

# Determinants of Toll Revenues: The Case of PT. Jasa Marga (Belmera Branch) Medan

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## Abstract

The purpose of this study was to determine the effect of E-Toll Card on Toll Revenue, to identify and analyze the effect of Cash Against Toll Revenue, and to identify and analyze the effect of E-Toll Card and Cash against Toll Revenue either partially or simultaneously on PT. Jasa Marga (Persero) Tbk Branch Belmera Medan. The used in this research is associative approach. The population in this research is PT. Jasa Marga (Persero) Tbk Medan Belmera while samples that meet the criteria of sampling observations made during 6 months or 184-days of the start of the month July 2017, August 2017, September 2017, October 2017, November 2017 and December 2017. Data collection techniques in this study using documentation technique. Data analysis techniques in this study using descriptive statistics, Classical Assumption Test, Multiple Regression, Hypothesis test (t test and F test), and the coefficient of determination. The data in this study using SPSS software program (Statistics Package for the Social Sciens) 22.00. Hasil version of this study prove that Partial E-Toll Card no effect on Toll Revenue Cash whereas no influence on Toll Revenue. Simultaneous E-Toll Card and Cash effect on Toll Revenue. The results of this study prove that Partial E-Toll Card no effect on Toll Revenue Cash whereas no influence on Toll Revenue. Simultaneous E-Toll Card and Cash effect on Toll Revenue. The results of this study prove that Partial E-Toll Card no effect on Toll Revenue Cash whereas no influence on Toll Revenue. Simultaneous E-Toll Card and Cash effect on Toll Revenue.

Keywords: Revenue, E-Toll Card, Cash.

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## Introduction

Government by the state-owned enterprises (SOEs) which is designated as a toll road service providers to provide good service to be able to provide services to support the toll road public transport activities. With the good motorway services it will be able to provide benefits for society in the form of time and transportation costs that can be deducted is also an advantage for the providers of the toll road in the form of income and the level of public confidence in an increasingly. PT Jasa Marga is a state-owned company engaged in the service providers highway to build, operate, maintain toll roads that have been authorized, and develop the potential of the area traversed by the toll road.

Rudianto (2010) defines that revenue is the increase in the number of assets owned by a cooperative that is not caused by the increase in the amount of debt or capital increase in the number of members of the owned clear SOPs regarding the minimum service standards motorway. Minimum service standards set by regulatory No. 392/PRT/M/2005 dated august 31, 2005 on minimum service standards toll road is a measure that must be achieved by the toll road business entities in order to improve the quality of public service to toll road users. Toll collection activities describes a structured process standards and interconnected.

According to Lestingsih and Agustini (2016) based on the phenomenon that occurs along with the increasing number of road use and economic growth continues to increase, public toll road users often complain about the congestion problems that occur at the toll gate entrance and toll gate exit due to the queue of the toll road users pay for the ticket using cash takes a long time, in addition to the queue congestion at toll booths would cause harm to consumers in the form of time and fuel is wasted when experiencing congestion queue. Meanwhile, the intention to continue using electronic applications is directly by the perceived usefulness and satisfaction,

and then the satisfaction was affected by the confirmation and perceived usefulness, while the confirmation affects the perceived usefulness (Kholid, Urumsah, & Hamdani, 2018).

Therefore, in 2009 PT. Jasa Marga as a state-owned company providing toll roads launched product innovations in the form of e-toll card in lieu of cash transactions, based on Bank Indonesia Regulation No. 11/12/PBI/2009 on money electronic circular letter of Bank Indonesia No./11/11/DASP about electronic money, with the service to toll road users can pay the toll by using only card. E-toll card is realized with the cooperation between motorway which is managed by PT Jasa Marga (Persero) in payment. Cooperation track inaugurated on 21 March 2016 between PT Jasa Marga (Persero) with Bca Bank and the Bank is incorporated in the State Banks Association namely Bank Rakyat Indonesia, Bank Mandiri, Bank Negara Indonesia,

Based on studies by Gunadi and Sihombing (2015), only about 12% of the toll road users who use this card, but the e-toll card transaction is expected to cut the time payment about 3-4 seconds, but in reality people are still many who use cash transactions in comparison with the use of e-Toll Card. Therefore, In accordance with Regulation no.16/PRT/M/2017 on non-cash transactions in the road toll, the government began to enforce payment of the toll road by using the e-toll card since 1 October 2017. Toll collection system has been set out in the decree of directors No. 48/KPTS/2006 on guidelines for toll collection system. The development of the toll collection system there are two types: open and closed. Toll collection system is an open system which is strongly influenced by the environment of the system, so it is necessary to do some adjustments to the processes contained in the toll collection system so that it remains able to follow the rules and policies. Original toll collection payment transactions using cash, switch to using e -toll cards certainly have an impact on the reception of the guard tollbooth. On the emergence of e-toll card then affects the level of cash income from toll or toll collection officer where e-toll card revenues increased while revenues decreased cash toll booths. So we need a few adjustments to the processes contained in the toll collection system so that it remains able to follow the rules and policies. Original toll collection payment transactions using cash, switched to using e-toll card would have an impact on the acceptance of the guard tollbooth , on the emergence of e-Toll Card then affects the level of cash income from toll or toll collection officer where e-toll card revenues increased while revenues decreased cash toll booths. So we need a few adjustments to the processes contained in the toll collection system so that it remains able to follow the rules and policies. Original toll collection payment transactions using cash, switched to using e-toll card would have an impact on the acceptance of the guard tollbooth , on the emergence of e-toll card then affects the level of cash income from toll or toll collection officer where e-toll card revenues increased while revenues decreased cash toll booths.

## Literature Review

### Income

Revenue is a very important element in the financial statements, because in doing a business activity, the company's management would want to know the value or amount of revenue earned in the accounting period are recognized in accordance with principles generally accepted.

According to the Indonesian Institute of Accountants (IAI) (2009) defines Revenue is the gross inflow of economic benefits arising from ordinary activities during the period when those inflows result in increases in equity, which is not derived from the contribution consists only of planting Capital. Revenue gross inflows of economic benefits received by the company for itself. amount on behalf of third parties, such as value added tax, not an economic benefit flowing To Company and do not result in increases in equity, and therefore have to remove it from income. Similarly, in an agency relationship, the gross inflows of economic benefits include amounts in the bill on behalf of the principal, did not result in increases in equity.

According to Nordiawan et al. (2009) defines revenue is the acceptance by the general treasurer countries/regions or by any other government entity that adds to equity smoothly in the period of the fiscal year in question the right of the government and does not need to be paid

back by the government. According to the government Accounting standards regulation (PSAP) defines are all revenues the State Treasury/areas add to equity funds in the current budget year period in question the right of the government, and does not need to be paid back by Government. Lestingsih and Agustini (2016) and Sukirno (2006) stated revenue is the amount of income received by a resident on his performance during a given period, whether daily, weekly, monthly or years. The definition can be concluded that the revenue is the gross inflow of economic benefits arising from ordinary activities during the period when inflows that result in increases in equity that do not come from the contribution of capital investment.

The basic concept of income is that income is the current process, which is the creation of goods or services by the company during certain intervals. The current process is:

1. At the time of the completion of the main activities  
Reporting is expected to provide useful information in order to capture the business and can be understood by people who can be trusted on the activities of the company and the economic activity and is willing to study the information.
2. At the time of the incident made a theoretical  
Financial reporting should provide information about the economic resources of a company and the circumstances that change the source and in accordance with the expected utility that financial reporting should be feasible or needed by potential users. In other words, the financial statements should be made to meet the information needs of the wearer.
3. Once the exchange happens  
present at the loading load with revenues obtained but for certain load though it can not be associated with revenue reporting is done in a period where the load provides a benefit.

According to the Financial Accounting Standards (GAAP) SFAS no. 25, which need in approach outflow (outflow) is that the revenue obtained from the delivery or production of goods, delivery of services or activities of other major companies, where in it is implied that the product had left the company.

## **Toll Road**

The toll road is a public road that is part of the road network system and a national road users are required to pay a toll (Republik Indonesia, 2005). The toll road is a road traffic is an alternative to cross public roads that exist, have specifications freeway and highway is only intended for the use of road use of motor vehicles wheeled 4 more by paying tolls (Republik Indonesia, 1980). Ownership and rights to operate the toll road is in the hands Government. toll road management is to ensure equitable development and results as well as the balance in regional development in a fair, where fostering use funds derived from local communities with a toll road payment.

The other definition of motorway or freeway brisk walking with controlling the entrance completely. Control of the driveway fully or full control of access means that the authority to regulate the driveway aimed to favor the traffic moving straight by providing the link driveway only by way of certain general and with violating the crossing plot or direct contact with the road leading to the houses. Due to the use of this road by paying a toll, namely certain amount of money paid for the toll road users, then the toll road must have requirement with specifications that exceed the usual way, namely:

1. Toll road is an alternative way of existing public road traffic, has a primary arterial road class minimal and basically a new way.
2. The toll road plan is designed based on the lowest speed of 80 km/h on the motorway urban region.
3. This toll road is designed to be able to withstand a single centralized vehicle axle load of at least 81/5 tons or centralized tandem axle load of vehicles at least 14 ½ tons.
4. The amount of the toll at the entrance to limit the efficient and designed so that all entrances controlled.

5. There is no plot crosses another road or other transportation infrastructure.
6. At least consist of two lanes for each direction.
7. The width of the shoulder of the road enough to be used as an emergency lane.
8. Unidirectional traffic is not separated or median cultivated.
9. The vehicles can only pass through the road with both ends or through a mutual bridge overpass (swordfish have direct driveway unless restrained).

While the advantage of using toll roads are:

1. Reduce travel time, with the freeway (motorway) time lost due to stop and wait for another vehicle in a can be eliminated.
2. Safer, reduce conflicts at crossroads and along both sides of the road and pedestrian fencing of the place of the right of way can reduce the number of accidents significantly.

Reduce operating costs of fuel consumption, air pollution and vehicle grama smooth and the termination of the vehicle as little as possible to reduce fuel consumption and operating. right fuel consumption further reduced the population of the air.

the toll is determined by the magnitude of vehicle operating cost advantages amount on highways and arterial roads that exist (existing road). Instructions for determining the amount of the toll road tariffs, namely:

1. Taken by 35-45% of the savings vehicle operating cost advantages amount
2. The amount of the toll Rates are calculated on a basic level, the control level of loans or benefits expected to be obtained until a certain time that is associated with the loan repayment program.

## Payment System

This payment system at any time very close to the everyday life in economic activities carried out by economic operators and the general public every payment. According Pohan (2013) declare the payment System is a regular working of the various parts of the value chain displacement between two parties who do transaktion. Committee for payment and Settlement System/Bank for International Settlements (CPSS/BIS), defines the payment system as an interaction between entities consisting of a set of instruments, procedures, IFT System that are components to expedite turnaround fund.

According to Republik Indonesia (1999) Payment Systems explicitly defined as a unified whole out of a set of rules, institutions, mechanisms, to carry out the transfer of funds in order to fulfill the obligations arising from economic activity. From the definition above is a payment system payment instruments, banking procedures with respect to the payment and interbank fund transper system used in the payment process.

## E-Toll Card

E-Toll Card is prepaid contactless smart cards issued by the bank in collaboration with PT. Jasa Marga (Persero) Tbk, PT. Citra Marga Nusaphala Persada Tbk and PT. Marga Mandalasakti for toll payment transaction. e-Toll Card to use RFID technology (Radio Frequency Identification) which enables transactions can be done from a distance (contactless). E-toll card feature complete as follows:

- a. The balance stored on the chip card so that when the transaction is not required for a PIN or signature.
- b. It can be recharged.
- c. Minimum card balance Rp10,000
- d. Maximum card balance of Rp 1,000,000 (in accordance with Bank Indonesia).
- e. Balance to settle on the card does not give flowers.

*E-toll card* is an electronic card that is used to pay an entrance fee of toll roads in some parts of Indonesia. E-toll card users only need to attach the card to pay tolls within 4 seconds, faster than when paying in cash which takes 7 seconds. The use of e-toll card also reduces

operational costs because it costs to collect, deposit, and transfer cash to the bank. E-toll card began to be marketed to the public since January 2009.

### **Conceptual Framework**

A conceptual framework is a relationship or link between one concept to another concept of problem you want investigated. Conceptual framework is useful to connect or explain at length on a topic to be discussed. This framework is derived from the science or theory that is used as the theoretical basis that is used as the theoretical basis associated with the variables studied.

Based on the things that have been described, some factors affecting the use of E-Toll Card and Cash it is necessary in the analysis of the effect of each independent variable on the dependent.

### **Influence of E-Toll Towards Toll Revenue**

*Toll E* is an electronic card that is used to pay an entrance fee of toll roads in some areas in Indonesia. The results of previous investigators Lestiningsih and Agustini (2016), that the E-Toll Card has a significant influence on Toll Revenue. From the above statement can be concluded Significant among the E-Toll Card on Toll Revenue in which to increase company's revenue through the levels of E-toll card. The higher the E-Toll Card users showed more effective expressway company in generating revenue. The company's ability to manage E-TOLL to generate profits have traction and be able to influence investors to buy E-Toll Card.

### **Influence Use of Cash Towards Toll Revenue**

The results Fatmaniawati (2017), that consumers who use the supermarket much cash payment system in comparison to non-cash payment systems, meaning a system of cash (Cash) have significant toll revenues and have a positive relationship to the toll revenues, which the company got a big advantage to have access to alternative sources of income in addition toll earned as profits of the company.

### **Influence of E-Toll Card and Cash Simultaneously Towards Toll Revenue**

Revenue is the amount of money received by the company from its activities mostly from the sale of products or services to investors customer. IAI (2009) specifies that the revenue is the gross inflow of economic benefits arising from ordinary activities for one period when those inflows result in increases in equity, which is not derived from planting capital. contribution consists only of gross inflows of economic benefits received by the company for itself. amount on behalf of third parties, such as value added tax, not an economic benefit flowing company and do not result in increases in equity, and therefore have to remove it from income. Similarly, in an agency relationship,

E-toll is an electronic card that is used to pay an entrance fee of toll roads in some areas in Indonesia. Cash a using the currency (banknotes and coins) . previous description, the second independent variable (independent variable) of the respective each has an influence on Toll Revenue that acts as the dependent variable (dependent variable). Reinforced by the results of the study results Lestiningsih and Agustini (2016), that the E-toll card has influence significantly on Toll Revenue, and the results of previous studies Fatmaniawati (2017), that the consumer supermarkets many who use cash payment system in comparison system non-cash payments,

### **Hypothesis**

Hypothesis is a provisional explanation of behavior or specific circumstances that have occurred. The hypothesis is a temporary answer allegations or of the revelation contained in the formulation of research problems. It said temporary answer by answer comes from the theory (Juliandi et al., 2014).

Based on the formulation of the problem and the purpose of this study, it can be hypothesized as follows:

1. The use of E-Toll Card effect on Toll Revenue
2. Use of Cash effect on Toll Revenue.
3. The use of E-Toll Card and Cash effect simultaneously on Toll Revenue.

## Research Methods

The research approach used in this study is using Associative research. Associative approach is the approach taken to determine or influence the relationship between two or more variables. In this study, researchers wanted to determine the effect of use of e-Toll Card and Cash against Toll Revenue. This type of research data in the form of quantitative data report, which is shaped figures using formal instruments, standards, and are measuring.

## Results and Discussion

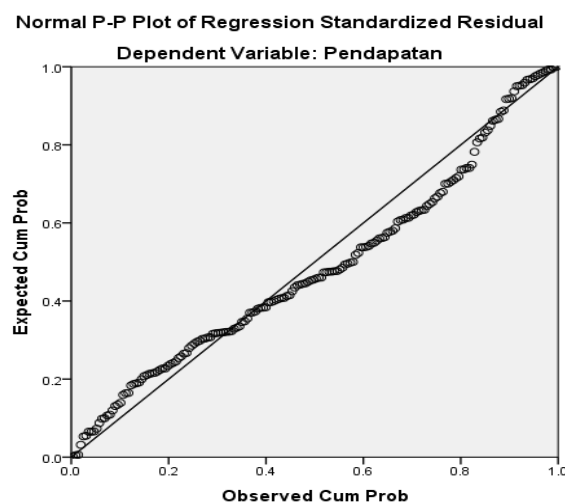
### Classic Assumption Test

Classic assumption test is a requirement berganda yang regression analysis aims to obtain valid analytical results. In this classic assumption test including normality test, multicollinearity test, heterokedastisitas test, and autocorrelation test.

### Normality Test

Normality test whether the regression, the dependent variable and independent variables both have a normal distribution or not. A good regression model is to have a data distribution to normal or near to normal spread of data diagonal line and follow the direction of the diagonal line and follow the direction of the diagonal regression model to meet the assumption of normality test normality conducted by the authors is as figure 1.

Figure 1 can be seen that the data spread means that the data follow a diagonal line between the dependent variable and the independent variables have a relationship or a normal distribution or meet normalitas assumption test.



Source: SPSS 22:00

Figure 1. Nomality Test

### Collinearity Test

Collinearity test in this research is to look at the coefficient of Variance Inflation Factor (VIF) and the value of Tolerance. According Juliandi et al. (2014) that: a common cutoff value with the terms used to indicate the existence Multicollinearity are:

- a) When tolerance <0.1 or equal to VIF <5 then there is a serious multicollinearity problem.
- b) When tolerance > 0.1 or equal to VIF > 5 then there is no multicollinearity problems.

In other words, the data that can either be seen if it has a value of tolerance > 0.1 and VIF > 5 and if the value of tolerance and VIF is not in accordance with the provisions of the research data it contains multikolinearitas which means unfit for use as a research data. Here are Multicollinearity Test Results With SPSS version 22.00 which is done:

**Table 1.** Collinearity Test Results

Model	collinearity Statistics	
	Tolerance	VIF
1 (Constant)		
E-Toll Card	.161	6,224
Cash	.161	6,224

a. Dependent Variable: Income  
Source: SPSS 22:00

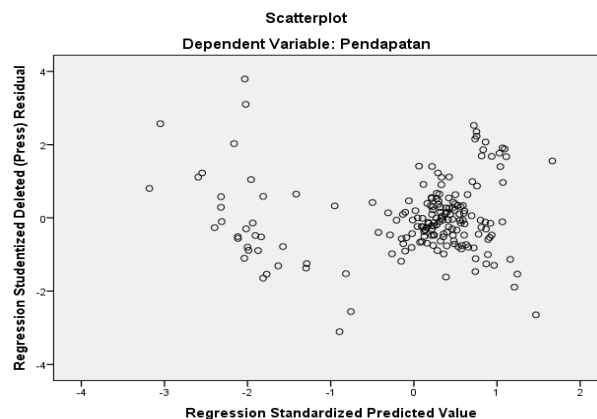
**Heterocedasticity Test**

Heterocedasticity test conducted to determine whether the regression model occurred inequality residual variance from one observation to another observation. To determine whether or did not happen in the regression model heterokedastisitas this study, the analysis is carried out by informal. Method in testing the method heterokedastisitas scatterplot graph and methods. Basic analysis is as follows:

- a) If there are certain patterns, such as dots form a regular pattern that has occurred heterokedastisitas.
- b) If there is no clear pattern and dots spread irregularly, then there is no heterokedastisitas.

SPSS version with 22:00 then heterocedasticity test results can be obtained as follows:

**Table 2.** Heterocedasticity Test Results



Source: SPSS 22:00

**Autocorrelation Test**

According Juliandi et al. (2014) autocorrelation aims to test whether in a linear regression model was no correlation between bullies error in period t to the error in period t-1 (previous). If the case of correlation, it is called there autocorrelation problem. A good regression model is free of autocorrelation. One way to identify it is to look at the value of Durbin Watson (DW):

1. If the value of DW below -2 means there is a positive autokorealasi
2. If the value of DW between -2 to +2 means no autocorrelation
3. If the value of DW above +2 means no negative autocorrelation

Autocorrelation test results can be seen in the following table:

**Table 3.** Autocorrelation Test Results

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.971a	.943	.943	11443747.99701	.627

a. Predictors: (Constant), Cash, E-Toll Card  
b. Dependent Variable: Income

Source: SPSS 22:00

From the table 3 that the value of Durbin Watson (DW count) amounted 0,627. With thus no autocorrelation in the regression model for the DW is between -2 to +2.

### Multiple Linear Regression

Multiple linear regression models were used income as the dependent variable and the E-Toll Card and Cash as an independent variable. Where multiple analysis is useful to determine the effect of each variable on the dependent variable data management. results by using SPSS version 22.00.

**Table 4.** Multiple Linear Regression Test Results

Model	Coefficients unstandardized		standardized	t	Sig.
	B	Std. Error	Coefficients beta		
1	(Constant)	-85805604,486	7411523.873		
	E-toll Card	5414.410	101 468	2,353	53 361
	cash	5100.645	94 169	2,388	54 165

a. Dependent Variable: Income

Source: Results of data processed SPSS

### Hypothesis Testing

#### Statistics t test or partial test

Used to determine the ability of each independent variable on the dependent variable used effects. Another reason t test done is to test whether the independent variable (X1) are individually significant relationship exists or not on the dependent variable (Y). According Sugiyono (2016), the formula used in this study are as follows:

- 1) Tests:
  - a)  $H_a: r_s = 0$ , meaning that there is no significant relationship between the independent variable (X) and the dependent variable (Y).
  - b)  $H_a: r_s \neq 0$ , meaning that there is a significant relationship between the independent variable (X) and the dependent variable (Y).
- 2) Decision-making criteria are as follows:
  - a)  $H_0$  if  $-t_{table} \leq t \leq t_{table}$  at  $\alpha = 5\%$ .  $Df = n - 2$
  - b)  $H_0$  is rejected if  $t > t_{table}$  or  $-t_{hitung} < -t_{table}$

Based on the results of data management with SPSS version 22 o'clock, the obtained results of statistical tests of t as follows:

**Table 5.** Test Results Statistics t (partial)

Model	Coefficients unstandardized		standardized	t	Sig.
	B	Std. Error	Coefficients beta		
1	(Constant)	-85805604,486	7411523.873		
	E-toll Card	5414.410	101 468	2,353	53 361
	cash	5100.645	94 169	2,388	54 165

a. Dependent Variable: Income

Source: SPSS Data



## Discussion

Analysis of the findings of this study is an analysis of the suitability of theories, opinions, and previous research has noted the results of previous studies and behavioral patterns should be done to overcome it. Here are three (3) main sections which will be discussed in the analysis of the findings of this study, as follows:

### Effect of e-toll card towards toll revenue

Based on the result between the E-Toll Card against toll revenue at PT. Jasa Marga (Persero) Tbk Medan Belmera have significant numbers of  $0.000 \leq 0.05$  means  $H_0$  which showed that partially no significant positive effect on the E-Toll Card Toll revenue at PT. Jasa Marga (Persero) Tbk Medan Belmera the period July 2017 to December 2017.

Results this study was supported by the results of research conducted by Amin Setio Lestingsih and Elyna Agustini (2016) and the research conducted Aldio O.Sihombing Pramoedya and Sabrina (2015) which states that the E-Toll Card significant influence Against Toll Revenue.

### Effect of cash towards toll revenue

Based on the result of cash against Toll revenue at PT. Jasa Marga (Persero) Tbk Medan Belmera have significant numbers of  $0.000 \leq 0.05$  means  $H_0$ . Based on these results concluded that  $H_0$  which showed that partially no significant positive effect of cash to revenues in PT. Jasa Marga (Persero) Tbk Medan Belmera the period July 2017 to December 2017.

Results of this research was supported by the results of research Fatmanawati (2017) which states that the use of Cash significant influence.

### Effect of e-toll card and cash together towards revenue

Based on the results obtained on the effect of E-Toll Card and cash to the PT. Jasa Marga (Persero) Tbk Branch Belmera Medan. From the ANOVA (Analysis Of Variance) The results can be seen that a significant level of  $0.000 \leq 0.05$  so  $H_0$ . So it can be concluded that the variable E-Toll Card and Cash jointly significant positive effect on earnings at PT. Jasa Marga (Persero) Tbk Medan Belmera the period July 2017 to December 2017.

Results The study was supported by the results of research conducted by Lestingsih and Agustini (2016) and the research conducted Gunadi & Sihombing (2015) which states that the E-Toll Card significant influence Toll. conducted Against Revenue by Fatmanawati (2017) which states that the use of Cash significant influence

## Conclusions

Based on the results of research and discussion that has been raised before it can be concluded from the study of Effect of E-Toll Card and Cash to earnings at PT. Jasa Marga (Persero) Tbk Branch Belmera field is as follows. Partially known that E-Toll Card as a positive and significant impact on revenues in the company of PT. Jasa Marga (Persero) Tbk Branch Belmera field in the period July 2017 to December 2017. Partially known that Cash has a positive and significant impact on the company revenue in PT. Jasa Marga (Persero) Tbk Branch Belmera field in the period July 2017 to December 2017. Simultaneously note that the e-toll card and cash had a significant impact on earnings in the company of PT. Jasa Marga (Persero) Tbk Branch Belmera field in the period July 2017 to December 2017.

Based on the above conclusions, then in this case the author can suggest, to increase revenue at PT. Jasa Marga (Persero) Tbk Branch Belmera Terrain companies should use the e-toll card and cash. We recommend that management should pay more attention to the use of cash in order to make it easier for toll road users.

## References

- Bank Indonesia. 2009. *Peraturan bank Indonesia Tentang Uang Elektronik* PBI No. 11/12/PBI/2009. Jakarta.
- Bank Indonesia. 2009. *Surat Edaran Bank Indonesia No 11/11/DASP Tentang Uang Elektronik*. Jakarta.
- Fatmaniawati. (2017). *Analisis penyebab sistem pembayaran tunai mendominasi sistem pembayaran non tunai (Studi kasus Glant, Ekspres, Indomaret, dan Alfamart)*. UIN Antasari Banjarmasin.
- Gunadi, A. P., & Sihombing, S. O. (2015). Prediksi penggunaan actual e-toll card dengan pendekatan persamaan model struktural. *Jurnal Manajemen Teknologi*, 14(2), 151–172.
- Ikatan Akuntan Indonesia. (2009). *Standar Akuntansi Keuangan*. Salemba Empat.
- Jasa Marga. 2006. SK. *Direksi Nomor.48/KPTS/2006 tentang Pedoman Sistem Pengumpulan Toll*. Jakarta.
- Juliandi, A., Irfan, & Manurung, S. (2014). *Metodologi Penelitian Bisnis, Konsep dan Aplikasi: Sukses Menulis Skripsi & Tesis Mandiri*. UMSU Press.
- Kholid, M. N., Urumsah, D., & Hamdani, R. (2018). Expectation Confirmation Model in the Transportation Order Applications: Gender Differences. *Proceedings of the 31st International Business Information Management Association Conference (IBIMA)*. Milan, Italy.
- Lestingsih, A. S., & Agustini, E. (2016). Hubungan penggunaan E-Toll card terhadap pendapatan tol pada PT. Jasa Marga Tbk cabang Ctc: Studi kasus gerbang tol Tebet 1. *Jurnal Online Insan Akuntansi*, 1(2), 279–298.
- Nordiawan, D., Putra, I. S., & Rahmawati, M. (2009). *Akuntansi Pemerintahan*. Salemba Empat.
- Pohan, A. (2013). *Sistem pembayaran: strategi dan implementasi di Indonesia*. Rajawali Pers.
- Republik Indonesia. 2005. *Peraturan Menteri Pekerjaan Umum No.392/PRT/M/2005 Tentang Standar Pelayanan Minima (SPM) Jalan Tol*. Sekretariat Negara. Jakarta.
- Republik Indonesia. 2017. *Peraturan Menteri Pekerjaan Umum Dan Perumahan Rakyat Nomor 16/PRT/M/2017 Tahun 2017 tentang Transaksi Tol Nontunai di Jalan Tol*. Jakarta.
- Republik Indonesia. 2005. *Peraturan Pemerintah Republik Indonesia Nomor 15 Tahun 2005 Tentang Jalan Tol*. Jakarta.
- Republik Indonesia. 1980. *Undang-Undang No.13 Tahun 1980 Tentang Jalan tol*. Jakarta.
- Republik Indonesia. 1999. *Undang-Undang Nomor Republik Indonesia Nomor 23 Tahun 1999 tentang Bank Indonesia*. Jakarta.
- Rudianto. (2010). *Akuntansi Koperasi (Kedua)*. Erlangga.
- Sugiyono. (2016). *Buku Metode Penelitian Kuantitatif Kualitatif dan R&D*. Alfabeta.
- Sukirno, S. (2006). *Makro Ekonomi*. Raja Grafindo Persada.