MANAGING SUSTAINABLE LIVELIHOODS ON THE EDGE:
STRATEGIES FOR RURAL AND URBAN FRINGE
RESILIENCE

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Abstract

The primary objective of this investigation is to explore and analyze sustainable livelihoods (SL) within villages situated in the RUF region. The RUF area, characterized as a transitional zone between rural and urban environments, is also referred to as suburban or hinterland. The study was specifically conducted in an RUF area proximate to Palembang, the provincial capital of South Sumatra, progressing towards Ogan Ilir Regency. The specific research locale is Pemulutan District, Ogan Ilir Regency, situated along the Palembang-Inderalaya traffic route, encompassing Pemulutan Ulu Village and Pelabuhan Dalam Village. The designated unit of analysis for this research is the Head of the Household (KK). In Pemulutan District, there are a total of 1,480 families, distributed between Pemulutan Ulu Village (691 families) and Pelabuhan Dalam Village (789 families). The sample size for Pemulutan Regency comprises 314 respondents, with 148 respondents from Pemulutan Ulu Village and 166 respondents from Pelabuhan Dalam Village. The study employs the sustainable livelihood framework, focusing on human resources as one of its key components. The findings indicate that, despite the RUF area classification, the sustainable livelihoods of residents in this region are notably suboptimal.

Keywords: Human Capital, Sustainable Livelihoods, Rural Urban Fringe, Poverty, Education, Health.

Abstrak

INTRODUCTION

The Sustainable Livelihood (SL) concept serves as a powerful tool in mitigating poverty, offering a holistic approach to poverty alleviation. This methodology is particularly significant in addressing poverty challenges, as evidenced by numerous literature studies that concentrate on implementing and evolving Sustainable Livelihood strategies in rural settings. The emphasis on rural areas is justified by the fact that approximately 70% of the global impoverished population resides in these regions. The prevalence of poverty is notably higher in rural areas of developing countries when compared to urban counterparts. This discrepancy is attributed to the intensified industrialization concentrated in urban centers, generating a plethora of employment opportunities. Consequently, the rural-urban divide exacerbates, with poverty rates soaring in rural areas due to the comparative scarcity of economic prospects in contrast to the bustling urban landscapes. The integration of Sustainable Livelihood approaches emerges as a promising avenue to address these disparities and foster comprehensive poverty reduction.

A crucial element in shaping Sustainable Livelihoods (SL) is human capital (HC). The development of human capital is instrumental in enhancing the productivity and competitiveness of individuals within a given area, ultimately contributing to the reduction of poverty and inequality in the region. Grounded in human capital theory, the notion posits that investments in education serve as a strategic investment in human resources, yielding manifold benefits. Education, as a pivotal aspect of human capital development, is instrumental in fostering improved working conditions, enhancing production efficiency, and elevating overall welfare. According to this theory, individuals attaining higher levels of education stand to gain increased income, creating a notable disparity when compared to the earning potential of those with lower educational qualifications. Essentially, the cultivation of human capital through education is seen as a transformative force, not only benefiting individuals but also contributing to the broader socioeconomic advancement of the community and region.
This research aims to investigate and delineate the status of Human Capital (HC) in the Rural Urban Fringe (RUF) area. The RUF zone is characterized as a transitional land use area, undergoing a gradual shift from agricultural to non-agricultural activities. Notably, the agricultural landscape in this region plays a pivotal role in determining the village's functionality by assessing the number of functions oriented towards the urban center. The outcome of this RUF area development is anticipated future urban expansion, leading to a consequential reduction or abandonment of agricultural pursuits by local farmers.

This study focuses on assessing the state of Human Capital, utilizing education and health facilities as key indicators. The selected RUF area for this research is situated adjacent to the city of Palembang, specifically in Pemulutan District, Ogan Ilir Regency, along the Palembang-Inderalaya transportation route. More specifically, the villages of Pemulutan Ulu and Pelabuhan Dalam will be scrutinized to provide insights into the evolving dynamics of Human Capital in the context of the Rural Urban Fringe.

LITERATURE REVIEW

The trajectory of economic development has evolved over time. Initially, the focus was on measuring the production and potential increase of the national gross product (GRDP). However, contemporary development paradigms now emphasize the assessment of how development outcomes can be shared across the entire population. This includes objectives such as poverty alleviation, reduction of income inequality, and lowering the unemployment rate (Kuncoro, 2010).

Specifically, the success of development, as gauged by improved income distribution and reduced unemployment, centers on the human factor. Humans, considered a distinct factor of production, possess unique characteristics that distinguish them from other elements of production. The movement of people is intricately linked to the flow of goods and capital, forming an interdependent relationship. Essentially, this implies that the circulation of goods and capital is contingent upon the movement of people, highlighting the integral role of human dynamics in shaping successful development outcomes.
Sheng (2001) argues that poverty is a condition that has three interrelated aspects, namely: "income poverty", "access poverty", and "power poverty". According to Sheng (2001), poverty encompasses three interconnected dimensions: "income poverty," "access poverty," and "power poverty." In addressing "income poverty," Sheng argues that empowerment of impoverished individuals is crucial, and self-help initiatives through the establishment and sustenance of income-generating activities can effectively alleviate this aspect. Noteworthy examples of successful poverty reduction through self-help programs are evident in countries like Malaysia, India, Bangladesh, and Indonesia, as highlighted by Nurlina (2003). Empowerment also involves providing the poor with access to essential services and infrastructure. Concurrently, the involvement of corporate entities and religious community institutions plays a vital role in job creation. This is achieved through Corporate Social Responsibility (CSR) programs, as noted by Nurlina (2015a). While such programs have been established, their impact remains uneven across societal strata, indicating a need for improvement to ensure more comprehensive coverage and benefit to all levels of society.

Rural-urban linkages refer to the intricate network of social, economic, cultural, and political connections between individuals and groups residing in urban and rural areas, as defined by Lesetedi in Ndabeni (2013). These linkages can be comprehended as spatial and sectoral flows that encompass various elements such as people, goods, money, technology, knowledge, and information, among others. In low-income countries, rural-urban interactions are often characterized by forward linkages and backward linkages. An illustration of this is evident in the agricultural sector, where there is a reciprocal relationship involving the processing and manufacturing of raw materials for agricultural products (forward linkages) and the production of agricultural inputs (backward linkages), as highlighted by Akkoyunlu (2013). This dynamic interplay paints a picture of the expansion of non-agricultural employment opportunities, coupled with an increased demand for agricultural and industrial products and services, as observed by Bah et al. (2003).

According to Sheng (2001), there is a pressing need for renewed attention to rural-urban interactions, primarily driven by significant changes occurring in developing countries. One notable change is the decentralization of central government power to
local governments, manifested in the form of regional autonomy. Nurlina (2015b) expresses the hope that, through an understanding of the advantages and disadvantages inherent in each region, rural-urban living conditions can be sustained and harmonized. Cities, as noted by Nurlina et al. (2015), possess advantages in terms of capital resources and high market potential but face limitations due to a scarcity of natural resources. Conversely, villages benefit from natural and physical resources, such as extensive land, but encounter challenges related to capital and information resources, as well as limited employment opportunities.

Bintaro, as cited in Subroto et al. (2008), identifies several interaction zones, including cities, suburban areas, suburban fringe lanes, the strongest urban fringe, rural-urban fringe, and rural areas. The Rural Urban Fringe (RUF) zone, positioned as an interface between cities and villages, exhibits mixed land use characteristics and is closely connected to rural areas. This specification suggests that the RUF zone is more intensive than other zones in facilitating the flow of human capital (commuting and occupation), financial capital, and goods, thereby contributing to an accelerated reduction in poverty.

Von Braun (2007) observes a transformation in the relationship between rural and urban areas, driven by evolving conditions, including (1) increased trade and capital flows, (2) the information revolution, and (3) changes in the government system towards decentralization. Furthermore, Von Braun (2007) highlights that the flows characterizing rural-urban relations manifest in various ways, encompassing spatial flows, such as migration and transfer, along with the movement of natural resources. Additionally, sectoral flows are evident, reflecting shifts in the economic sector within rural areas from agriculture to non-agriculture. The dynamic flow creates interdependence between rural and urban areas, contributing to the multifaceted nature of their relationship.

The potential of a village area to function as a growth center capable of fostering accelerated development within rural settings is emphasized. Todaro (2006, as cited in Nurlina 2015b) argues that when a city attains the status of a "main" city, it attracts substantial investments that surpass those received by villages. This leads to disproportionate and inefficient economic activity levels. Consequently, the
establishment of ‘growth centers' emerges as a strategic approach to mitigating rural-urban disparities. Prior investigations into rural-urban interactions have employed diverse methods and approaches, as evidenced by studies conducted by Sawitri in 2006, Setijaningrum in 2009, and Budiantara in 2010. Sawitri (2006) focused on village development efforts, employing an approach centered on empowering community participation in rural areas of West Java.

Building on the approach used by Sawitri, Setijaningrum (2009) implemented a community empowerment model to investigate poverty alleviation efforts in urban areas. This study focused on slum areas within 10 villages in Surabaya, namely Ujung, Bulak Banteng, Wonokusumo, Sidotopo Wetan, Tanah Kali Kewall, Bulak, Dupak, Bongkaran, Sukolilo, and Moro Krembangan. Similarly, in the realm of regional development, Budiantara (2010) conducted a study addressing the challenges faced by the underdeveloped border areas between administrative regions in Indonesia. This study, akin to the works of Sawitri and Setijaningrum, contributes to the broader understanding of various development issues, employing specific models and methodologies tailored to the distinct contexts of poverty alleviation and regional development.

RESEARCH METHODS

In this study, the chosen research method is descriptive quantitative research. Specifically, the data processing involves the utilization of descriptive analysis methods and cross-tabulation analysis. Descriptive analysis serves the purpose of transforming raw data into a more comprehensible and concise form of information, as outlined by Sugiyono (2014). The research type is conclusive research, which aims to investigate the relationship between variables. It is of a descriptive nature, where the results elucidate the characteristics or functions of the market. This information proves valuable in decision-making processes, aiding in the determination, evaluation, and selection of the best alternative course of action in a given situation. The study employs multiple cross-sectional surveys, conducted within a single period on various samples within the population.
The primary data for this study were gathered through interviews and questionnaires administered to respondents residing in the villages of Pelabuhan Dalam and Sungai Dua. The questionnaire comprises questions categorized into two main sections: respondent demographics and Human Capital (HC) indicators specific to their respective regions. In analyzing the collected data, descriptive analysis was employed, focusing on profiling and demographic characteristics of the respondents. The descriptive method is utilized to elucidate and portray the gathered information without the intention of deriving universally accepted conclusions or generalizations, as explained by Sugiyono (2016).

Additionally, cross-tabulation analysis was conducted in this study, focusing on the demographic variables of the respondents. These variables include gender, age, number of children, number of dependents, education, side jobs, health facilities, and the utilization of health facilities. The cross-tabulation analysis aims to uncover relationships and patterns within the demographic data, providing a more nuanced understanding of the interplay between these variables.

RESULTS AND DISCUSSION

From the outcomes of data analysis, it was observed that the majority of respondents in the two villages were male. In terms of age, 60% of the respondents in both Pelabuhan Dalam and Pemulutan Ulu villages fall within the 25 to 44 years age bracket. This demographic pattern indicates that the research respondents belong to the productive age group. In the demographic assessment, the age distribution is categorized into three segments: (a) the young age group, under 15 years; (b) the productive age group, 15 – 64 years old; and (c) the elderly age group, aged 65 years and over. It can be inferred that the respondents in the two villages exhibit an age distribution skewed towards the young population, as the proportion of individuals under 40% falls into the young age group.

The profile of respondents, focusing on their primary occupations in the two villages, reveals that a significant number are engaged in informal sector labor, particularly as construction workers. Specifically, the predominant occupation among respondents in both Pelabuhan Dalam and Pemulutan Ulu villages is that of casual daily
laborers, primarily working in construction. The geographical location of these villages, serving as a nexus between urban and rural areas, has led to a transformation in the livelihoods of their residents. The occupational shift is evident in the fact that a substantial portion of the population, originally engaged in farming, has transitioned to working as construction laborers. Currently, only 30 percent of the total respondents identify as farmers. This transformation aligns with the encroachment of urban development into the surrounding areas, resulting in the reduction of available agricultural land. However, despite this shift in livelihoods, there is a discrepancy in the Human Capital (HC) attributes of the two villages. The educational attainment of the residents in both villages predominantly remains at the elementary school level, indicating that the changes in occupation have not been accompanied by a corresponding increase in educational qualifications.

### Table 1
**Characteristics of Respondents**

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Percentage (%)</th>
<th>Pelabuhan dalam</th>
<th>Pemulutan Ulu</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Gender</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Man</td>
<td>62</td>
<td>59</td>
<td></td>
</tr>
<tr>
<td>woman</td>
<td>38</td>
<td>41</td>
<td></td>
</tr>
<tr>
<td><strong>Age</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>25 - 44</td>
<td>66</td>
<td>63</td>
<td></td>
</tr>
<tr>
<td>45 - 64</td>
<td>29</td>
<td>30</td>
<td></td>
</tr>
<tr>
<td>65+</td>
<td>5</td>
<td>7</td>
<td></td>
</tr>
<tr>
<td><strong>Number of children</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1 - 2</td>
<td>74</td>
<td>66</td>
<td></td>
</tr>
<tr>
<td>3 - 4</td>
<td>22</td>
<td>30</td>
<td></td>
</tr>
<tr>
<td>5 - 6</td>
<td>4</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td><strong>The number of dependents</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Don't have</td>
<td>3</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>1 - 3</td>
<td>82</td>
<td>72</td>
<td></td>
</tr>
<tr>
<td>4 - 6</td>
<td>15</td>
<td>21</td>
<td></td>
</tr>
<tr>
<td>&gt; 6</td>
<td>1</td>
<td>1</td>
<td></td>
</tr>
</tbody>
</table>

Source: Data processed
Table 2
Frequency of Respondents Based on Village Location and Main Occupation

<table>
<thead>
<tr>
<th>Location</th>
<th>Farmer</th>
<th>Trader/entrepreneur</th>
<th>laborer</th>
<th>Government Employees/Private Employees/Retired</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pelabuhan Dalam</td>
<td>38.0</td>
<td>1.8</td>
<td>55.4</td>
<td>4.8</td>
</tr>
<tr>
<td>Pemulutan Ulu</td>
<td>38.5</td>
<td>11.5</td>
<td>48.6</td>
<td>1.4</td>
</tr>
</tbody>
</table>

Source: Data processed

Similarly, the educational background of respondents' partners reflects a parallel pattern in both villages, where the majority have completed only elementary school education. Nevertheless, a noteworthy distinction emerges when comparing Pemulutan Ulu and Pelabuhan Dalam villages, indicating a lower percentage of couples with completed primary school education in Pemulutan Ulu. Intriguingly, the findings reveal a tendency for women in Pemulutan Ulu village to attain higher levels of education compared to men in the same village.

Table 3
Percentage of Respondents by Village Location and Education

<table>
<thead>
<tr>
<th>Location</th>
<th>Education</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Primary School</td>
</tr>
<tr>
<td>Pelabuhan Dalam</td>
<td>71</td>
</tr>
<tr>
<td>Pemulutan Ulu</td>
<td>60</td>
</tr>
</tbody>
</table>

Source: Data processed 2018

The analysis of respondents' characteristics concerning population income reveals that a significant majority in both villages still earn low incomes. Specifically, the income bracket for most respondents falls within Rp. 625,000 - 1,600,000, categorizing it as low. This income level is indicative of the financial challenges faced by these individuals. The limited range of job opportunities, stemming from the unpreparedness
of farmers in adapting to the evolving patterns of livelihood, contributes to the prevalent low income among the respondents.

Table 4

Percentage of Respondents by Village Location and Spouse's Education

<table>
<thead>
<tr>
<th>Location</th>
<th>Wife/Husband Education</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Primary School</td>
<td>Junior High School</td>
<td>High School and University</td>
<td>No school / Not completed in Primary School</td>
</tr>
<tr>
<td>Pelabuhan Dalam</td>
<td>63.3</td>
<td>16.9</td>
<td>10.8</td>
<td>9</td>
</tr>
<tr>
<td>Pemulutan Ulu</td>
<td>47.3</td>
<td>20.9</td>
<td>20.3</td>
<td>11.5</td>
</tr>
</tbody>
</table>

Source: Data processed

The next aspect of human capital under consideration is health, which in this study is evaluated through the availability of health facilities, the frequency of health service utilization in the preceding year, the presence of clean water facilities at home, and the sources of clean water used. According to the information gathered from interviews with respondents in both villages, over 60 percent of the respondents experienced illness in the past year, while only 30 percent remained free from any reported illnesses during that period. Additionally, it was revealed that nearly 80 percent of respondents opted for health center facilities for medical treatment, citing their proximity to home locations and relatively lower costs as the primary reasons for their choice.

Table 5

Percentage of Respondents by Village Location and Health Level

<table>
<thead>
<tr>
<th>Location</th>
<th>Sick in the last 1 year</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Not</td>
<td>yes</td>
<td></td>
</tr>
<tr>
<td>Pelabuhan Dalam</td>
<td>35</td>
<td>65</td>
<td></td>
</tr>
<tr>
<td>Pemulutan Ulu</td>
<td>40</td>
<td>60</td>
<td></td>
</tr>
</tbody>
</table>

Source: Processed Data

In terms of water facility indicators, there are distinct variations between the two villages. The majority of residents in Pemulutan Ulu village rely on government-
provided water facilities on a daily basis. The village's proximity to the road facilitates access to clean water provided by the government. Conversely, in the more remote village of Pelabuhan Dalam, residents predominantly depend on river water for their daily needs. The village's distance from the main road and its proximity to the river lead residents to prefer river water for both consumption and daily activities. It was observed and confirmed through interviews that each resident in both villages has personal facilities, including a bathroom, washing area, and latrine, within their homes.

**Table 5**

*Percentage of Respondents by Village Location and Purpose of Treatment*

<table>
<thead>
<tr>
<th>Location</th>
<th>Purpose of Treatment</th>
<th>Percentage (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>RS</td>
<td>Public health center</td>
</tr>
<tr>
<td>Pelabuhan Dalam</td>
<td>8</td>
<td>80</td>
</tr>
<tr>
<td>Pemulutan Ulu</td>
<td>9</td>
<td>80</td>
</tr>
</tbody>
</table>

Source: Data processed

The expansion of urban areas has given rise to the Rural Urban Fringe (RUF) region, serving as an interface between urban centers and rural communities, fostering relatively rapid growth. In theory, the RUF area could serve as a developmental hub, catalyzing accelerated progress in the neighboring villages. However, the reality in the RUF villages in South Sumatra presents a contrasting scenario. Urban development has led to the reduction of arable land, and the high production costs do not align with the market value of agricultural products. Despite the increasing availability of non-agricultural business opportunities, there is a mismatch with the educational levels of the villagers. Consequently, the transformation of livelihood patterns among farmers is predominantly limited to engaging in construction work, yielding minimal results and income. This disparity underscores the challenges faced by villagers in adapting to the evolving economic landscape brought about by urban development.
The data analysis reveals that the state of Human Capital (HC) in the two villages situated within the Rural Urban Fringe (RUF) area is currently considered low. Specifically, the limited educational background continues to shape the lifestyle and capabilities of individuals who were formerly engaged in farming. This outcome implies that a substantial transformation in the factors of production—initially confined to capital, labor, and land—requires a complementary emphasis on knowledge or Human Capital. To effectively adapt to the shifting dynamics and urban development, it is imperative for stakeholders to prioritize efforts in enhancing and reinforcing the Human Capital factor. This strategic approach becomes crucial for the rural population to successfully navigate and integrate into the evolving economic landscape influenced by the development of urban areas.

Likewise, the attributes of Human Capital (HC), gauged through the health status in the two Rural Urban Fringe (RUF) villages, align with theoretical expectations. In theory, health constitutes a crucial component of human capital essential to bolster economic development. This is rooted in the understanding that health serves as a prerequisite for heightened productivity. In this context, the impact of health on economic growth is multifaceted; it not only enhances labor participation but also contributes to improvements in education levels, thereby fostering overall economic development.

Indicators of public health in the Rural Urban Fringe (RUF) area are assessed through factors related to health services, encompassing facilities and infrastructure. According to information gathered through community interviews, the state of public health in this area is deemed to be relatively low. Over the course of the past year, it was revealed that nearly half of the residents in both villages experienced illness. Despite the presence of health facilities, namely health centers, in the study area, the accessibility to these facilities was generally uncomplicated. However, a noteworthy observation was that a significant proportion of male respondents were hesitant to visit the health centers due to work commitments.
CONCLUSION

This study seeks to depict the status of Human Capital (HC) in the Rural Urban Fringe (RUF) area, utilizing education and health as key indicators. While the demographic structure of the two villages has experienced a demographic bonus, characterized by a higher percentage of the population falling within the productive age range (15-64 years) compared to those in the non-productive age groups (0-14 years and 65+ years), the Human Capital, as evidenced by public health and education indicators, remains relatively low.

The educational achievements of residents in both villages, as well as those of their spouses, are predominantly confined to the elementary school level. Moreover, the proximity of health centers (puskesmas) notwithstanding, the utilization of health services is suboptimal, underscoring an underutilization of available healthcare resources. To address this issue, mitigation measures are imperative, and government policies should be formulated to establish structured and direct access to education and health services in these regions.

According to the theory of the vicious circle of poverty, improving education and health stands out as a viable strategy to break the chain of poverty that has persisted from one generation to the next. Implementing policies that focus on these aspects can potentially serve as an effective intervention to uplift the overall well-being of the communities in the two villages.

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