	0												
Seberida	1.5749	3.2960	0											
Pasir Penyu	1.8503	4.8730	0.3652	0										
Peranap	0.2245	0.2823	0.0629	0.1773	0									
Batang Cenaku	0.3337	0.5047	1.1460	0.0835	0.0437	0								
Batang Gansal	0.2441	0.3560	0.6657	0.0617	0.0146	0.0704								
Lubuk Batu Jaya	0.1112	0.1389	0.0313	0.0860	0.0961	0.0278	0.0101	0						
Lirik	0.7153	1.8254	0.1428	3.7016	0.0564	0.0315	0.0203	0.0771	0					
Rakit Kulim	0.1533	0.2073	0.1089	0.1551	0.1009	0.0993	0.0182	0.0781	0.0416	0				
Kelayang	0.1450	0.2002	0.0384	0.1579	0.5778	0.0292	0.0087	0.1630	0.0589	0.1655	0			
Sungai Lala	0.1405	0.2533	0.0324	0.5093	0.0474	0.0124	0.0051	0.1409	0.0462	0.0889	0.1166	0		
Kuala Cenaku	0.4632	0.1640	0.0242	0.0245	0.0054	0.0067	0.0046	0.0038	0.0029	0.0083	0.0032	0.0019	0	
Batang Peranap	0.0282	0.0338	0.0081	0.0192	0.3247	0.0051	0.0019	0.0250	0.0097	0.0061	0.0080	0.0044	0.0007	0

Source: The Author.

Appendix 3. Questionnaire 1

No. Respondent
Village
Enumerator

QUESTIONNAIRE 1

Good morning/afternoon/evening

Dear all,

I would like to you to help us to participate survey by filling in or answer the questionnaire about your knowledge, opinions, or experiences regarding rural development program or policy issues in your residential areas. This survey is as a part of my dissertation as Ph.D student at Ritsumeikan University, Osaka Ibaraki, Japan. We will keep your information and use your opinion anonymously only for this research. There is no right or wrong answer.

Thank you for your kindness and support

Regards,

Yustinus Ari Wijaya

INSTRUCTION: Please tick (✓) only one answer provided (unless there are instruction to choose more than one answer), fill in the order of priority (only for the instruction to fill out in order) or fill in the blank asked or instructed.

A. GENERAL INFORMATION

1. Age: Years

2. Sex: ₁ Male ₂ Female

3. Marital Status: ₁ Single ₂ Married ₃ Divorced/separated

4. Number of family members:
 ₁ Alone ₂ 1 – 2 peoples ₃ >2 peoples

5. How long have you been living in this village?

- ₁ <5 years
- ₂ 5 – 10 years
- ₃ >10 years

6. Your highest education:

- ₁ No school
- ₂ Elementary
- ₃ Junior High School
- ₄ Senior High School
- ₅ Diploma/University

7. Your main job:

- ₁ Farmer
- ₂ Entrepreneur
- ₃ Student
- ₄ Fisherman
- ₅ Private Employer
- ₆ Housewives
- ₇ Civil Servant
- ₈ Others.....

B. COMMUNITY ASSESSMENT ON SPATIAL INEQUALITY AT SUB-DISTRICT LEVEL

8. What type of infrastructure and public service facilities need to be improved in your sub-district? (Please choose 1)

- ₁ Road Infrastructure
- ₂ Education Facility
- ₃ Health Facility
- ₄ Marketplace
- ₅ Administrative Facility
- ₆ Clean water & sanitary facility
- ₇ Others.....

9. Where did you go if there is a need/service that cannot be met in your sub-district capital?

- ₁ Neighbouring sub-district capital (please specify.....)
- ₂ District capital
- ₃ Neighbouring district capital
- ₄ Province capital

10. Please specify six sub-districts that you think are more "urbanized" than other sub-districts in Indragiri Hulu.

.....

.....

.....

Appendix 4. Questionnaire 2

No. Respondent	:.....
Village	:.....
Enumerator	:.....

QUESTIONNAIRE 2

Good morning/afternoon/evening

Dear all,

I would like to you to help us to participate survey by filling in or answer the questionnaire about your knowledge, opinions, or experiences regarding rural development program or policy issues in your residential areas. This survey is as a part of my dissertation as Ph.D. student at Ritsumeikan University, Osaka Ibaraki, Japan. We will keep your information and use your opinion anonymously only for this research. There is no right or wrong answer.

Thank you for your kindness and support

Regards,

Yustinus Ari Wijaya

INSTRUCTION: *Please thick (√) only one answer provided (unless there are instruction to choose more than one answer), fill in the order of priority (only for the instruction to fill out in order) or fill in the blank asked or instructed.*

A. GENERAL INFORMATION

1. Name:
2. Age: Years
3. Gender: ₁ Male ₂ Female
4. Marital Status: ₁ Single ₂ Married ₃ Divorced/separated
5. Family members:
₁ Alone ₂ 2 - 4 peoples ₃ >4 peoples

6. Your highest education:

- ₁ No school ₂ Elementary ₃ Junior High School
₄ Senior High School ₅ Diploma/University

7. Occupation:

- ₁ Farmer ₂ Entrepreneur ₃ Fisherman ₄ Private Employer
₅ Army/Police ₆ Civil Servant ₇ Retired ₈ Others.....

8. Monthly household income (Indonesian Rupiah):

- ₁ <1 million ₂ 1 - 3 million ₃ 3,1 – 5 million ₄ >5 million

9. Workplace distance from house:

- ₁ <500 meters ₂ 0,5 – 1 km ₃ 1 – 2 km ₄ >3 km

10. How do you go to work?

- ₁ On foot ₂ Motorcycle ₃ bicycle
₄ Car ₅ Public transport ₆ Others.....

B. PARTICIPATION IN RURAL DEVELOPMENT

11. Are you currently participating in rural development?

- ₁ Yes ₂ No

12. If your answer is Yes, how do you participate? (ALLOW MORE THAN 1 ANSWER)

- ₁ Attended the Village Meeting
₂ As Mid-term Development Plan Drafting Team
₃ As Implementation Team ₄ As Village Consultative Body

₅ As Procurement Unit ₆ As Community Empowerment Cadre

₇ As Village Officials ₈ as Community Empowerment Institute

13. Have you attended Village Meeting in the last 2 years?

₁ Yes ₂ No

14. If your answer is Yes, how many times have you attended Village Meeting?

₁ 1 time ₂ 2 - 5 times ₃ > 5 times

15. Do you attend village meetings more frequently since the enactment of village law 6/2014 (village decentralization policy)?

₁ Yes ₂ No

16. Are you satisfied with the decision-making process for rural infrastructure development in the last four years?

₁ Very satisfied ₂ Satisfied ₃ So-so

₄ Dissatisfied ₅ Very dissatisfied

C. RURAL DEVELOPMENT OUTCOMES

17. What type of infrastructure and public service facilities need to be improved in your village? (Please choose 1)

₁ Bridge ₂ Village road ₃ Drainage ₄ Village Market

₅ Non-Formal Education Facility ₆ Village Office ₇ Clean water & sanitary facility

₈ Health facility ₉ Canal/Irrigation ₁₀ Others.....

18. Are you satisfied with the provision of village-scale infrastructure and public service facilities in the last four years?

- ₁ Very satisfied ₂ Satisfied ₃ So-so
- ₄ Dissatisfied ₅ Very dissatisfied

19. What benefits do you feel most in the development of village-scale infrastructure and public service facilities in the last four years?

- ₁ Road connectivity improvement ₂ Education service improvement
- ₃ Health service improvement ₄ Administrative service improvement
- ₅ Local economy and marketplace improvement

20. Will the construction of infrastructure and public service facilities in your village increase your income in the future? Please explain.

- ₁ Yes ₂ No

Explanation:

.....

.....

.....

.....

21. Has village road infrastructure improvement reduced your expenditure on transportation?

- ₁ Yes ₂ No

22. If yes, how much has your transportation expenditure been reduced?

- ₁ <10% ₂ 10 -20% ₃ > 20%

D. INTERACTION WITH URBAN AREA

23. Has infrastructure and public facilities in your sub-district capital been able to meet your family's needs for consumer goods, as well as administrative, educational and health services?

- Yes, all of it Most of it Only a small portion of it No

24. Where did you go if there is a need/service that cannot be met in your sub-district capital?

- Neighboring sub-district capital (please specify.....)
- District capital Neighboring district capital Province capital

Appendix 5. List of Interviews

LIST OF INTERVIEWS

No	Name	Affiliation	Topic	Date
1.	Mrs. Erlina Wahyuningsih	Division Head of the Village Administration, District Secretariat Office of Indragiri Hulu Regency	<ul style="list-style-type: none"> • District policies in rural development • Significance of village decentralization • Community involvement in rural development 	04/06/2018
2.	Mr. Rianto	Division Head of Settlements, Indragiri Hulu's Housing and Settlements Agency	<ul style="list-style-type: none"> • District policies in rural development • Significance of village decentralization • Community involvement in rural development 	07/06/2018
3.	Mr. Kamaruzaman,	Head Division of Village's Finance and Asset Development, Community Empowerment Agency of Indragiri Hulu Regency	<ul style="list-style-type: none"> • District policies in rural development • Significance of village decentralization • Community involvement in rural development 	05/06/2018
4.	Mr. Zulkarnain	Head Division of Infrastructure and Facilities, Indragiri Hulu's Regional Development Planning Agency	<ul style="list-style-type: none"> • District policies in rural development • Significance of village decentralization • Community involvement in rural development 	07/06/2018
5.	Mr. Nafriandi	Head Division of Regional Roads, Indragiri Hulu's Public Works Agency	<ul style="list-style-type: none"> • District policies in rural development • Significance of village decentralization • Community involvement in rural development 	12/06/2018
6.	Mr. Sukarjo	Head Division of Governance and Welfare, Indragiri Hulu's Regional Development Planning Agency	<ul style="list-style-type: none"> • District policies in rural development • Significance of village decentralization • Community involvement in rural development 	11/06/2018

No	Name	Affiliation	Topic	Date
7.	Mr. Gandhi Hernawan	sub-District Official of Batang Gansal	<ul style="list-style-type: none"> • Significance of village decentralization • Community involvement in rural development • Spatial disparities at the sub-district level 	28/02/2019
8.	Mr. Azazi Kudus	sub-District Official of Batang Gansal	<ul style="list-style-type: none"> • Significance of village decentralization • Community involvement in rural development • Spatial disparities at the sub-district level 	28/02/2019
9.	Mr. Pardi	sub-District Official of Batang Gansal	<ul style="list-style-type: none"> • Significance of village decentralization • Community involvement in rural development • Spatial disparities at the sub-district level 	28/02/2019
10.	Mr. Abdul Hayat	sub- District Official of Seberida	<ul style="list-style-type: none"> • Significance of village decentralization • Community involvement in rural development • Spatial disparities at the sub-district level 	11/02/2019
11.	Mr. Fitrilizon	sub- District Official of Seberida	<ul style="list-style-type: none"> • Significance of village decentralization • Community involvement in rural development • Spatial disparities at the sub-district level 	11/02/2019
12.	Mrs. Rosmayati	sub- District Official of Rengat Barat	<ul style="list-style-type: none"> • Significance of village decentralization • Community involvement in rural development • Spatial disparities at the sub-district level 	04/02/2019

No	Name	Affiliation	Topic	Date
13.	Mr. Jaat	sub- District Official of Rengat Barat	<ul style="list-style-type: none"> • Significance of village decentralization • Community involvement in rural development • Spatial disparities at the sub-district level 	04/02/2019
14.	Mr. Ali Sadikin	sub- District Official of Rengat Barat	<ul style="list-style-type: none"> • Significance of village decentralization • Community involvement in rural development • Spatial disparities at the sub-district level 	21/06/2018
15.	Mr. Andrianto	sub- District Official of Lubuk Batu Jaya	<ul style="list-style-type: none"> • Significance of village decentralization • Community involvement in rural development • Spatial disparities at the sub-district level 	18/06/2018
16.	Mr. Triyatno	sub- District Official of Kuala Cenaku	<ul style="list-style-type: none"> • Significance of village decentralization • Community involvement in rural development • Spatial disparities at the sub-district level 	20/06/2018
17.	Mr. Zulfikar	sub- District Official of Kelayang	<ul style="list-style-type: none"> • Significance of village decentralization • Community involvement in rural development • Spatial disparities at the sub-district level 	18/06/2018
18.	Mr. Wawan Kusnadi	sub- District Official of Peranap	<ul style="list-style-type: none"> • Significance of village decentralization • Community involvement in rural development • Spatial disparities at the sub-district level 	19/06/2018
19.	Mr. Suparman	Village Official of Sungai Dawu	<ul style="list-style-type: none"> • Significance of village decentralization • Community involvement in rural development • Village development 	06/02/2019

No	Name	Affiliation	Topic	Date
20.	Mr. Yoto	Village Official of Sungai Dawu	<ul style="list-style-type: none"> • Significance of village decentralization • Community involvement in rural development • Village development 	06/02/2019
21.	Mr. Firdaus	Community Leader of Sungai Dawu	<ul style="list-style-type: none"> • Significance of village decentralization • Community involvement in rural development • Village development 	06/02/2019
22.	Mr. Roman Iskandar	Community Leader of Sungai Dawu	<ul style="list-style-type: none"> • Significance of village decentralization • Community involvement in rural development • Village development 	06/02/2019
23.	Mr. Rizki Ade Chandra	Village Official of Sungai Akar	<ul style="list-style-type: none"> • Significance of village decentralization • Community involvement in rural development • Village development 	01/03/2019
24.	Mr. Rustam	Village Official of Sungai Akar	<ul style="list-style-type: none"> • Significance of village decentralization • Community involvement in rural development • Village development 	01/03/2019
25.	Mr. Jaharan	Community Leader of Sungai Akar	<ul style="list-style-type: none"> • Significance of village decentralization • Community involvement in rural development • Village development 	04/03/2019
26.	Mr. Agus Surojo	Community Leader of Sungai Akar	<ul style="list-style-type: none"> • Significance of village decentralization • Community involvement in rural development • Village development 	04/03/2019

No	Name	Affiliation	Topic	Date
27.	Mr. Eko	Village Official of Bukit Meranti	<ul style="list-style-type: none"> • Significance of village decentralization • Community involvement in rural development • Village development 	12/02/2019
28.	Mr. Ahmad Maibun	Village Official of Bukit Meranti	<ul style="list-style-type: none"> • Significance of village decentralization • Community involvement in rural development • Village development 	12/02/2019
29.	Mr. Damanhuri	Community Leader of Bukit Meranti	<ul style="list-style-type: none"> • Significance of village decentralization • Community involvement in rural development • Village development 	12/02/2019
30.	Mr. Suhari	Community Leader of Bukit Meranti	<ul style="list-style-type: none"> • Significance of village decentralization • Community involvement in rural development • Village development 	12/02/2019
31.	Mr. Suryatman	Community Facilitator of Kelayang	<ul style="list-style-type: none"> • Significance of village decentralization • Community involvement in rural development • Village development 	18/06/2018
32.	Mr. Yusrizal	Community Facilitator of Kuala Cenaku	<ul style="list-style-type: none"> • Significance of village decentralization • Community involvement in rural development • Village development 	20/06/2018
33.	Mr. Mahudin	Community Facilitator of Lubuk Batu Jaya	<ul style="list-style-type: none"> • Significance of village decentralization • Community involvement in rural development • Village development 	18/06/2018

No	Name	Affiliation	Topic	Date
34.	Mr. Ahmadi	Community Facilitator of Rengat Barat	<ul style="list-style-type: none"> • Significance of village decentralization • Community involvement in rural development • Village development 	21/06/2018

