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The Effect of Toll Road Construction on The Daily Income at PT. Jasa Marga (Persero) Tbk

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Abstract: The study aims to determine the influence of each toll road construction segment on the daily income. The research employed a quantitative method to get an overview of the daily income at PT. Jasa Marga (PERSERO) Tbk. The results of this study showed: correlation coefficient analysis, determination test, simple regression test, and descriptive statistical analysis. The results revealed that there was a correlation coefficient between "toll road construction" and "daily income" at PT. Jasa Marga (PERSERO) Tbk of $r = 0.899$, which is classified as very strong, and the determinant coefficient or the magnitude of the influence of "toll road construction" on "daily income" is 80.9%, which is classified as very strong. Based on the results of the study, the researchers concluded that there was a significant influence between toll road construction and daily income at PT. Jasa Marga (PERSERO) Tbk. which is.

Keyword: Road Construction, Toll Road, Income, & Jasa Marga

INTRODUCTION

Development needs to be carried out to achieve a better quality of life. In addition, Indonesia's national goals implied in the preamble to the Constitution of the Republic of Indonesia year 1945 paragraph 4 is an evidence that there are goals that must be achieved by the Indonesian through national development (Renny Puteri Harapan Rani, 2021). Development is not only carried out on aspects of Community Empowerment which include education, social, economic, political, and cultural, but also on infrastructure aspects, such as the construction of roads, bridges, markets, and other public infrastructure facilities (Mahadiansar et al., 2020).

The toll roads construction aims to improve the accessibility and capacity of the road network in serving traffic (Alfiansyah et al., 2021). This construction cannot be separated from the physical and non-physical aspects of the community. The notion of development has different meanings depending on which parts we look at and the time it is directed. It is carried out due to the needs of the community that must be fulfilled (Mahadiansar et al., 2020). Construction is a process of life change in all areas that is done intentionally based on a

particular plan. According to Soerjono Soekanto, “the construction process primarily aims to improve people's living standards, both spiritually and materially (Mahadiansar et al., 2020).

Toll roads are the public roads that are part of the road network system and as a national road that are required to pay tolls. This is according to Article 1 of Law No. 15 of 2005 in (Khasanah et al., 2017). The implementation of the toll road itself is intended to realize equitable development and its results as well as a balance in regional development by concerning to justice. This can be achieved by fostering a road network whose funds come from the road users (Prakoso et al., 2020; F. I. Sari & Sutiono, 2017). Meanwhile, the purpose of toll roads is to improve the efficiency of distribution services to support increased economic growth, especially in areas that have a high level of development according to Article 2 of Law No. 15 of 2005 in (Khasanah et al., 2017).

Toll road is one of the government's ways to realize equitable development and as one of the ways to speed up the delivery of distribution services. In addition, toll road users must pay a certain amount of money in order to use the road. The meaning of toll roads based on PP No. 15 of 2005 on roads, stated that "toll roads are the public roads that are part of the road network system and as a national road that the users need to pay tolls (Sandhyavitri & Zulfiqar, 2019).

In order to support economic growth, Indonesia needs a reliable road network. According to the government regulation No. 04 year 1978, on March 01, 1978 the government established PT. Jasa Marga (PERSERO) Tbk. The main duty of Jasa Marga is to plan, build, operate, and maintain toll roads and their facilities so that these can function as the freeways that provide higher benefits rather than non-toll public roads. (Marga, n.d.). The new toll road construction will increase the total length of the toll road from the previous length and with the increase its length, it will have an impact on increasing daily revenue (Alfiansyah et al., 2021; Winarda et al., 2021).

The meaning of income is the gain derived from the factor costs of production or productive services. Its meaning indicates that income is the entire acquisition both derived from the factor costs of production and the total output generated for all production in an economy in a given period of time.(L. Sari, 2019). According to Sukirno (mita, 2021), income is the amount of revenue received by the population for work performed during a certain period, either daily, weekly, monthly, or annually. The income can cause an increase or gain in assets and a decrease in company liabilities as a result of operating activities or procurement of goods and services to the public or consumers, particularly (Harnanto, 2019).

Besides, income has a great influence on the sustainability of a company, if the greater the income, the greater the intelligence or expertise of the company to be able to fund all expenses and activities carried out (Ishak, 2021). Person condition can be measured using the concept of income or revenue, by presenting the overall income received by a person or family over a certain period of time (Rezza Anni Musrofah & Fatihah, 2021).

One of the implementers of toll road construction is PT. Jasa Marga (PERSERO) Tbk PT. This company not only acts as the operator but also has the responsibility as the toll road authority in Indonesia (Marga, n.d.; Ningrim & Syarah, 2018). The milestone of toll roads in Indonesia was began in 1987 with the operation of Jagorawi toll road with a length of 59 km (including access roads), connecting Jakarta, Bogor, and Ciawi. The construction of the toll road, which began in 1975, was carried out by the government with funds from the government budget and foreign loans submitted to PT. Jasa Marga (PERSERO) Tbk. as capital participation (Satriaputri & Cahyadi, 2016).

A research states that the construction of toll roads can increase economic output and GDP, as well as create jobs and wages/salaries received by workers (Hidayat, 2021). This is in accordance with research conducted by Prakoso et al (2020) which stated that the construction of toll roads improves the economy. Therefore, the differences with previous research is that this study aims to determine the amount of influence in each section of toll road construction on daily income.

METHOD

This study used a quantitative research method (Sugiyono, 2019). This was carried out by collecting data through the annual report of PT. Jasa Marga (PERSERO) Tbk. The data obtained was then processed/tabulated into a single data table for data analysis. The object of this study employed PT. Jasa Marga (PERSERO) Tbk. which is an Indonesian state-owned enterprise (BUMN) engaged in toll road business and is one of the companies listed on the IDX (Indonesia Stock Exchange). The type of research used in this study was quantitative data, namely data in the form of numbers with a ratio scale. The collected data were secondary data obtained from the annual report 2010 to 2019. Annual report data were obtained directly from the official website of PT. Jasa Marga (PERSERO) Tbk (Website: <https://investor.jasamarga.com/ar.html>). The data collection technique was an observation technique, namely obtaining secondary data from financial statements or annual reports for the period 2010 to 2019 which have been officially published on the official website <https://investor.jasamarga.com/ar.html>. Analysis of research data used correlation coefficient analysis and determination analysis, simple linear regression analysis, and descriptive statistical analysis (Martono, 2016).

RESULTS AND DISCUSSION

PT. The government assigns Jasa Marga (PERSERO) Tbk to build toll roads with land financed by the government. Currently, the condition of infrastructure in Indonesia is a factor that is still to be the 67 obstacles in encouraging investment in areas that actually have economic potential that could be developed. Experience and capacity of PT. Jasa Marga (PERSERO) Tbk, in realizing the construction of toll roads in Indonesia is the capital to reach its opportunity (Satriaputri & Cahyadi, 2016; Sedyata utami et al., 2018).

On the results of research overview related to the toll road construction at PT. Jasa Marga (PERSERO) Tbk from descriptive statistics obtained the average value of toll road construction growth or toll road length (km) growth of 70 km/year, with max (mode) growth increasing in 2018 by 319 km.

The following table and graph of toll road length growth in PT. Jasa Marga (PERSERO) Tbk:

Table 1. Tabulation Result of Toll Road Length Data

Year	Km Length of Toll Road	Addition
2010	531	
2011	545	14
2012	545	0
2013	560	15
2014	576	16
2015	590	14
2016	593	3
2017	681	88
2018	1000	319
2019	1162	162

From the results of the graph above, the researcher can get an idea of the increase in the growth of toll road length (km) which is the result of toll road construction from year to year. In addition, the increase began to jump up in 2017 by 681 km, in 2018 by 1000 km, and in 2019 by 1162 km.

The Daily Income of Toll Road

Development and construction of toll roads conducted by PT. Jasa Marga (PERSERO) Tbk is always based on a financially viable investment framework. Even, the daily income is used by PT. Jasa Marga (PERSERO) Tbk to try the new toll road sections connected to the roads that have been operating so that the traffic volume on the new toll road project can support the return on investment target that has been set. In addition, PT. Jasa Marga (PERSERO) Tbk tries to be a majority in the ownership of the share portion in the subsidiary in order to become a controller in integrating the company's business as a whole.

On the results of the toll road research overview, the development in PT. Jasa Marga (PERSERO) Tbk., descriptive statistics get an average value for the average daily income of 20 billion rupiah/year, with *max (mode)* of daily revenue increased in 2019 by 35 billion rupiah. The following table and graph of daily income at PT. Jasa Marga (PERSERO) Tbk:

Table 2. Data Tabulation of Daily Income

Year	Daily Income		
2010	12	0	11,797,550
2011	13	0	13,269,123
2012	15	0	15,292,473
2013	16	0	15,897,897
2014	18	0	18,209,295
2015	20	0	19,509,657
2016	22	0	21,716,923
2017	23	0	22,688,414
2018	25	0	24,757,169
2019	35	0	34,881,000

According to the results of the table above, the researchers get an overview of the daily income at PT. Jasa Marga (PERSERO) Tbk. It shows the average increase in daily income in PT. Jasa Marga (PERSERO) Tbk amounted to 20 billion rupiah from year to year but had a surge increase in daily income in 2018-2019 of 35 billion rupiah.

The Effect of development on Toll Road Daily Revenue

The following is an explanation of how toll road construction affects daily income. Tabulated data on the influence of "toll road development" on daily income is taken from the *annual report* data from 2010 to 2019 after the recapitulation is shown in the table as follows:

Table 3. Recapitulation Tabulation of Toll Road Length Data and Daily Income

Year	KM Length of Toll Road	Daily Income	
2010	531	12	11,797,550
2011	545	13	13,269,123
2012	545	15	15,292,473
2013	560	16	15,897,897
2014	576	18	18,209,295
2015	590	20	19,509,657
2016	593	22	21,716,923
2017	681	23	22,688,414
2018	1000	25	24,757,169
2019	1162	35	34,881,000

The researchers used its overview using statistical tests. Through the statistical test, it is known how the influence level of the relationship between 2 variables. Here are the results and discussion on the effect of toll road construction on daily income. The results of correlation coefficient analysis between variable X (toll road construction) and variable Y (daily income) using *SPSS software.26.0* can be seen in the table below:

Table 4. Correlation Coefficient Analysis Results of Pearson SPSS

Correlations			
		KMLENGTH OF TOLL ROAD	DAILY INCOME
KMLENGTH OF TOLL ROAD	Pearson Correlation	1	.899**
	Sig. (2-tailed)		0.000
	N	10	10
DAILY INCOME	Pearson Correlation	.899**	1
	Sig. (2-tailed)	0.000	
	N	10	10

The correlation coefficient obtained from the results with processing SPSS is 0,899 with a significant level of α (*Alpha*) smaller than 0.05, which is included in the classification of a very strong correlation. The correlation coefficient between the influence of toll road construction (X) and daily income (Y) included in the classification is very strong.

Based on the results of the correlation coefficient, the researcher get the coefficient of determination as exposed in the following table:

Table 5. Analysis Results of the Coefficient SPSS Determination

Model Summary of ^b				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
	.899 ^a	.809	0.785	3.173

a. Predictors: (Constant), KM Length of Toll Road

b. Dependent Variable: Daily Income

Based on the results of determination coefficient testing, we can see that the results of the table describe the magnitude of the correlation value or relationship (R) as 0.899 from the output results. Then, we can obtain the coefficient of determination (R Square 0,809 or 80,9% which implies that the amount of influence of "toll road construction" (X) on daily income (Y) is as many as 0,899 which is included in the classification of a very strong influence.

The coefficient of determination or influence of "toll road construction" (x) on daily income is 80,9%. It means that daily income (y) was influenced by "toll road construction" by 80,9%, while 19,1% was influenced by other factors not studied at this time (*epsilon*).

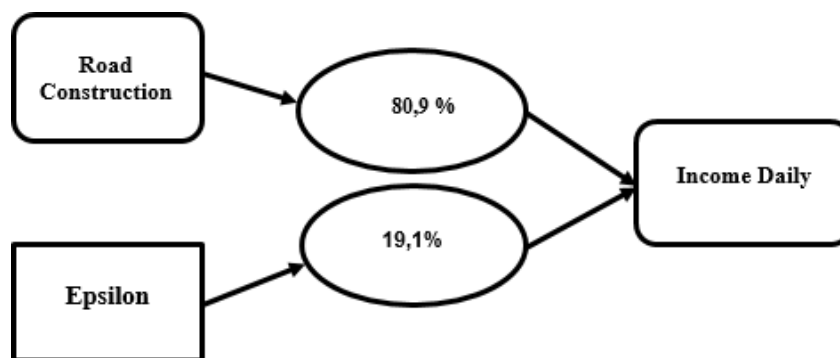


Figure 1. Determination Coefficient of Toll Road Development on Daily Income

Analysis of Simple Liner Regression

A regression test can be used to predict how high the value between the independent variable. In this case, the toll road construction and the dependent variable is the daily income. This analysis aims to show the pattern of correlation between variables that can be seen in the table below:

Table 6. Results of SPSS Simple Linear Regression Analysis
Coefficients^a

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
	(Constant)	,909	,416		
1 KM LENGTH OF TOLL ROAD	,028	,005	,889	,815	,000

a. Dependent Variable: Daily Income

We can see in the table that the *constant* value (a) of 0,909, while the value of toll road construction (b/regression coefficient) of 0,899, so the regression equation as follows:

$$Y = a + bx$$

$$Y = 0,909 + 0,899 x$$

If x = 1 then

$$Y = 0,909 + 0,899 (1)$$

$$Y = 1,808$$

This equation can be concluded:

1. Constant of 0,909, means that the value of variable consistent daily income of 0,909
2. If X is 1, then the regression equation is:
 $Y=0,909 + 0,899(1)$
 $Y = 1,808$
 or equal to 1,808 billion rupiah.

CONCLUSION

On the results of Toll Road Construction Research Overview PT. Jasa Marga (PERSERO) Tbk from descriptive statistics obtained the average value of toll road construction growth or toll road length (km) growth of 70 km/year, with *max* (mode) growth increasing in 2018 by 319 km. From the descriptive statistics obtained data that the average value for the average daily income of 20 billion rupiahs/year, with *max* (modus) the highest daily income in 2019 was 35 billion rupiah. The effect of toll road construction on daily income is 80,9%, which means it is affected by 80,9% of the length of toll roads that are the result of development.

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