

The Influence of Infrastructure on Village Community Income (Ujung Rambung, Kecamatan Pantai Cermin, Serdang Bedagai Regency)

Ilda Agus Elvira¹, Lidia Yunita²

^{1,2}Management Study Program, Sekolah Tinggi Ilmu Ekonomi LMII, Indonesia

Article Info

Article history:

Received, November 19, 2020

Revised, Desember 20, 2020

Accepted, January 10, 2021

Keywords:

Influence,
Infrastructure,
Income.

ABSTRACT

Research is carried out in the village of Ujung Rambung District of Coast Mirror Regency of Serdang Bedagai, research is aimed to determine the effect of the construction of infrastructure roads, infrastructure drainage and infrastructure TPT against income communities village End Rambung District of Coast Mirror District Serdang Bedagai. Type of research this is quantitative with approach to research descriptive and associative researchers using SPSS 16 for test research. The samples in the study is that 100 respondents Society Village Edge Rambung District of Coast Mirror Regency of Serdang Bedagai the results obtained by using the formula solvin. Sources of research data using primary data and secondary data, data collection techniques used interviews, questionnaires and literature study. Mechanical analysis of the data using test validity, test reliability, test the assumptions of classical use test for normality, test of heteroscedasticity, a test multicollinearity, test linear multiple and test hypotheses are partial and simultaneous results of the study provide answers to the hypothesis, that ariable construction of infrastructure roads, Infrastructure Drainage and Infrastructure TPT affect income communities village of is 0828 or 82.8% and the remaining 17.2% can be explained by variables other.

This is an open access article under the [CC BY-SA](https://creativecommons.org/licenses/by-sa/4.0/) license.



Corresponding Author:

Ilda Agus Elvira,
Management Study Program,
Sekolah Tinggi Ilmu Ekonomi LMII,
Jl. Kolam, Kenangan Baru, Kec. Percut Sei Tuan, Kabupaten Deli Serdang, Sumatera Utara 20371.
Email: elvira.agus@gmail.com

1. INTRODUCTION

The country of Indonesia consists of 34 provinces with different backgrounds between regions. This difference is in the form of differences in natural, social, economic, and natural resource characteristics, which are distributed differently in each province. This difference becomes an obstacle in equitable distribution of economic development due to the concentration of an economic activity which has an impact on increasing economic growth in several provinces or areas that have abundant natural resources.

Economy is the most important thing in nation building. The role of the economy as the heart of the government which regulates all matters relating to state policy. A country that has a good economic level has a positive impact on the quality and income of its people, as well as the welfare of all its citizens. The development of the Indonesian economy has experienced various obstacles and challenges. Since 1997, the monetary crisis that hit, has had a direct negative impact on the

community, so that domestic needs are insufficient and must depend on other countries to provide for the people's needs. Likewise, the high price of food in the country has caused anxiety and panic for almost all people, the policy makers are trying their best to restore the economy with various policies and implementations made. To measure the economic success of a region, one of which can be seen from the economic growth rate in that area. Economic growth can be measured by the increase in the amount of national income. National income is the value of goods and services produced by an economy (country) within one year.

Nowadays development has become a matter of great concern to the government, especially development in rural areas. Administratively, the village is the smallest part of the country of Indonesia. Sutarjo Kartohadikusumo in Annawang (2019) defines a village as a residence for a group of people who have a legal entity which has the right to run their own household and a village is a government under the sub-district. Meanwhile, according to R. Bintarto in Annawang (2019) explains that the village is a geographical form of various aspects such as physiographical, economic, social, political, cultural from the environment and reciprocal influence with other environments.

Development in rural areas is important because the village itself has various problems related to community needs such as health, economy, education and adequate environment. The village has wealth in the form of resources including Human Resources and Natural Resources. To meet the needs of the community, the potential for existing wealth needs to be utilized as well as possible so that the hope can solve the problems at hand.

It cannot be denied that the community's own hope is to improve the quality of life regardless of these problems one by one so that they can have a much better life with more advanced village conditions. Health, economy, education and even adequate environment are the basic needs of society. In meeting these needs, of course, requires infrastructure that can support the fulfillment of community needs by building infrastructure.

According to Neil S. Grigg in Annawang (2019) explains that infrastructure is a system that is physical and provides various facilities such as transportation, irrigation, drainage, buildings and even public facilities needed by the community to meet all forms of basic human needs which include social needs. economic too. Meanwhile, according to Kodoatie in Annawang (2019) infrastructure is a physical facility which is needed by the public in carrying out government functions, such as in terms of electricity, transportation, water supply, waste disposal, and other services in order to facilitate rather than socio-economic goals. The need for infrastructure development in the village is aimed at making it easier for the community to fulfill all their needs, such as road construction that will become people's access to travel.

The purpose of development is basically to create progress in the economic sector in a sustainable manner, without neglecting equal rights and upholding the principles of justice for the Indonesian people as a whole. Some of the important components of the development aspect include: (1) economic development, focusing on efforts to increase people's income in various potential economic activities, increase agricultural and non-agricultural productivity, improve efficiency and increase industrial growth and public service sectors widely. (2) environmental development, aims to maintain 2 ecological balance to create a natural environment that is friendly and friendly, (3) institutional development, namely encouraging community participation in development activities, improving administrative work procedures, decentralization and resource mobilization, strengthening institutions, (4) physical and social development, including improving and enhancing the quality of education, as well as developing the skills of the workforce and improving the quality of service facilities and infrastructure for physical and social development, including repairing and carrying out reduce the workforce and improve the quality of service facilities and infrastructure.

Based on the history of the journey of economic development in Indonesia, infrastructure development is the most vital sector in increasing economic growth and also income in Indonesia. Infrastructure development is one of the work programs currently being implemented in Indonesia. Infrastructure development is focused on development in underdeveloped villages and areas outside the island of Java in order to create a fair distribution.

One of the developments currently being carried out by the government includes the construction of infrastructure in Ujung Rambung Village, Pantai Cermin District, Serdang Bedagai

Regency. The village is located in the PTPN IV Adolina oil palm plantation. The area of this village is 3.28 km², consisting of IX hamlets with a population of 3,213 people with 499 families. Ujung Rambung village is one of the fostered villages that are considered to have quite a good income from the agricultural sector, this is because most of the Ujung Rambung area is rice fields, not only that the supporting aspects of Ujung Rambung's economy are also supported by some people who work as teachers, traders and entrepreneur. Thus, Ujung Rambung village really needs facilities and infrastructure that are considered capable of helping the community in facilitating all activities they want to carry out, for example, such as roads, drainage and retaining walls (TPT). As a fostered village that will later be used as an example for other villages in Medium Bedagai Regency, Ujung Rambung village really needs these facilities.

Infrastructure development in the village of Ujung Rambung is one of the most appropriate efforts to help meet the complex demand and supply, needs and interests of the community. Infrastructure development in Ujung Rambung is a means of encouraging the growth of existing economic sectors. Infrastructure development in Ujung Rambung village is a means to increase income from the community in Ujung Rambung village with a level of equity that is cultivated through infrastructure development. This growth rate of people's income can then be seen from the regular gross regional income statistics or also known as GRDP (Gross Regional Domestic Product).

Serdang Bedagai's PDRB based on current prices in 2019 reached 27.95 trillion Rupiah, while the GRDP at constant 2010 prices was 19.39 trillion Rupiah. The past five years have shown positive growth, from 2015 to 2019 the growth has accelerated. When compared between districts in North Sumatra, Serdang Bedagai's GRDP is in the eighth rank after Labuhan Batu Regency. The role of Serdang Bedagai in the formation of the GRDP of North Sumatra Province in 2019 is 3.46 percent. The largest contribution in 2019 was generated by the Agriculture, Forestry and Fisheries business fields, followed by the Processing and Wholesale and Retail Industry, Car and Motorcycle Repair and construction. Meanwhile, the roles of other business fields are below 5 (five) percent respectively. The contribution of the Water Supply, Waste Management, Waste and Recycling business fields as well as the Provision of Electricity and Gas to GRDP is a small contribution, respectively 0.01 percent and 0.08 percent. The agricultural, forestry and fisheries business fields provided the largest contribution in 2019, amounting to 38.10 percent, with details of the sub-categories of Agriculture, Animal Husbandry, Hunting and agricultural services of 31.59 percent, Fisheries 6.33 percent and Forestry and Logging 0.18 percent.

Serdang Bedagai's economy in 2019 experienced an acceleration compared to the previous year, Serdang Bedagai's GDP growth rate in 2019 reached 5.28 percent, while in 2018 it was 5.17 percent. In the previous year, Serdang Bedagai's economic growth showed a positive growth acceleration. All business fields recorded positive growth. The business field with the highest economic growth was 7.29 percent, followed by the food and drink accommodation provider business field with a growth of 7.22 percent and the Government Administration, Defense and Compulsory Social Security business fields at 7.03 percent. Meanwhile, the 3 (three) business fields with the lowest growth were Corporate Services at 3.77 percent, Processing Industry by 3.64 percent, Financial Services and Insurance business fields at 2.84 percent.

If you look at the progress that has occurred, there is a good percentage but not the existing infrastructure in the villages in Serdang Bedagai District, still a lot that has to be repaired and organized by the district government. Like Ujung Rambung Village, here I am a resident who comes from that village and as a user of public facilities provided by the government is considered not feasible, still many have to be reorganized, even though as explained above that Ujung Rambung village is one of the villages. which has good agricultural results, therefore in this study I as the author would like to describe the infrastructure provided by the government in the village, such as road infrastructure, drainage infrastructure, and soil retaining wall infrastructure (TPT). These three infrastructures are considered very important in agriculture in the end of the rambung village, because these three infrastructures are means of supporting the community in increasing the productivity of community agricultural products. Road infrastructure is a means of smooth traffic on land. Smooth traffic will greatly support the economic development of a region. Road infrastructure is one of the means to facilitate the mobility of the community in general and economic activities such as in the production and distribution of harvest and consumption goods. The following is village data

regarding road repairs carried out by Ujung Rambung village officials for the 2017 - 2019 period, namely: in 2017 asphalt was carried out covering an area of 1,010 m and it used funds originating from the APBD, which was carried out in hamlet IV leading to hamlet V. Then in 2018 the road paving of 600 m, and it used funds from the village, which was carried out in VII hamlet. Then in 2019 asphalt covering an area of 600 m with funds originating from the village which was carried out in hamlet V to hamlet VII. From these data we can see that the paving is still very uneven when compared to the number of hamlets in Ujung Rambung village, namely IX hamlets.

Not only road infrastructure, as other supports are drainage infrastructure and retaining walls (TPT), these two infrastructures have a good role in the agricultural environment because, drainage is an arch or water channel on the surface or underground, both naturally formed and man-made. . In Indonesian, drainage refers to ditches at ground level and underground culverts. Drainage plays an important role in regulating water supply for flood prevention and removing excess water from one land area to another. The following is an explanation of the drainage construction carried out by the village apparatus of Ujung Rambung. In 2018 drainage was made in hamlet V along 370 m, then in 2019 drainage was carried out in hamlet IX along 200 m.

Other supporting infrastructure that is related to the two previous infrastructures is a retaining wall (TPT), a retaining wall (TPT) is a building that functions to stabilize certain soil conditions which are generally installed on unbalanced cliff areas or as a land barrier so that it is not eroded. by water or landslides. In its application, this retaining wall is used as a retaining wall for large trenches of water discharge from the rice fields. TPT is applied in order to be able to withstand the walls of the trenches so that they are not eroded and burst, if there is water delivery from the river. The following is an explanation of the construction of a retaining wall (TPT) carried out in Ujung Rambung Village, where in 2017 the construction was carried out on an area of 900 m with village funds and carried out in IX and VIII hamlets, in 2018 the construction was carried out on an area of 600 m using funds villages as well and carried out in hamlets IV and VII. And in 2019, construction of an area of 280 m with village funds was carried out in hamlet VII.

Based on the problems discussed above, the authors believe that infrastructure has a big impact and influence on the income of the community in Ujung Rambung village. Kec. Mirror Beach. Regency. Serdang Bedagai. Therefore, researchers are interested in conducting research with the title "The Influence of Infrastructure on Village Community Income (Ujung Rambung District of Pantai Cermin, Kaaba Serdang Bedagai Regency).

2. RESEARCH METHOD

2.1 Type of Research

The type of research that is used is the study associative with approach quantitative. According Sugiono (2018), Methods Quantitative is a method of using the tool of analysis is quantitative, in which the results of the analysis disajika in the form of figures are then described and interpreted in a description. Type of research this is a study associative, according Sugiono (2018), the study associative is research that aims to determine the effect or also cause and consequence between two variables or more.

2.2 P opulation and Samples

2.2.1. Population

According Sugiono (2018), the population is the area generalization which consists on the object and the subject that has the quality and characteristics of particular were determined by researchers to learn and then drawn conclusions. So the population is not only people, but also objects and other natural objects. The population is also not just the number that exist at the object / subject of the study, but includes the entire characteristics / properties that are owned by the subject or object it. Then from the explanation that, the authors define the population in the study of this is that is located in the village of Ujung Rambung. According to the data the village of Ujung Rambung number of residents in the village of Ujung Rambung amounted to 3,213 inhabitants.

2.2.2. Sample

Retrieval of samples in research is using simple random sampling is said to be simple (simple) for taking members of the sample of the population was taken in a random without regard

tiers that exist within the population , according to Sugiono (2018). In this study, to determine the minimum sample size, the Slovin formula was used to measure the population, as follows:

$$n = \frac{N}{1 + N (e)^2}$$

Information:

n = size or number of samples.

N = total population.

e = The tolerable percentage of leeway due to sampling errors (not careful) 10%.

In this study, using a sample percent leeway is not careful because of the error in sampling which can still be allowed as much as 10%. Of Data Based on the data the village of Ujung Rambung The study is the number of the population that used as many as 3,213 souls, then the number of samples that can be known through the calculations are as follows:

3. RESULTS AND DISCUSSION

3.1. Results

Data Description

In the following discussion, a description of the data that has been obtained in the study is presented. The research data were obtained directly from respondents, namely by means of a research questionnaire submitting a statement that had been prepared by the researcher. Respondents in this study amounted to 100 people. This study provides information about the general condition of respondents based on age, gender, occupation and recent education and community income.

Grouping of respondents based on age categories is divided into four parts, namely 20-29 years, 30-39 years, 40-49 years and ≥ 50 years. Based on the data of respondents according to age, it can be seen that of the 100 respondents, the respondents with the highest percentage value were > 50 years old, namely 31 people or with a percentage value of 31% and the lowest percentage value was 30-30 years old, namely as many as 22 people or 22% .. There are two groups of respondents based on gender: male and female. shows that the number of respondents male gender is 53 with a presentation rate of 53% and female is 47 people with a presentation rate of 47%. The grouping of respondents based on occupation is divided into six parts, namely: civil servants, farmers, entrepreneurs, self-employed, laborers, teachers and housewives (IRT). Of the 100 respondents who were research subjects, the more dominant occupations were farmers, namely 38 people or 38%, and civil servants with a low number of 3 people or 3%. Of the 100 research respondents, the respondent's data based on the latest education had the largest number in high school education, namely 65 people or 65%. And the lowest was at the undergraduate level, which was 4 people or 4%. Of the 100 research respondents, the community's income with the highest amount was Rp. 1,100,000 - Rp. 2,000,000, namely as many as 53 people or 53%. And at least the income of IDR 500,000 - IDR 1,000,000 is 4 people or 4%.

Data Analysis Techniques

a. Normality Test

To be able to determine whether there are symptoms of normality or not , the Kolmogorov-Smirnov Test method is used . The normality test criteria , namely : significance value (Asym Sig 2 tailed) > 0.05 , then the data is normally distributed.

Table 1. Normality Test Results

One-Sample Kolmogorov-Smirnov Test		Unstandardized Residual
N		100
Normal Parameters ^a	Mean	.0000000
	Std. Deviation	1.00570704
Most Extreme Differences	Absolute	.098
	Positive	.097
	Negative	-.098
Kolmogorov-Smirnov Z		.977
Asymp. Sig. (2-tailed)		.296

Based on table results of the test for normality shows that the value Kolmogorov- Smirnov Z amounted to 0.977 and the value of significance at 0.296. Because the significant value is > 0.05 , namely 0.296, the data is normally distributed and the normality assumption is fulfilled.

b. Heteroscedasticity Test

The method used to determine the symptoms of heteroscedasticity is the Glejser method, with the following criteria: significance of the residual value > 0.05 , it can be concluded that there are no symptoms of heteroscedasticity.

Table 2. Heteroscedasticity Test Results

Model		Coefficients ^a				
		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	.473	1.717		.275	.784
	Infrastruktur Jalan	-.014	.031	-.046	-.430	.668
	Infrastruktur Drainase	.032	.027	.123	1.153	.252
	Infrastruktur TPT	-.012	.032	-.041	-.386	.701

a. Dependent Variable: Abs_Res

In the table above, it can be seen that the significance of the residual value for road infrastructure (X1) is 0.668, the significance value of the residual value for drainage infrastructure (X2) is 0.252, and the significance of the residual value for TPT (X3) is 0.701. If we look at the results of the table above, it shows that the significance of the residual value of the three variables is > 0.05 , so we can conclude that there is no symptom of heteroscedasticity.

c. Multicollinearity Test

Test multikolinieritas means between variables independently are contained in the model regression has a relationship linear perfect or close to perfect (coefficient of correlation is high or even number). K riteria testing multikolinieritas, are as follows :

a) When the value of Tolerance > 0.1 and the value of VIF (Variance Inflation Factors) < 10 , can be concluded that not happen symptom of multicollinearity between variables independent.

b) If the Tolerance value < 0.1 and the VIF (Variance Inflation Factors) value > 10 , it can be concluded that there are symptoms of multicollinearity between the independent variables .

Data obtained with see table 4.8, to thus be obtained pernyataan as follows :

X1 = the value of Tolerance = $0.872 > 0.1$ and the value of VIF = $1,147 < 10$ So may disimpulkan that does not happen symptom of multicollinearity between the variables of the independent.

X2 = the value of Tolerance = $0.899 > 0.1$ and the value of VIF = $1,112 < 10$ So may disimpulkan that does not happen symptom of multicollinearity between the variables of the independent.

X3 = the value of Tolerance = $0.888 > 0.1$ and the value of VIF = $1,126 < 10$ So may disimpulkan that does not happen symptom of multicollinearity between the variables of the independent.

So it can be concluded that the regression model of the effect of infrastructure on rural community income does not have multicollinearity symptoms.

3.2 Discussion

Test t was conducted to determine the effect is partial of each respective variable independent namely: infrastructure road (X1), infrastructure drainage (X2) and infrastructure walls retaining land (TPT) (X3) against income communities village (Y). The following are the criteria for the t test, or partial hypothesis, namely:

1. If the significant value t count < 0.05 , and t count $> t$ table then H_a is accepted (H_o is rejected), so there is an influence between variable X and variable Y.

2. If the value of significant t count > 0.05 , and t count $< t$ table then the H_0 diterima (H_a rejected), so it is not no influence between variable X to variable Y.
3. In the study's calculation of R^2 to measure how far the ability of variable independent in explaining variable dependent. With the provision if the coefficient of determination (R^2) increasingly large (approaching one) showing increasingly good ability variable X describes the variable Y where $0 < R^2 < 1$. Conversely if R^2 is getting small (approaching zero), then it will be said that the influence of variable -free (X) is small against variable dependent (Y). Based on the value of R Square that resulted in research this is 0.828 means that 82.8% means that the variable Infrastructure road (X1), the variable infrastructure drainage (X2) and infrastructure walls retaining land (TPT) (X3) can be explained by shared - at variable income communities village (Y). While the rest ($100\% - 82.8\% = 17.8\%$) is explained by other variables which are not used in this study. Then $0 < 0.828 < 1$ indicates that the linkage of three variables free (X) with a variable (Y) is very strong.

4. CONCLUSION

From the primary data obtained from distributing questionnaires, validity testing is carried out to measure the validity of a questionnaire. And the reliability test was carried out to find out that the respondent's answer to the statement was consistent from time to time. The results of the validity and reliability tests show that all statements in each variable are valid and reliable. In the classical assumption test which includes normality test, heteroscedasticity test and multicollinearity test that the regression model has a normal distribution, heteroscedasticity does not occur and there is no correlation between independent variables. Based on the results of the multiple regression analysis that has been carried out, conclusions can be drawn based on the results of the multiple linear regression analysis that has been carried out in this study. The results of the study of multiple linear regression analysis, the value of a (constant) 5.420 means that if there are no road infrastructure variables X1, drainage infrastructure X2, and Retaining Wall (X3) infrastructure or equal to zero, the village community income will increase by 5,420. From the coefficient value (b1) 0.116, this means that every time there is an increase in road infrastructure (X1), the income of the village community also increases. From the coefficient (b2) 0.051, this means that every time there is an increase in drainage infrastructure (X2), the income of the village community will also increase. Meanwhile, the TPT infrastructure (X3) shows that the coefficient value (b3) is 1,067, this means that every time the TPT infrastructure increases, the people's income also increases.

REFERENCES

1. A.A Ngurah Dianta Esa Negara, Zainul Arifin, Inggang Perwangsa Nuralam. 2018. "Pengaruh Kualitas Produk Dan Brand Image Terhadap Minat Beli (survei Pada Pembeli di Gerai Starbuck di Kota Surabaya)", *Jurnal Administrasi Bisnis (JAB)*, Vol. 61, No. 2: 202.
2. Arief Adi Satria. 2017. "Pengaruh Harga, Promosi, Dan Kualitas Produk Terhadap Minat Beli Konsumen Pada Perusahaan A-36", *Jurnal Manajemen dan Start-Up Bisnis*, Vol. 2, No. 1: 45-53.
3. Asep Maulana. 2019. "Pengaruh Merek dan Kemasan Terhadap Keputusan Pembelian Produk The Pucuk Harum Pada Siswa-Siswi SMKN 1 Jatisari", *Value Journal of Management and Business*, Vol. 4, No. 1.
4. Asriah Immawati S. 2018. "Pengaruh Harga, Produk, Distribusi dan Promosi Terhadap Sikap Konsumen dan Minat Beli Pengguna Mobil Honda Brio di Jabodetabel", *Jurnal Dinamika UMT*, Vol. 3, No. 1, Tahun 2018.
5. Astari Armayani, I Made Jatra. 2019. "Peran Brand Image Memediasi Promosi Dn Harga Terhadap Keputusan Pembelian Smartphone Samsung di Kota Denpasar", *E-Journal Manajemen*, Vol. 8, No. 8: 5222-5239.
6. Aulia Rahman Rambe. 2019. "Pengaruh Citra Merek, Harga, dan Lokasi Terhadap Keputusan Pembelian Konsumen Pada Kedai Kopi Ulee Kareng dan Gayo Dr. Mansyur Medan". Skripsi. Fakultas Ekonomi Dan Bisnis, Universitas Sumatera Utara.

-
7. Budi D. Soebakir, Bode Lumanauw, Ferdy Roring. 2018. "Pengaruh Brand, Harga dan Kualitas Pelayanan Terhadap Keputusan Pelanggan Membeli di Kedai Kopi Gudang Imaji Manado", *Jurnal EMBA*, Vo. 6, No. 4: 3842-3852.
 8. Elina Monica. 2018. "Pengaruh Harga, Lokasi, Kualitas Bangunan dan Promosi Terhadap Minat Beli Perumahan Taman Safira Bondowoso", *Internasional Journal of Social Science and Business*, Vol. 2, No. 3: 141-149.
 9. Febsri Susanti, Zaky Zakaria. 2019. "Pengaruh Lokasi Toko dan Citra Merek Terhadap Minat Beli Konsumen Pada Ayam Gepuk Pak Gembus", *Jurnal Pundi*, Vol. 03, No.02, Juli 2019.
 10. Fikasari. 2018. "Analisis Pengaruh Kualitas Produk, Harga, dan Motivasi Konsumen Terhadap Minat Beli Sepeda Motor Honda (Studi Pada Konsumen CV. Surya Motor Sragen)". Skripsi. Fakultas Ekonomi dan Bisnis Islam, Institut Agama Islam Negeri Surakarta.
 11. Firmansyah, M Anang. 2019. *Pemasaran Produk dan Merek (Planning & Strategy)*. Pasuruan: CV. Penerbit Qiara Media.