

Socio-Economic Conditions of Society Affected by The Development of Overpass and Double-Track Railway in The Village of Gambarsari, Kebasen District, Banyumas District

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Abstract

The construction of road infrastructure in an area can displace residents who have previously inhabited the area. Likewise, the construction of double tracks and overpasses in Gambarsari Village, Kebasen District, Banyumas Regency. However, with the eviction, the Government takes action. The Government provided compensation that did not harm the community.

This study aims to analyze the socio-economic conditions of the respondents who were evicted from the perspective of land area, living conditions and housing facilities, with 28 households evicted. The analysis method used a paired two-sample test by first testing the conditions for the normality of the data.

The study results were that the average land area had decreased. However, as much as 57.14 percent of the respondents had an increase in land area. Respondent's living conditions are all getting better with permanent buildings and there is also an increase in the score of living conditions for 67.86 percent of respondents. The condition of facilities where the respondents lived was increase in 25 percent of the respondents. The condition of the facilities includes from the good category to the complete category.

Keywords

Socio-Economic Conditions; Double Track and Train Overpass; Land Value; Residence; Housing Facilities

INTRODUCTION

The Government is trying to build an infrastructure network, one of which is the rail infrastructure. It is realized that the better of transportation will support the mobility of people and goods. With the increasing population, the needs for human and goods transportation to increase, especially when faced with limited resources, not all residents can fulfill their transportation functions, and their own regions can produce not all necessities. The availability of adequate and appropriate transportation facilities will certainly improve welfare.

The Ministry of Transportation has built facilities and infrastructure in 10 new airports, rehabilitated 65 terminals, built 21 ferry ports, 104 non-commercial port facilities, and constructed 45 railway operational stations/buildings.

Trains are one of the most popular of transportation due to the load capacity of both passengers and many goods. Besides that,

the travel time is fast and relatively precise. The growth of passenger and freight transport on trains (Table 1) despite fluctuating but the average growth rate is positive.

The positive trend of growth in the number of passengers and goods for rail transport must be supported by increasing railway facilities and infrastructure, including the construction of the double track and overpass lines. During 2015 - 2019 the growth rate of the construction of new railway lines on the islands of Sumatra and Java. in the form of multiple tracks and the average reactivation reached 86.17 percent, with an average of 48,351.8 km of track length (Table 2).

The construction of the double track and the Gambarsari overpass began to be socialized in 2017. This line includes in Operation Area V, connecting Purwokerto and Kroya with a line length of 27,168 Km.

Rianto (2011) states that in the development of infrastructure, land acquisition activities are inseparable. Land acquisition will

have a social and economic impact on the affected communities. Changes in the community's socio-economic conditions that occur can lead to better conditions or even vice versa. It is based on each individual's ability to manage assets of compensation for land acquisition and the ability to adjust to a new environment. Communities affected by land acquisition and moving to areas far from their previous areas need to adjust to the new area.

In the initial phase of the railway overpass and double-track construction project in Gambarsari Village, land acquisition and residences for residents whose land has been affected by the railroad development. However, the land acquisition received compensation according to the agreement between the railroad and the residents. On the other hand, it also impacted socio-economic conditions, especially the residents of the surrounding community.

Dewitasari (2015) in the construction of the Surabaya - Mojokerto toll road in Wringinom Subdistrict, Gresik Regency, also impacts the socio-economic conditions of the community as the shift in livelihoods from farmers to entrepreneurs, distance relationships between affected residents, and increased family needs. On the other hand, according to Kayupa (2015), the construction of a hydroelectric power plant in Suluwana Village, North Pamona District, Poso Regency positively impacts employment, increasing income, and education level and health of the surrounding community.

This study analyzes how the construction of the railway overpass and double track in Gambarsari Village affects the affected residents, seen from their socio-economic conditions. Socio-economic conditions analyzed include changes in fixed assets, namely land area, residence and residential facilities owned by affected residents.

RESEARCH METHODS

This research combines quantitative and qualitative research forms (Creswell, 2017: 5). The concurrent triangulation combination research method is through collecting data at one time (concurrent) in one stage both quantitative and qualitative data to compare whether there is a difference, convergence, or several combinations through comparing and integrating the results of two data in a side-by-side discussion (Cresswell, 2017 : 320). Data collection was obtained through the census method, namely observations made on the

entire population in an area (Yughi, 2018), with the population of households affected by the overpass and double-track construction in Gambarsari Village 28 households.

Data Analysis

The test of normality data is conducted to determine whether the data is normally distributed or not. The statistical test of normality uses skewness and kurtosis, the variables are normally distributed if the value of skewness and kurtosis is not more than : 0.05 (Ghozali, 2016: 28). The data is normally distributed if the resulting Z value is not more than 1.96 ($\alpha = 0,05$)

To answer the hypotheses, this research using t-test paired sample. According to Kadir (2016; 302), to compare the differences between a correlated sample with the same sample group and produce two data distributions. If the data is not normally distributed, then non-parametric statistics are tested,

Hypotheses development:

- a. For the variable of fixed assets seen from the land area
 $H_0 : \beta_1 = 0$, there is no difference in fixed assets owned by the community before and after land acquisition
 $H_1 : \beta_1 \neq 0$, there is no difference in fixed assets owned by the community before and after land acquisition
- b. For the variable of residence
 $H_0 : \beta_1 = 0$, there is no difference in the condition of the community's residence before and after land acquisition
 $H_1 : \beta_1 \neq 0$, there are differences in the condition of people's residence before and after land acquisition
- c. For residential facilities variable
 $H_0 : \beta_1 = 0$, there is no difference in community housing facilities before and after land acquisition
 $H_1 : \beta_1 \neq 0$, there are differences in community housing facilities before and after land acquisition

1. The indicators used in observing changes in living conditions and residential facilities are based on the following BPS 2019 indicators:

- a. Indicators of housing conditions include a). Status of control of the residential building occupied, 6 indicators; b). Status of residence, 3 indicators; c). Roof type, 6 indicators; d). The widest type of wall, 3

indicators; e). The widest type of floor, 5 indicators; e). Floor area, 6 indicators.

- b. Indicators of residential facilities include: a). Sources of drinking water, 11 indicators; b. Use of drinking water facilities, 4 indicators; c). How to get drinking water, 3 indicators ; d). Water source for bathing/washing, 9 indicators ; e). How to get water for bathing/washing, 3 indicators ; f. WC, 4 indicators ; g). Light source, 4 indicators ; h). Electric power, 6 indicators; i). Fuel source, 4 indicators ; j). Family entertainment, 5 indicators; k). Cooler, 4 indicators.

Based on these indicators, a score range is made with the formula (Sari, 2014):

Calculation of the range of scores for residential facilities:

- a. Complete housing facilities if the score obtained 43-57
- b. Housing facilities are sufficient if the score obtained is sufficient 27-42
- c. Residential facilities are lacking if the score obtained 11-26

Range of scores for the state of residence:

- a. State of permanent residence if score is obtained 20-26
- b. The state of semi-permanent residence if the score obtained is 13-19
- c. The state of residence is non-permanent if the score is obtained 6-12

RESULTS AND DISCUSSIONS

1. Normality test on asset change data

- a. The normality test of the change in asset value data before the respondent is affected by the double-track construction shows that the respondent's asset value data is normally distributed. From the test results in Table 5 shows the value of Z Skewness = 1,23 and Z Kurtosis = -0,41, using $\alpha = 0,05$ both of them below the critical value $\pm 1,96$.
- b. The normality test of the data on changes in asset values after the respondent was affected by the construction of the double-track shows that based on the results of the Z Skewness. value test Z Skewness = 1,959 and Z Kurtosis = 0,38. Using $\alpha = 0,05$, both of them below the critical

value $\pm 1,96$, it means the data normally distributed.

- c. Paired t-test result shows land score before and after the Overpass and Double Track building, showing t score $-3,464 > |t \text{ table} | -2,05183$, p-value 0,002. It means that H_0 rejected and H_1 accepted. The result shows that there is significant asset accumulation in public in the land acquisition period.

2. Normality test on the living condition data

- a. Data on the condition of the respondent's residence before being affected by the construction of the double-track was not normally distributed because the value of Z Skewness = -2,371 and score Z Kurtosis = 2,001, critical value $\pm 1,96$.
- b. Likewise, the condition of the respondent's place of residence after being affected by the construction of a double-track is not normally distributed, this is indicated by the value of Z Skewness = -2,477 and score Z Kurtosis = 0,576, critical value $\pm 1,96$.
- c. The result of Wilcoxon test shows z score $-3,52 > |z \text{ table} | -1,96$ and p-value : 0,00043. It means H_0 rejected dan H_1 accepted. This means there is a change significantly on the living condition of the community after the land acquisition.

3. Normality test on residential facility

- a. Residential facility of the respondent before the land acquisition shows normally distributed, it shows from score of Z Skewness = -1,942 and score of Z Kurtosis = -0,960, critical value $\pm 1,96$.
- b. Data of residential facility after the establishment of double track also normally distributed, it can be seen from score of Z Skewness = 0,524 and score of Z Kurtosis = 0,071, critical value $\pm 1,96$.
- c. The result from Paired t-test, the t-score is $-6,838 > |t \text{ tabel} | -2,05183$ and p-value 0,000. It means that H_0 rejected and H_1 supported. It means that the changing of residential facility is significant when compare before and after land acquisition.

Discussions

Respondent's Land Area

The land acquisition has a significant influence towards the ownership of land area of the residents affected. The average of land acquisition for the construction of double trucks and overpasses in Gambarsari of the respondents' land area decreased by 8 m², with details of 16 people (57.14 percent) whose average land area increased by 127.8 m², 9 people (32.14 percent). The average land area is reduced by 196.6 m² and 3 people (10.72 percent) the land area remains. As for the price of land in the new location shows an increase from 1,256,000 Indonesia rupiah to 1,340,296 Indonesia rupiah per m². This condition is following the opinion of Soeparmoko (2002) that the construction of transportation facilities will have a more significant impact on the increase in the value of land and buildings (rate of increase) in an area.

The Condition Of Respondent's Residence

The land acquisition by PT KAI for the construction of double trucks and overpasses in Gambarsari Village turned out to have a significant impact on the living conditions of the affected communities. Referring to the BPS criteria for Living Condition Indicators, all respondents have permanent houses, whereas previously there were 5 respondents whose houses were not permanent. In addition to changes in the condition of the house, there was also an increase in the score of living conditions, 19 respondents (67.86 percent) experienced an increase in their score, 2 respondent's scores decreased (7.14 percent) and 7 respondent's scores remained constant (25 percent).

The acquisition of residential land has a positive impact on the living conditions of the affected residents. This is different from the acquisition of agricultural land as proposed by Al-Fajar et.al (2017), namely that the conversion of agricultural land does not impact changes in the farmer's residence. Kersanagara Village, Cibereum District, Tasikmalaya City, West Java Province. It can happen because the respondents in Gambarsari Village who were evicted were their places of residence so they had to find a new place to live, in the construction of a new residence armed with the compensation money received, of course respondents wanted a more comfortable place to live.

Residence Facilities

The condition of the respondent's residence facilities has a significant and positive difference between before land acquisition and after land acquisition. This difference can be seen from the score of the residential facilities indicator. Before land acquisition, all respondents had adequate housing facilities and after land acquisition there was an increase in ownership of residential facilities, namely 7 respondents (25 percent) ownership of residential facilities to be classified as complete, while the remaining 21 respondents (75 percent) ownership of residential facilities were still in use. enough category. This shows that 25 percent of respondents use the money from compensation to increase residential facilities completeness.

This condition is also not in line with land use change, as Al-Fajar et al (2017) research that the conversion of agricultural land has no impact on the condition of the respondent's household facilities. In Gambarsari the respondents do not focus their compensation money on land replacement but on housing and housing facilities, because the respondents in Gambarsari are not land conversions but are evictions of respondent's housing because they are affected by double-track construction and train overpass.

In accordance with Rianto's opinion, 2011, changes in respondents' socio-economic conditions affected by land acquisition vary according to their ability to manage and allocate compensation received. Likewise, the conditions that occur in Gambarsari Village, therefore prior to the land acquisition process, are better if socialization is carried out regarding financial management to manage and allocate compensation money to improve welfare. According to Janathin, 2021 after the relocation of the displaced people's residences there will be no significant changes in terms of income and welfare, there is even a decrease in the level of welfare, this is because the affected respondents are generally old and use their compensation money more for consumption, this condition It would be concerning if many young people inhabited the displaced settlements. In a new settlement, armed with the remaining compensation money after meeting their housing needs, they can set aside to carry out productive economic activities to increase their income.

CONCLUSIONS

Transportation development carried out by PT KAI in Gambarsari Village, Kebasen District, Banyumas Regency led to the eviction of residential land. This condition has a beneficial impact on the evicted residents because the compensation provided by the Government does not harm the evicted respondents. This impact is evident from the changes in the land area owned by the respondents, although the average area has decreased. However, the 57.14 percent of the land area has increased, and positive changes in housing conditions where all respondents have permanent housing buildings and residential facilities. There is an increase, 7 respondents the condition of their living facilities into the complete category. It needs to socialize the use of compensation money and replace the old place of residence and carry out productive economic activities to increase the income of the displaced.

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List of table:

Table 1. Average Growth in the Number of Passengers and Goods of Railway Transportation on the Island of Java in 2014-2018 (percent)

Description	2014	2015	2016	2017	2018	Average
Passenger	25,65	18,33	9,17	0,94	16,59	14,14
Goods	34,58	-8,77	4,54	13,62	17,44	12,82

Source: Kemenhub 2017-2018

Table 2. Development of New Railways in Sumatra and Java Islands 2015-2019 (Km)

Description	2015	2016	2017	2018	2019	Total
Construction of new railway lines (Including Double and Reactivated Tracks)	89.91	184.73	373.29	744.05	1,025.61	2,417.59
New Railroad Development Growth)		105,46	102,07	99,32	37,84	Average 86,17

Source: Kemenhub 2019

Table 3. Data Normality test result and hypotheses acceptance at = 0.05 (+ 1.96)

a. Land area before and after overpass and double track construction

	N	Skewness		Kurtosis	
	Statistic	Statistic	Std. Error	Statistic	Std. Error
Land area before	28	0,570	0,441	-0,383	0,858
Z Skewness			1,23		
Z Kurtosis			-0,41		
Conclusion		Data normally distributed			
Land area after	28	0,907	0,441	0,355	0,858
Z Skewness			1,959		
Z Kurtosis			0,38		
Conclusion		Data normally distributed			

Paired t-test T counted = -3,464 T table = | 2,05183 | Sig = 0,002

Kesimpulan

H1 accepted

There is a significant difference in asset value between before and after land acquisition.

b. Condition of residence before and after land acquisition

	N	Skewness		Kurtosis	
	Statistic	Statistic	Std. Error	Statistic	Std. Error
Before land acquisition	28	-1,098	0,441	1,853	0,858
Z Skewness			-2,371		
Z Kurtosis			-2,001		
Conclusion		Data nor normally distributed			

After land acquisition	28	-1,147	0,441	0,533	0,858
Z Skewness			2,477		
Z Kurtosis			0,576		
Conclusion	Data not normally distribute				
Uji Wilcoxon	z score	-3,52	> Z table 1,96	and	sig = 0,00043
Conclusion	H1 accepted, there is a significant difference in the condition of the community's residence before and after land acquisition pembebasan				
c. Resident facility before and after land acquisition					
	N	Skewness		Kurtosis	
	Statistic	Statistic	Std. Error	Statistic	Std. Error
Before land acquisition	28	-0.691	0.441	-0.888	0.858
Z Skewness			1,492		
Z Kurtosis			-0,960		
Conclusion	Data normally distributed				
After land acquisition	28	0.242	0.441	0.065	0.858
Z Skewness			0,524		
Z Kurtosis			0,071		
Conclusion	Data normally distributed				
Paired t-test	t score = - 6,838 > t table = 2,05183 sig = 0,000				
Conclusion	H1 is accepted, there is a significant difference in community living facilities between before and after land acquisition				

Figure 1: Calculation range of score

$$RS = \frac{SkT - SkR}{JK}$$

RS : Range Skor
 SkT : Highest score
 SkR : Lowest score
 JK : Number of classification