

Evaluation of Housing Development Growth in Asahan Regency

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Authors' contributions

This work was carried out in collaboration among all authors. All authors read and approved the final manuscript.

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ABSTRACT

This study aims to evaluate the factors influencing housing development growth in Asahan Regency and to assess the socio-economic impacts on the local community. The research focuses on the transition of land use from agricultural to non-agricultural purposes, examining the driving determinants and the consequent socio-economic effects. Utilizing both primary data from interviews and questionnaires and secondary data from official statistics and literature, the study employs multiple regression analysis to identify key factors such as location, price, facilities, and accessibility. The findings indicate that while these factors positively influence housing development growth, their significance varies. The study also highlights the socio-economic impacts, including job displacement for farmers, reduced social interaction, social stratification, and new employment opportunities. Recommendations are made for better land management and the development of new agricultural areas to ensure sustainable growth.

Keywords: Asahan; Houses; Growth; Economic; Management.

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1. Introduction

Regional development fundamentally aims to stimulate economic activities that contribute directly to economic growth (Hairudin, 2008). This development necessitates adequate space aligned with population growth and urban expansion (Daldjoeni, 1996; Wibisono, 2002). Housing, as a basic human need alongside food and clothing (Sastra & Marlina, 2006), demands increasing amounts of land, often occupying 50-60% of urban areas.

The rising demand for land presents a significant challenge, with the need often surpassing the available supply. Efficient land management is essential to balance development needs with social functions, ensuring optimal use of land. Asahan Regency, historically reliant on agriculture, has shifted towards trade, services, and industrial sectors. This transition is evidenced by the conversion of agricultural land for residential and industrial development, significantly impacting land availability and the local economy.

Housing development, a fundamental aspect of urban growth, requires extensive land resources. The shift from agricultural land to housing developments has significant implications for the socio-economic landscape of Asahan Regency. Between 2000 and 2020, agricultural land in Asahan decreased from 18,755 hectares to 9,918 hectares, a reduction of 8,837 hectares, primarily due to housing projects like Tembung Resident, Tembung Permai Indah, Griya Sahabat Arbi I, and Griya Sahabat Arbi II. This transition raises important questions about the factors driving housing development growth and its socio-economic impacts on the local community.

Development is a comprehensive social process encompassing economic growth and social change, aiming to achieve a more prosperous society. It involves a continuous cycle of production to meet consumption needs, utilizing various resources such as natural resources, human resources, financial capital, and equipment (Supardi, 1994; Tjahya, 2000; Hadi, 2000). Effective development planning must consider potential environmental impacts, including waste and pollution, which can hinder the primary goal of enhancing living standards.

Development is an ongoing, planned process aimed at improving various aspects of life, including the economy, politics, culture, and environment. It maximizes the use of human, natural, technological, and financial resources while maintaining societal balance. Socio-economic impacts refer to the consequences of planned changes, affecting biophysical, social, and economic aspects (Pelly, 1994). Integrating socio-economic and biophysical aspects into environmental impact analysis can provide a comprehensive understanding (Soemarwoto, 1991).

Previous studies have highlighted the socio-economic impacts of land conversion. Matera (1996) found that land conversion in Beraban Village for tourism development significantly altered livelihoods. Priatmono (1999) observed that industrial development led to land conversion and labor shifts from agriculture to non-agriculture sectors, enhancing regional economic growth. Similarly, Jamal (1999) noted that land fragmentation through inheritance reduced average landholding sizes, driven by the undervaluation of agricultural land. Fauzia (2004) demonstrated that land conversion positively affected household incomes by creating new economic activities and job opportunities.

Understanding these factors is crucial for developing strategies that balance housing needs with sustainable land use and socio-economic development. The primary research question guiding this study is: What are the factors influencing housing development growth in Asahan Regency? Additionally, the study aims to assess the socio-economic impacts of housing development on the local community. By addressing these questions, the research seeks to provide insights that can inform better land management and housing development policies.

This study employs a comprehensive approach, utilizing both primary and secondary data to analyze the determinants of housing development growth and its socio-economic impacts. The findings will contribute to a deeper understanding of the dynamics of housing development in Asahan Regency and offer recommendations for sustainable growth and development.

2. Method

This study focuses on housing development growth in Asahan Regency, covering Kisaran Timur, Air Joman, Kisaran Barat, and Pulau Banding districts. Data collection involved both primary and secondary sources. Primary data was gathered through interviews and questionnaires distributed to residents living in and around housing developments. Secondary data was obtained from the Asahan Regency Statistics Office, sub-district offices, and other relevant institutions, as well as literature, journals, and reports.

The research population consisted of residents living in housing developments and those residing nearby in the specified districts. Given the unknown population size, a non-probability sampling method was employed, specifically purposive sampling, to select 95 samples that met the study criteria.

Using a structured interview guide, in-depth interviews were conducted to gather comprehensive responses from informants about their experiences and perspectives on housing development and its impacts. The researcher systematically recorded and summarized information obtained from documents, behaviors, and informant speeches during the research process. Environmental observations were also made to understand the context better.

Essential documents, including recordings, writings, photographs, policy regulations, and images of larval inspector activities, were collected to support the research. To determine the factors influencing housing development growth, multiple regression analysis was used. The model is represented as follows:

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \mu$$

Where:

Y = Housing Development Growth

X₁ = Location

X₂ = Price

X₃ = Facilities

X₄ = Accessibility

β₀ = Constant

μ = Error term

β₁... β₆ = Regression coefficient

The research instruments were tested for validity and reliability. Validity was assessed by examining the corrected item-total correlation, with all items showing values greater than or equal to the table R value of 0.2, confirming their validity. Reliability was measured using Cronbach's Alpha, with values greater than 0.6 indicating reliable instruments.

The multiple regression analysis aimed to understand the influence of independent variables (location, price, facilities, and accessibility) on the dependent variable (housing development growth). The regression equation derived from the analysis is:

$$Y = 1.639 + 0.037 X_1 - 0.025 X_2 - 0.08 X_3 + 0.046 X_4 - 0.047 X_5 + e$$

The coefficients of the regression variables indicate the relationship between each independent variable and housing development growth, though not all were statistically significant.

3. Result and Discussion

3.1 Instrument Testing

Before utilizing the instruments for variable measurement, validity and reliability tests were conducted. The validity test showed that all questionnaire statements for the housing location variable were valid, as the corrected item-total correlation values were greater than or equal to the table R value of 0.2, thus validating the questionnaire for

research purposes (Table 1). The reliability test results indicated that Cronbach's Alpha values for all variables exceeded 0.6, confirming the reliability of the research instruments (Table 2).

Table 1: Validity Test Results

Variable	Corrected Item-Total Correlation	R Table Value
Location (X1)	≥ 0.2	0.2
Price (X2)	≥ 0.2	0.2
Facilities (X3)	≥ 0.2	0.2
Accessibility (X4)	≥ 0.2	0.2
Comfort (X5)	≥ 0.2	0.2

Table 2: Reliability Test Results

Variable	Cronbach's Alpha
Location (X1)	0.943
Price (X2)	0.917
Facilities (X3)	0.927
Accessibility (X4)	0.827
Comfort (X5)	0.932
Housing Development Growth (Y)	0.879

3.2 Multiple Regression Analysis

The purpose of the multiple regression analysis was to identify the influence of independent variables (location, price, facilities, accessibility, and comfort) on the dependent variable (housing development growth). The results of the regression analysis are presented in Table 3.

Table 3. Multiple Regression Analysis

Model	Unstandardized Coefficients	Standardized Coefficients	t	Sig.
	B	Std. Error	Beta	
(Constant)	1.639	0.540		3.035
Location (X1)	0.037	0.035	0.171	1.050
Price (X2)	-0.025	0.047	-0.081	0.539
Facilities (X3)	-0.008	0.034	-0.038	0.239
Accessibility (X4)	0.046	0.065	0.106	0.713
Comfort (X5)	-0.047	0.038	-0.180	1.231

The regression equation is as follows:

$$Y = 1.639 + 0.037 X_1 - 0.025 X_2 - 0.08 X_3 + 0.046 X_4 - 0.047 X_5 + e$$

3.3 Interpretation of Results

The regression analysis indicates that:

- The coefficient for the location variable (X1) is 0.037, suggesting that a 1% increase in the location quality increases housing development growth by 0.037 units, although this relationship is not statistically significant.

- The price variable (X2) has a negative coefficient of -0.025, indicating that a 1% decrease in housing price reduces development growth by 0.025 units, but this effect is not significant.
- Facilities (X3) show a negative coefficient of -0.08, implying that a 1% decrease in facilities reduces growth by 0.08 units, with no significant impact.
- Accessibility (X4) has a positive coefficient of 0.046, suggesting that a 1% increase in accessibility enhances growth by 0.046 units, though the effect is not significant.
- Comfort (X5) has a negative coefficient of -0.047, indicating that a 1% increase in comfort reduces growth by 0.047 units, but this relationship is not significant.

3.4 Discussion

3.4.1 Impact of Location on Housing Development

The study found that housing location partially influences development growth. Housing developments closer to central areas promote growth, which aligns with previous research by Haerulina (2020) and Primananda (2010) highlighting the importance of location, price, and accessibility. Locations with better proximity to amenities and infrastructure attract more development activities.

3.4.2 Influence of Price on Housing Development

The regression results indicate that while the price of housing negatively influences development growth, the relationship is not statistically significant. Economically priced and high-quality housing can stimulate development, supporting findings by Yunus (2000) and Catanese & Snyder (1989), who emphasized land value and economic strategies in development.

3.4.3 Role of Facilities in Housing Development

The presence of facilities, including public and social amenities such as education, healthcare, and transportation, plays a crucial role in attracting investors and residents. However, the study found that the impact of facilities on housing development growth was not statistically significant. Despite this, areas with comprehensive facilities tend to have higher demand for housing.

3.4.4 Effect of Accessibility on Housing Development

Accessibility, defined by transportation systems and connectivity, was found to positively influence housing development growth, although not significantly. Dwiyanto (2008) and Peter (2007) noted that accessibility affects land use patterns and transportation networks, which in turn influence development activities.

3.4.5 Impact of Comfort on Housing Development

Comfort, encompassing environmental quality and living conditions, showed a negative but insignificant impact on housing development growth. High comfort levels can enhance living standards and attract residents, but other factors such as location and accessibility may play more dominant roles in influencing growth.

3.4.6 Socio-Economic Impacts

Housing development in Asahan Regency has led to several socio-economic impacts:

1. Job Displacement for Farmers: Conversion of agricultural land to housing has resulted in job losses for farmers.
2. Reduced Social Interaction: There is a decrease in social interaction between new residents and the local community.
3. Social Stratification: The development has led to social stratification within the community.

4. **New Employment Opportunities:** Housing development has created new job opportunities in construction and related sectors.

4. Conclusion and Recommendations

4.1 Conclusion

The analysis of housing development growth in Asahan Regency reveals several key factors influencing this growth. Location, price, facilities, accessibility, and comfort all play roles, though their significance varies:

1. **Location:** Proximity to central areas and amenities positively influences housing development, though the relationship was not statistically significant in this study.
2. **Price:** Economically priced housing can stimulate development, but the study found a negative and insignificant relationship.
3. **Facilities:** The presence of public and social amenities is crucial for attracting development, yet the impact was not statistically significant.
4. **Accessibility:** Improved transportation and connectivity positively influence development growth, though this was also not statistically significant.
5. **Comfort:** Higher comfort levels can enhance living standards and attract residents, but other factors may have a more dominant influence on development growth.

Socio-Economic Impacts: The transition from agricultural to non-agricultural land use for housing development in Asahan Regency has several socio-economic impacts:

- **Job Displacement for Farmers:** Many farmers have lost their jobs due to the conversion of agricultural land to housing.
- **Reduced Social Interaction:** There is a noticeable decline in social interactions between new residents and the existing local community.
- **Social Stratification:** The development has led to increased social stratification within the community.
- **New Employment Opportunities:** The housing development has created new jobs, particularly in construction and related sectors.

4.2 Recommendations

Based on the findings of this study, several recommendations can be made to manage housing development growth in Asahan Regency effectively:

1. **Reorganize Land Use:** The government should reassess and reorganize productive and non-productive land to ensure balanced development. This includes maintaining productive agricultural land and designating appropriate areas for housing development.
2. **Develop New Agricultural Areas:** To ensure food security and compensate for lost agricultural land, new agricultural areas should be developed. This can be done in regions distant from urban centers to prevent conflicts with housing development.
3. **Enhance Community Engagement:** Efforts should be made to improve social interaction and integration between new residents and the local community. This can include community-building activities and programs aimed at fostering social cohesion.
4. **Improve Accessibility and Infrastructure:** Investing in better transportation systems and infrastructure can enhance accessibility, making housing developments more attractive and sustainable.
5. **Maintain Environmental Quality:** Ensuring high levels of comfort through environmental quality and living conditions can help attract and retain residents.

Policies should focus on maintaining clean air, green spaces, and efficient waste management.

6. **Monitor and Evaluate Development:** Continuous monitoring and evaluation of housing development projects are crucial. This includes assessing the socio-economic impacts and making necessary adjustments to policies and strategies.

By implementing these recommendations, Asahan Regency can achieve balanced and sustainable housing development that meets the needs of its growing population while preserving its socio-economic and environmental integrity.

REFERENCES

- Ahmad, F. (2004). *Psikologi umum*. Bandung, Indonesia: CV Pustaka Setia.
- Daldjoeni, N. (1996). *Geografi kota dan desa*. Yogyakarta, Indonesia: Penerbit Ombak.
- Hairudin, S. (2008). *Kajian perkembangan spasial wilayah pada kawasan pusat pengembangan*. Semarang, Indonesia: Perpustakaan MPWK Undip.
- Hadi, S. (2000). *Metodologi research*. Yogyakarta, Indonesia: Andi Yogyakarta.
- Jamal, E. (1999). *Economic and institutional analysis of the conversion of paddy fields to non-agricultural use in Krawang Regency, West Java* (Master's thesis). Graduate Program, IPB University, Bogor, Indonesia. Unpublished.
- Matera, I. G. M. (1996). *Conversion of agricultural land for tourism facilities development and its impact on farmers* (Master's thesis). Graduate Program, IPB University, Bogor, Indonesia. Unpublished.
- Pelly, U. (1994). *Urbanisasi dan adaptasi: Peranan misi budaya Minangkabau dan Mandailing*. Jakarta, Indonesia: LP3ES.
- Priatmono, E. (1999). *Study on the impact of industrial development on land conversion and agricultural labor shift in Sukoharjo Regency* (Master's thesis). Graduate Program, IPB University, Bogor, Indonesia. Unpublished.
- Soemarwoto, O. (1991). *Ekologi, lingkungan hidup dan pembangunan* (5th ed.). Jakarta, Indonesia: Penerbit Djambatan.
- Suparno, S. M., & Marlina, E. (2006). *Perencanaan dan pengembangan perumahan: Sebuah konsep, pedoman, dan strategi perencanaan dan pengembangan perumahan* (F. L. S. Suyantoro, Ed.).
- Supardi, I. (1994). *Pembangunan yang memanfaatkan sumber daya*. Jakarta, Indonesia: PT Rineka Cipta.
- Supriatna, T. (2000). *Strategi pembangunan dan kemiskinan*. Jakarta, Indonesia: Rineka Cipta.
- Wibisono. (2002). *Kajian perubahan lahan Kecamatan Mranggen Kabupaten Demak sebagai kawasan pinggiran Kota Semarang* (Master's thesis). Program Sarjana Magister Teknik Pembangunan Kota, Universitas Diponegoro, Semarang, Indonesia.