
AN IMPACT OF THE DEVELOPMENT OF KUALA NAMU INTERNATIONAL AIRPORT (KNIA) ON COMMUNITY'S SOCIOECONOMIC

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ABSTRACT: *The aim of this study is to obtain empirical evidence regarding the impact of surrounding community on development of Kuala Namu Airport in Deli Serdang. This include the impact of social life and economy. The method of analysis used is Ordinary Least Square (OLS) regression test. The dependant variable in this study is the main job shift, while the independant variables are the perceptions of Kuala Namu Airport presence (X_1), social impact (X_2) and economic impact (X_3). The sample is 52 respondents from the sub-districts of Tanjung Morawa, Batang Kuis and Beringin. The findings revealed that simultaneously the presence of Kuala Namu Airport has an impact on social life, economy, work shift of community surrounding the Airport. While, partially concluded that the community appreciate the presence of Kuala Namu Airport which has an impact to the economy, and the community's social life has not an effect on the presence of Kuala Namu Airport.*

KEYWORDS: Perception of the presence of Kuala Namu Airport, social impact, economic impact, main work shift.

INTRODUCTION

Kuala Namu International Airport is an Airport for Medan, Indonesia which replaces Polonia International Airport that has more than 70 years old. The Airport is expected to become an International Airport transit base for Sumatera and the surrounding region as the second largest Airport in Indonesia after Soekarno-Hatta International Airport. It was officially opened on July 25, 2013 in an area of 1,365 hectares. This Airport is the fourth biggest Airport in Indonesia that can accommodate Airbus A380 apart from Hang Nadim, Soekarno-Hatta, and Ngurah Rai Airports. On July 25, 2013, the airport was officially opened and at the same time the government closed Polonia Airport for a commercial flight.

In the development of Kula Namu Airport, the government expects that there are many positive impacts to the surrounding community, among others is to open a wide job opportunities for the community and at the same time as part of government measures to modernize the society. This will bring a positive benefit impact for the community for the traders, planners and perpetrators of other development because it will increase the income and a decent living. But ironically, these government expectation do not become a reality because in fact the farmers and other people are the losers in the development process where they had lost their jobs and livelihoods as a result of their agricultural land has been sold at unreasonable price and they are not involved as productive labor force in the project. This makes people become increasingly oppressed and poor which then bring crucial influence to their livelihood to switch to the informal sector.

1. How does the community's perception of the presence of Kuala Namu International Airport?
2. Is Kuala Namu International Airport affect the social life of the surrounding people?
3. Is Kuala Namu International Airport impact on the economy of villages around Kuala Namu?
4. Does the presence of Kuala Namu International Airport affect the shift in the main work around the community's villages?

LITERATURE REVIEW

Road Development Planning

In supporting the urban planning, the road development is one of the main priorities in addition to other planning which been used directing the use of designated land designations, the city development and plan of a specific area such as industrial (Law No. 24 of 1992), therefore the development of urban roads need to be harmonized with the spatial plan of the city. For this purpose the efforts include the structuring of the road network, the arrangement of functions and service roads, establishing the technical requirements of each road.

The transportation network can be used to control the growth, determine the direction of development, regulate the concentration of activities and physical structures in places so it does not exceed the capacity of existing utilities (Branch, 1995). Furthermore, Branch (1995) mentioned that the lane of roads and it's utilities are forming the patterns of land used in the city. Since the beginning of the community growth, various activities have been done along the lines of the primary traffic. The relationship between the regulation of land use with the transport system indicates the ease of interaction for each other to achieved a better transportation system. Different land use will have different accessibility due to the activities distributed in space are uneven in terms of quantity and quality. Some things that can be done with respect to an increase in transport capacity are; (i) the construction of new roads such as highways, ring road (outer ring road), the construction of a new connecting road; (ii) increase the capacity of the network infrastructure such as road widening and repair geometric intersection, the construction of roads breakthrough to complete the system of existing road network (missing links) and improvement of road hierarchy system and manufacture of road crossings for pedestrians (Tamin, 1993).

In achieving the economic growth in developing countries, one of the most important factors is to increase public accessibility in the region through the transport network. With the accessibility of transport in the city, the region or community groups in the region or the city will easily and quickly perform activities (Taafe, 1986). One impact of the development of the urban sub-centers with the strategy of increasing the accessibility of urban highways often ignore the strategy of increasing the accessibility of the highway. The placement of sub-centers are too far to the main center regardless of growth factor activity very rapidly, in the end it makes the city region become enlarged without offset by the development of adequate transport infrastructure.

Community Empowerment and Poverty

The term poverty arises when a person or a group of people is not able to reach the level of economic prosperity that considered as a minimum requirement of a certain standard of living. Poverty is a phenomenon that will never run out for discussion. Various strategies in poverty reduction have been done to address the issue but still the formulations have not been able to fully resolve it.

According Marwoto (2005) poverty measure is generally divided into absolute and relative poverty. An absolute poverty is based on the individual's inability to meet the minimum basic needs for a decent life. This concept was developed in Indonesia which declared as "inability of the individual to met basic needs" (Marwoto, 2005). The concept is in line with Sen in the Gini ratio of Gunungkidul district in 2006 stated that poverty is "the failure to have on certain minimum capabilities". The definition refers to the ability of certain minimum standards, which means that people who are not able to exceed the minimum capability is considered poor. Chambers (1987) states that the cause of poverty as the complexity of causal relationships interlocking of powerlessness, vulnerability, physical weakness, poverty, and

isolation. Overcoming poverty is basically an effort to empower people to be independent both in terms of economic, social and political. Besides that, the higher the economic access owned by someone, so in the end they expected to be self-sufficient in addressing the problems of poverty.

Community Participation in Development

Arnstein (1969) describes participation as a sense in which citizens can influence important social change that can make them share the benefit of society. It characterized into eight steps include; manipulation, therapy, informing, consultation, consolidation, collaboration, devolution of power and citizens' control. Meanwhile, Chougil (2008) mentioned the ladder of society participation in less developed countries can be divided into eight levels, namely; empowerment, partnership, conciliation, dissimulation, diplomacy, informing, conspiracy, self management.

The community involvement is seen from the narrow context, means that human perceived as a labor to reduce the cost of social development. With this condition, public participation is limited to the implementation or application of the program to be creative, where public power is not developed from within him/herself and had to accept the decisions taken by outsiders, then the participation reached a definite shape (Midgley in Moeljarto, 1995). The concept of participation fosters creative power in him/her to produce a public mindset that is more genuine, active and critical. The community involvement ranging from planning, decision making and evaluation results. Participation encourages people to begin to be aware of the situation, problems and trying to find a solution which also helps people to see the socio-economic realities that surrounded them (Paul in Moeljarto, 1995).

Mappadjantji (2005) posited that the basic concepts of development in accordance with the New Science: *First*, every human instinct is to sustain its existence. The biological activity conducted by the lowest creatures to humans triggered by instinct. Many human beings' social activities, economic, and political are basically a manifestation of instinct. *Second*, the peak of happiness is to participate in creating something and find happiness if they can contribute to the renewal process. The new science showing that participation is one of the main properties of the universe. All events in the universe is the result of the participation of all components of the universe (the principle of solidarity). On the microscopic level, this participation is an evident on how the particles interact with each other to produce themselves. The autopoiesis processes in living organisms previously described closely related to the phenomenon of participation.

Moreover, Mappadjantji (2005) revealed that a participate justice embodied in the form of availability of a wide selection of the community in the field of social, economic, and cultural, while in the other side, the community have their independence to choose including to channel their aspirations. Choice and voice refers as a form of fundamental justice because the public is given the money and opportunity as well as have the ability and independence to develop themselves and convey the aspirations. Life in order would give a deep meaning for all communities because they can enjoy being in order.

2.4 The Improvement on Roads

According to Setiabudi (2009), the road is a land of traffic communication that is destined for, in the form of vehicles, people, goods. Its have the sense that the road is not limited to conventional forms of road (at ground level) and above ground (overpass). While, complementary building refers to a building that can not be separated from the street, bridges, trees, cross-over, cross-bottom, parking lots, culverts, drainage and roads etc. The purpose of the road is to facilitate the transport of persons or goods from one place to another, paved the way traffic, open areas that are isolated, for the defense of the area and to improve the

economy (Fendi, 2009). Therefore prioritization of road improvement needs to be done as an absolute of road network development program in assessing the benefits provided from the road construction project.

2.5 Revenue

The revenue in the narrow sense is the amount of remuneration received by the owner of a factor of production for a certain period, while in the general sense consists of Net National Income calculated according to the amount of income that the remuneration received by the community as the owner of factors of production and income for individuals. It also be derived from family relatives support, prize or lottery results, loans, inheritance, pension funds that sourced from own business (self-employed, trade etc), as an employee working in the public or private sector, the results for lending the goods or money (Gilarso, 1992).

2.6 Regional Development

The regional development can be defined as the implementation of national development in a region that is adapted to the regional physical and social abilities with respecting the applicable legislation. For the rural areas which always associated with farmers and poverty, thus the development on agricultural sector is needed. The successful agricultural development occurs when the highest growth in agricultural production as well as a change in farming communities translated into better life (Soekartawi, 1994).

The regional development used as the effort to develop and improve the inter-dependencies and interactions between the human/society economic system and environment as well as natural resources. This is translated in the form of economic development, social, political, cultural and security defense that should be in the context of balance, harmony and conformity. The concentration of activity in a place or region will encourage the concentration of activities and facilities that support the life of the population in these regions. Furthermore, the concentration would create an increase in production in the region.

According to Sandy (1982), regional development is to build community in accordance with the potential and priorities of the region concerned. The potential means is not limited to physical aspect but include the social, economic and cultural potentials. Meanwhile, a regional planning refers to spatial arrangement in the form of activities in the region which can not be separated from other related plans. The spatial means the foundation as well as the target of regional development planning (Tarin, 2004).

Miraza (2005) mentioned that a regional planning implementation would differs from one region to another because each region has different backgrounds both concerning the economic resources, culture and society, demography and geography. Those background are used for entry and exit of people and goods and the availability of regional planning at the various facets of life. The regional development is basically an increase in the value of the benefits to the community of a particular region, able to accommodate more occupants with an average level of welfare of a better society, in addition to showing more facilities / infrastructure, goods or services available and the increase in activities of the community businesses in terms of the type, intensity, and quality service.

Review on Previous Researches**Table 1. A Summary of Previous Researches**

| No | Author/Year | Title of Study | Findings |
|-----------|--|--|---|
| 1 | Crowley, R.W. (1973). | A Case Study of The Effects of An Airport on Land Values | The results show the value of the land has improved significantly after the area become an Airport area. The value of residential land around the Airport has an increase in the long term. |
| 2 | Conexus I. (2012) | Indiana Airports' Economic Impact Study | The direct economic impact of both on the airport businesses and airport users does not paint the full picture of the total impact on the economy. In both cases, the impact of on the airport business and airport users is amplified by additional multipliers that positively affect both the state and local community. These multiplier impacts are the result of either the business itself or the business employee spending money in the local economy. |
| 3 | Airport Council International (2004) | The social and economic impact of Airports in Europe | The most important contribution of airports is the provision of connectivity, which allows the European economy and society to flourish. In summary, air transport both for business and leisure purposes, and for passengers and freight, is an essential component of modern life. Companies require fast and frequent communications with their world-wide offices. The ability to access a wide range of air transport services is a key factor in determining the quality of life for a region, for example the ability to travel on holiday at an affordable price is being regarded more and more as a 'right' in developed economies and contributes to the ability of companies to attract and retain key skilled employees. |
| 4 | Airports Council International – North America (2012) | The Economic Impact of Commercial Airports in 2010. | These are significant contributions to the national economy. Commercial airports uses economic engines that drive the local, state, and national economies. Airports are valuable assets that contribute to the growth of across the country. |
| 5 | Department of Economic and Community Development Economic Impact Analysis (2005) | The Contribution Of Bradley International Airport To Connecticut's Economy | This analysis show the critical role that Bradley plays in the local and regional economies as both an active employer and driver of economic impacts, but more so, as an invaluable transportation asset that propels Connecticut's people and businesses forward in an increasingly integrated and competitive international economy. |
| 6 | Bhandari, Doleswar (2013). | Economic Impacts of Albuquerque Airport System on the New Mexico Economy | Albuquerque Airport System is a vital and significant contributor to the New Mexico economy. The Airport system is a key enabler of economic growth, promote development and tourism by connecting different regions and providing market access for trade and investments. It also serves as more than just a location to land and depart aircraft, but fuel economic activity at the local, regional, and state levels via their direct, indirect, and induced impacts. This Airport system comprised of employment, payroll, and spending and other airport-dependent businesses, commercial airline visitor spending, general aviation visitor spending and capital |

| | | | |
|---|---------------------------------------|--|--|
| | | | spending. |
| 7 | Ninda Ramita and Rudy Laksmono (2012) | The Effect of Noise From the Activity in Juanda International Airport | From the analysis of noise due to the sound of aircraft engines do not have a significant impact to the health of surrounding communities and operational employees. In accordance with the regulations of the Minister of Environment and Minister of Labour on the noise shows that the areas around the airport Juanda does not meet the quality standards as resident areas. |
| 8 | Ida Mariana (2001) | The Effect of Infrastructure Development on the Community Development of Economic Activity in Kuala Namu Suburbs | It is expected, there is a relationship of household economic development and the presence or absence of an opportunity to work on various types of work arising from the construction of the airport, as traders in the vicinity of the airport, transportation from/to the airport and supplier of a wide range of needs of the airport. |

METHODOLOGY

The study used a survey method which analyze the perception of the community on the presence of Kuala Namu Airport as well as the impact on the social and economic life of the surrounding community. Both primary and secondary data are used which obtained from the Deli Serdang District in Figures and direct observation using questionnaire in the field at the Beringin, Kebon Kelapa, Daluh X, Telaga Sari and Bakaran Baru villages. All these villages located surrounding the Kuala Namu Airport.

Regarding the sampling method in this study, it been carried out by using simple random sampling. To determine the size of the sample, the following formula is used:

$$n = \frac{N}{Nd^2 + 1}$$

n = sample size

N = population size

d = precision used

The precision (bound of error) used in this study is set at 10% so that the minimum sample size as follows:

The total population of Kuala Namu as many as 21,983. The sample is taken as follows:

$$n = \frac{21,983}{(21,983 \times 0.10^2) + 1}$$

$$n = 21,983/220.83$$

$$n = 99.55$$

$$n = 100 \text{ population}$$

Thus the minimum sample size in this study is 100 residents from five (5) villages surrounding Kuala Namu Airport in Deli Serdang district. There are 52 respondents agreed to be interviewed.

Data Analysis and Research Variables

The variables in this study are the shift of main job as the dependent variable, while the perception on the presence of Kuala Namu Airport (X_1), social impact (X_2) and economic impact (X_3) as the independent variables. Meanwhile, there are two data analysis techniques used in the study, namely descriptive and multiple regression analysis.

Instrument Validity and Reliability Test

Instrument Validity Test

The validity is determined by accurate measurement process. A measuring instrument to be valid if the instruments are measured as what it is supposed to be measured. In other words, the instrument can measure the construct according to the researcher expectation.

Ghozali (2005) stated that in order to measure the validity can be done in two ways, namely:

1. Conduct a correlation between the scores of the questions with a total score of constructs or variables. Validity test can also be done through bivariate correlation between scores of each indicator with a total score of the construct.
2. Test with Confirmatory Factor Analysis (CFA).

While, the validity test of the questionnaire in this study is done by correlating the scores between the questions with a total score of constructs or variables.

Instrument Reliability Test

Reliability is a tool to measure a questionnaire as an indicator of variables or constructs. A questionnaire is reliable if the answers of respondents are consistent over time. Ghozali (2005) stated that the reliability of measurement can be done in two ways, namely:

- a. Repeated measure or re-measurement is done by giving the same questionnaire (questions) at different times, and then see whether the respondent is consistent with the answer.
- b. One shot or measure at once is the questionnaire was given to the respondent once, then the results are compared to other questions or to measure the correlation between answers to questions.

Data Analysis Method

Model analysis of the data used is a multiple linear regression model with a formula as follows:

$$Y = b_0 + b_1X_1 + b_2X_2 + b_3X_3 + e$$

Where:

- Y = Shift on Main Job
 X_1 = Perception of presence of Kuala Namu Airport
 X_2 = Social impact
 X_3 = Economic impact
 B_0 = Intercept Y
 B = Coefficient of variable X
 e = Variable not examined

The steps that performed in a model of multiple regression analysis are carried the significance tests as follows:

The hypothesis test criteria for simultaneous test (F test) is to see the simultaneous significant of dependent variable to the independent variables. The influence of the independent variables on the dependent variable is tested with a level of confidence of 95% or $\alpha= 0:05$.

Hypothesis test criteria are as follows:

H₀: B₁ = 0 element of perception on the presence of Kuala Namu Airport, social and economic impact affect the shift of main job.

H_a: B₁ ≠ 0 elements of perception on the presence of Kuala Namu Airport, social and economic impact does not affect the shift of main job.

ANALYSIS AND DISCUSSION

Respondent Characteristics

The respondent characteristics consists of gender, years of service, age group and educational level.

The respondents are predominantly male with the highest age range of 31-40 years with the majority of them having high school education level, and majority of them have length of stay of more than 5 years.

Moreover, the respondent's agricultural area surrounding Kuala Namu Airport has on average less than 1 hectare and there are some of the respondents have less than 5 hectares.

The distribution of respondents in Tanjung Morawa sub-district includes 3 villages with a total of respondents are 11 people, the respondents in Batang Kuis sub-district are 23 people which scattered in 3 villages, while the respondents in Beringin sub-district are 18 people which scattered in the 3 villages. The majority of respondents worked as a self-employed.

Frequency Statistics

Perception of Community on the presence of the Kuala Namu Airport (X₁)

Below are the frequency statistics of the questions on the perception of community on the presence of the Kuala Namu Airport:

- They agreed on the presence of Kuala Namu Airport with the highest of 53.8% and the disagreed with the lowest of 0%.
- They agreed that the presence of Kuala Namu help the family economy with the highest of 44.2% and disagreed with the lowest of 0%.
- They agreed that the presence of Kuala Namu has an impact on family relatives with the highest of 36.5% and disagreed with the lowest of 0%.
- They agreed that the presence of Kuala Namu create an increased on work ethic with the highest of 50% and disagreed with the lowest of 0%.

Kuala Namu Airport Affects the Surrounding Public Social Life (X₂)

Below are the respondents feedback:

- They agreed that the presence of Kuala Namu Airport provides additional activities of local people with the highest of 50% and disagreed with the lowest of 0%.
- They agreed that the presence of Kuala Namu Airport causes many newcomers living in our village with the highest of 40.4% and disagreed with the lowest of 5%.
- They agreed that the presence of Kuala Namu Airport enhance the spirit of togetherness and societal mutual aid with the highest of 36.5% and disagreed with the lowest of 0%.

- d. They agreed that the presence of Kuala Namu Airport changes the habits of youth with the highest of 48.1% and disagreed with the lowest of 3.8%.

Kuala Namu Airport Affect the Villages' Surrounding Economy (X₃)

Below are the respondents feedback:

- They strongly agreed that the Kuala Namu Airport Management helps the surrounding village through the environmental fund with the highest of 48.1% and strongly disagreed with the lowest of 0%.
- They strongly agreed that every villages' activities get the aid from the Airport's Management with the highest of 46.2% and strongly disagreed with the lowest of 1%.
- They strongly agreed that the the youth in surrounding villages is been prioritized for employment at Kuala Namu Airport with the highest of 65.4% and strongly disagreed with the lowest of 0%.
- They agreed that the vocational training is provided to communities surrounding Kuala Namu Airport by the management with the highest of 65.4% and disagreed with the lowest of 0%.

The presence of Kuala Namu Airport's Influence on Shifting the Main Work of the Village's Community (Y)

- They agreed that the presence of Kuala Namu Airport open variety of employment opportunities with the highest of 55.8% and disagreed with the lowest of 0%.
- They agreed on an increase in revenues and earnings after opening Kuala Namu Airport with the highest of 44.2% and strongly disagreed with the lowest of 0%.
- They are neutral that the employment opportunities are relatively easily obtained before opening Kuala Namu Airport with the highest of 44.2% and strongly disagreed with the lowest of 0%.
- They agreed that all residents get benefits greatly from the presence of KNIA with the highest of 59.6% and strongly disagreed with the lowest of 0%.

FINDINGS

Validity and Reliability Instruments Test

The validity test used to measure the validity of a questionnaire. Below Table is the validity test results of 52 respondents on the instruments used for each variable as follows:

| Variable | Tool Measure | r | r table | Criteria |
|-----------------|---------------------|----------|----------------|-----------------|
| (Y) | Q1 | .664 | 0.180 | Valid |
| | Q2 | .652 | 0.180 | Valid |
| | Q3 | .072 | 0.180 | Invalid |
| | Q4 | .516 | 0.180 | Valid |
| (X1) | Q1 | .664 | 0.180 | Valid |
| | Q2 | .713 | 0.180 | Valid |
| | Q3 | .839 | 0.180 | Valid |
| | Q4 | .647 | 0.180 | Valid |

| | | | | |
|------|----|------|-------|-------|
| (X2) | Q1 | .465 | 0.180 | Valid |
| | Q2 | .426 | 0.180 | Valid |
| | Q3 | .406 | 0.180 | Valid |
| | Q4 | .266 | 0.180 | Valid |
| (X3) | Q1 | .885 | 0.180 | Valid |
| | Q2 | .795 | 0.180 | Valid |
| | Q3 | .724 | 0.180 | Valid |
| | Q4 | .812 | 0.180 | Valid |

Meanwhile, the reliability test uses the one measurement only instead of re-measurement test because of times and expenses consideration. A construct or variable stated to be reliable if the Cronbach Alpha value > 0.60 (Ghozali, 2005).

Table 3. Reliability Test with Cronbach's Alpha Value

| No | Variable | Total Items | Cronbach' Alpha | Status |
|----|----------|-------------|-----------------|----------|
| 1 | (Y) | 4 | .785 | Reliable |
| 2 | (X1) | 4 | .854 | Reliable |
| 3 | (X2) | 4 | .591 | Reliable |
| 4 | (X3) | 4 | .912 | Reliable |

Based on the reliability test in the Table above, all the variables (Y, X₁, X₂, X₃, X₄) on its each questions' items are reliable.

Descriptive Variables

**Table 4. Frequency Distribution
Descriptive Statistics**

| | N | Minimum | Maximum | Mean | Std. Deviation |
|--------------------|----|---------|---------|---------|----------------|
| X1 | 52 | 11.00 | 20.00 | 16.3654 | 2.61241 |
| X2 | 52 | 10.00 | 18.00 | 14.2500 | 2.41624 |
| X3 | 52 | 12.00 | 20.00 | 17.9231 | 2.27386 |
| Y | 52 | 10.00 | 15.00 | 13.3846 | 1.52308 |
| Valid N (listwise) | 52 | | | | |

The Table shows that the variable X₁ with the highest value of the observation reached to 20, lowest value of 11 and an average reached to 16.36 with a standard deviation of 2.61. For the X₂, the highest value of reached to 18.10, lowest value of 10 and an average reached to 14.25 with a standard deviation of 2.41. The X₃ with the highest value of 20.12, the lowest value of 12 and an average reached to 17.92 with a standard deviation of 2.27. While, the variable Y with the highest value reached to 15.10, the lowest value of 10, and an average reached to 13.38 with a standard deviation of 1.52.

Classical Assumption Tests

Normality Test

Normality test aims to test whether the regression model of the dependent variable and independent variables both have a normal distribution or not. To test whether this study data were normally distributed or otherwise, it can be detected through analysis of the normality graph.

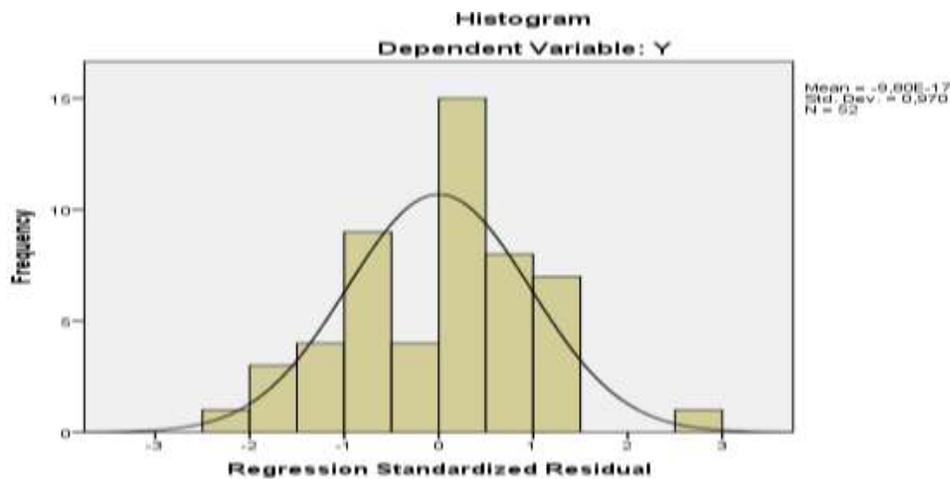


Figure 1. Data Normality Graph

Ghozali (2005) stated that if the data distribution is normal, then do not pass either left or right curve. Based on the Figure 1 above, the output can be seen that the data are normally distributed.

Multicollinearity Test

Multicollinearity is the presence of more than one definite linear relationship where one or more independent variables are correlated with other independent variables. Hair et al. (1998, p.193) stated that the existence of multicollinearity can be seen from the tolerance value or the value of Variance Inflation Factor (VIF).

Table 5. Multicollinearity Test

| Coefficients ^a | | Collinearity Statistics | |
|---------------------------|----|-------------------------|-------|
| | | Tolerance | VIF |
| 1 | X1 | .667 | 1.499 |
| | X2 | .801 | 1.248 |
| | X3 | .760 | 1.315 |

a. Dependent Variable: Y

From the Table above, it is seen that the value of Variance Inflation Factor (VIF) for the variables of X_1 , X_2 , dan X_3 are below 10 and tolerance value close to 0.1. This means there is no multicollinearity problem on the data of this study (Ghozali, 2005: 93).

Heteroscedasticity Test

According to Santoso (2001), heterokedastisitas appears when errors or residuals of the observed models do not have a constant variance of an observation to another observation. While Ghozali (2005), a good model of regression is homoscedasticity model or the heteroscedasticity does not occurred. To detect the presence or absence of heteroscedasticity can be done by the Scatterplot as stated in Figure 2 as follows:

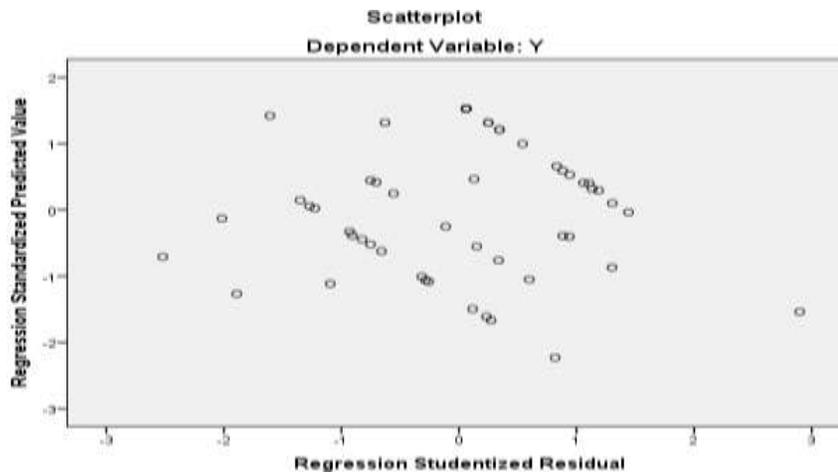


Figure 2. Scatterplot Graph

The conclusion is obtained by looking at the spread of dots randomly, does not form a specific pattern clearly, and spread both above and below the number 0 on the axis Y. Thus, it concluded that there is no heteroscedasticity in regression models.

DISCUSSION

Hypothesis Test

The test results stated that the public perception of the presence of Kuala Namu affects the social life of the surrounding people, shift the main work and economy of villages is acceptable. Meanwhile, the goodness of fit test is done to determine the feasibility of a regression model. Since the study consists of two variables, thus the feasibility can be seen from the value of Adjusted R Square as shows in below Table:

Table 6. Goodness of Fit Test
Model Summary^b

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate |
|-------|-------------------|----------|-------------------|----------------------------|
| 1 | .665 ^a | .442 | .407 | 1.17314 |

a. Predictors: (Constant), X3, X2, X1

b. Dependent Variable: Y

Adjusted R Square value as depicted in Table 6. is 0.407. It shows that 40.7% of the presence of Kuala Namu Airport has an impact on surrounding social life, shift main work and influence the economy of

villages partially and simultaneously while the remaining 59.3% is influenced by other variables that are not explained by the model of this research.

To test whether the parameters of Adjusted R^2 coefficient is significant or otherwise, then a statistical test of Fisher method (F Test) is done with a level of confidence of 95%. The testing criteria used if $F > F_{table}$ then H_0 is rejected, and if $F \leq F_{table}$ then H_0 is acceptable. Below is the F Test results:

**Table 7. F Test
ANOVA^a**

| Model | | Sum of Squares | df | Mean Square | F | Sig. |
|-------|------------|----------------|----|-------------|--------|-------------------|
| 1 | Regression | 52.247 | 3 | 17.416 | 12.655 | .000 ^b |
| | Residual | 66.060 | 48 | 1.376 | | |
| | Total | 118.308 | 51 | | | |

a. Dependent Variable: Y

b. Predictors: (Constant), X3, X2, X1

Table 4.45 shows that the value of F is 12 655 with a significance level of 0.000. While F_{table} at 95% confidence level ($\alpha = 0.05$) is 2.02. Therefore, $F > F_{table}$ ($12.655 > 2.02$) which indicates that the variables X_1 , X_2 , and X_3 partially and simultaneously affect the Y is accepted.

Partially, the community perception on the presence of Kuala Namu Airport (X_1) and economic impact on surrounding villages of Kuala Namu (X_3) have a significant impact to the shift of main job (Y), while the problem of social life variable (X_2) did not affect the Y. This is illustrated in the following Table 8:

**Table 8. t Test
Coefficients^a**

| Model | | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. |
|-------|------------|-----------------------------|------------|---------------------------|-------|------|
| | | B | Std. Error | Beta | | |
| 1 | (Constant) | 4.562 | 1.470 | | 3.103 | .003 |
| | X1 | .172 | .077 | .296 | 2.238 | .030 |
| | X2 | .107 | .076 | .170 | 1.412 | .164 |
| | X3 | .250 | .083 | .373 | 3.013 | .004 |

The statistical test results showed that t value of the perception of society on the presence of Kuala Namu Airport variable (X_1) is 2.238, while t_{table} at 95% confidence level is 1.955 ($2.238 > 1.955$). Thus H_0 is rejected. Likewise, the t value of economic impact variable of surrounding villages (X_3) is 3.013, while t_{table} at 95% confidence level is 1.955 ($3.013 > 1.955$), thus H_0 is rejected. While the t_{table} value for the problems of social life variable (X_2) at 95% confidence level is lower than the t value of 1.955, thus if $t < t_{table}$, then H_0 is rejected.

Analysis of the Impact of Kuala Namu Airport's Activities on the Regional Development in the Pantai Labu and Beringin sub- districts

The infrastructure of Kuala Namu Airport has a significant role in the development of the surrounding sub-districts. This includes transport, water and sanitation, electricity, irrigation, and telecommunications, which is a form of public facilities that have the network as the main physical features exist in the surrounding sub-districts. Various studies have been carried out to prove the strong relationship between the regional infrastructure development either in macro and micro contexts associated with an increase in per capita income of the community in sub-districts. An important role of the infrastructure development in a region mainly lies in its function as an input in the production process.

According to Zen (2001), the development is not a condition or situation that determined the possession of the local community. It is determined by the ability of what they can do with what they have to improve their quality of life as well as the quality of life of others. So development should be interpreted as a desire to obtain improvements as well as the ability to realize it. Miraza (2005) stated that the regional development is basically an increase in the value of the benefits to the community area of a particular region, able to accommodate more occupants with an average level of welfare of a better society, in addition to showing more facilities/infrastructure, goods or services available and community business activities increased, both in terms of the type, intensity, and quality service.

The purpose of regional development include Zen (2001):

1. The regional development is an effort to empower a community in the region to take advantage of available natural resources by using technologies that are relevant to the needs and aims to improve the quality of life.
2. Creating a community that can stand alone on its own efforts and realize that they can improve their life on their own efforts.
3. Creating a region that has awareness of it's political strength.

The construction of Kuala Namu Airport located around Pantai Labu and Beringin sub-districts which applied in a growing region is an attempt to modernize the regions that cause both positive and negative influences to the society, the readiness of the villages and sub-districts in the lack of human resources, the dependence of the means of production and funds, so that the dependence is more advantageous for other regional development. With the construction of the Airport then, transition and community occupational shift to the informal sector can not be inevitable. The absence of replacement agricultural land and residents who have been displaced and international development requiring thousands of acres of land causes of farming communities and farm workers are forced to be able to adapt.

CONCLUSION AND RECOMMENDATION

Conclusion

1. Simultaneously the presence of Kuala Namu Airport has an impact on the social life of the surrounding residents, shift main work and economy.
2. Partially, the community appreciated the presence of Kuala Namu Airport.
3. Partially, Kuala Namu Airport has no effect on the social life of the surrounding residents.
4. Partially, Kuala Namu Airport has an impact on the economy of surrounding villages.

RECOMMENDATION

1. In the future, the management of Kuala Namu Airport need to improve the participation in community activities
2. The impact on the presence of Kuala Namu Airport are to the economic activities of society, growing infrastructure, education.
3. It is necessary to study on Kuala Namu related to general spatial (land and sea).
4. The social program that has done by the Kuala Namu Airport's management to the community are the construction villages' halls, community empowerment, help in marketing of agricultural products, help the SMEs, and distribution of free food to the public.
5. The negative impact of the presence of Kuala Namu Airport are the changes in the work of most of the farming community to the perpetrators of the service sector, the agricultural area is reduced and an increase in the volume of waste.
6. The participation of Kuala Namu Airport to the society to be improved so that socially beneficial.
7. It is expected that the role of the community to take advantage of the presence of Kuala Namu Airport to increase the incomes in the future.

Reference

- Airport Council International (2004). The social and economic impact of airports in Europe. www.aci-europe.org. Accessed on 12 January 2014.
- Airports Council International – North America (2012). *The Economic Impact of Commercial Airports in 2010*. CDM Smith.
- Anonim. (2002). TAP MPR No. II tentang *Program Pembangunan Nasional* (The National Development Program).
- Arikunto, S. (1990). *Manajemen Penelitian (Management Research)*. Rineka Cipta, Jakarta.
- Bhandari, D. (2013). Economic Impacts of Albuquerque Airport System on the New Mexico Economy. *Working Paper*. Bureau of Business and Economic Research, MSC063510, 1 University of New Mexico.
- Branch, C. M. (1995). *Comprehensive City Planning: Introduction & Explanation*. American Planning Association. Chicago. USA.
- Catanese, A.J. (1979). *Introduction to Urban Planning*. McGraw-Hill, Inc, USA.
- Choguill, M.B. (2008). *A Ladder of Community Participation for Underdeveloped Countries*, Habitat International.
- Conexus Indiana (2012). *Indiana Airports' Economic Impact Study*. Aviation Association of Indiana.
- Crowley, R.W. (1973). A Case Study of The Effects of An Airport on Land Values. *Journal of Transport Economic and Policy*, 144-152.
- Department of Economic and Community Development Economic Impact Analysis (2005). *The Contribution Of Bradley International Airport To Connecticut's Economy*. Accessed on 12 January 2014.
- Dwidjowijoto, (2000). *Strategi Pemberdayaan Masyarakat (Community Empowerment Strategy)*. Humaniora Utama Press. Bandung.
- Dwiyanto, (2004). *Reformasi Birokrasi Publik di Indonesia. Bunga Rampai Pembangunan Kota Indonesia dalam abad 21. Konsep dan Pendekatan Pembangunan Perkotaan di Indonesia (Public Bureaucracy Reform in Indonesia in 21th Century: Concept and Approach of Development of Cities in Indonesia)*. Lembaga Penerbit Fakultas Ekonomi Universitas Indonesia, URDI-YSS-Jakarta.
- Fetterman, D., & Wandersman, A. (2007). Empowerment Evaluation: Yesterday, Today, and Tomorrow, *American Journal of Evaluation*.

- Ghozali, I. (2005). *Aplikasi Analisis Multivariate Dengan Program SPSS (Application of Multivariate Analysis with SPSS Program)*, Badan Penerbit Universitas Diponegoro. Semarang.
- Gilarso, T. (2005). *Pengantar Ilmu Ekonomi Makro (Introduction of Macro Economics)*, Kanisius, Yogyakarta.
- Guijt, I. (2000). *Methodological Issues in Participation Monitoring and Evaluation, Learning From Change Issues and Experiences in Participatory Monitoring and Evaluation*, Canada: ITDG Publishing.
- Irma, P. (2008). *Studi Partisipasi Masyarakat dalam perencanaan pembangunan di Kecamatan Cibadak Kabupaten Sukabumi (Community Participation in Development Planning in Cibadak Sub-district of Sukabumi District)*.
- Kodoatie, J. R. (1995). *Analisis Ekonomi Teknik (Analysis of Economics Technique)*. Penerbit Andi Offset. Yogyakarta.
- Mappadjantji (2005). *Kemandirian Lokal. Konsepsi Pembangunan, Organisasi dan pendidikan dari persepsi sains baru (Local Independence: Concept of Development, Organization, Education from New Science Perspectives)*, PT. Gramedia Pustaka Utama, Jakarta.
- Mariana, I. (2001). Pengaruh Pembangunan Infrastruktur Terhadap Perkembangan Kegiatan Ekonomi Masyarakat di Kawasan Pinggiran Bandara Kuala Namu (The Effect of Infrastructure Development on Progress of Economy Activities). *Tesis Pascasarjana Universitas Sumatera Utara*.
- Marwoto (2005). Evaluasi Atas Kebijakan Program Beras Bagi Keluarga Miskin Dalam Rangka Peningkatan Kesejahteraan Keluarga di Kabupaten Gunungkidul (An Evaluation of Rice Program Policy for Poor People of Increasing the Family Prosperity in Gunungkidul District), Universitas Gadjah Mada.
- Midgley in Moeljarto (1995). *Politik Pembangunan Sebuah Analisis Konsep, Arah dan Strategi (Development Politics: A Concept Analysis, Direction and Strategy)*, PT. Tiara Wacana, Yogyakarta.
- Miraza, B.H. (2005). *Perencanaan dan Pengembangan Wilayah (Planning and Regional Development)*. ISEI, Bandung.
- Mubyarto (1997). *Politik Pembangunan: Sebuah Analisis Konsep, Arah dan Strategi (Development of Politics: A Concept Analysis, Direction and Strategy)*, Yogyakarta: PT. Tiara Wacana.
- Ninda, R., & Rudy, L. (2012). Pengaruh Kebisingan Dari Aktifitas Bandara Internasional Juanda (The Effect of Noise on the Activities in Juanda International Airport). *Jurnal Ilmiah Teknik Lingkungan*, 4(1).
- Nurgiyanto, B. G., & Marzuki (2000). *Statistik Terapan Untuk Penelitian Ilmu-ilmu Sosial (Applied Statistics for Social Sciences)*. Gadjah Mada University Press, Yogyakarta.
- Parakesit. D., A. T. Mulyono., & A. Wismadi. (1998). *Transportation Project Appraisal. Ways to Move, Faculty of Engineering and Researchers Inter – University Gadjah Mada University and Indonesia Islamic University*. Yogyakarta.
- Parson, W, (2005). *Public Policy: Introduction of Theory and Practical Analysis*, Kencana, Jakarta.
- Riyadi & Bratakusumah, D. (2004). *Perencanaan Pembangunan Daerah: Strategi Menggali Potensi Dalam Mewujudkan Otonomi Daerah (Regional Development Planning: Strategies in Exploring Potential of Regional Autonomy)*. Gramedia Pustaka Utama. Jakarta.
- Salim H. A. Abbas. (1997). *Manajemen Transportasi (Management Transportation)*. PT. Raja Grafindo Persada. Jakarta.
- Sandy, I. Made. (1982). *Pembangunan Wilayah (Regional Development)*. Mimeograft. Bogor.
- Sekaran, U. (2003). *Research Methods for Business: A Skill Building Approach*. Sixth Edition, John Willey & Sons, Inc., New York.
- Soekartawi. (1994). *Perencanaan Pembangunan (Development Planning)*. Penerbit Rajawali Press. Jakarta.
- Soemardjan S. et al. (1994). *Kemiskinan Struktural (Poverty Structures)*, PT. Sanghala Pulsar, Jakarta.
- Sugiyono, (2008). *Metode Penelitian Pendidikan: Pendekatan Kuantitatif, Kualitatif, dan R & D (Education Research Method: Quantitative, Qualitative and R&D Approaches)*. Penerbit Alfabeta, Bandung.

- Suharto. (2005). *Pemberdayaan Masyarakat: Konsep Pembangunan yang Berakar Pada Masyarakat (Community Empowerment: Development Concept on Community)*, Surabaya.
- Sukirno, S. (2000). *Makro Ekonomi Modern (Modern Macro Economics)*. Buku I. PT. Raja Grafindo Persada Jakarta.
- Todaro (2004). *Pembangunan Otonomi di Dunia Ketiga (Autonomy Development in the Third World)*, Erlangga, Jakarta.
- Umar, H. (2008). *Metode Penelitian untuk Skripsi dan Tesis Bisnis (Research Method for Business Thesis)*, PT. RajaGrafindo Perkasa, Jakarta.
- Wibawa, S. (1994). *Kebijakan Publik (Public Policy)*, Intermedia, Jakarta.