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THE EFFECT OF EASE OF USE OF THE SIGNAL APPLICATION (NATIONAL DIGITAL SAMSAT) ON MOTOR VEHICLE TAX REVENUE IN DKI JAKARTA

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Abstract. Motor vehicle tax plays a crucial role as one of the significant sources of Local Own-Source Revenues in regional development and policy management. One viable approach to enhancing motor vehicle tax revenue is the utilization of SIGNAL. This research aims to investigate the influence of the Ease of Use of the SIGNAL application (National Digital Motor Vehicle Tax Office) on motor vehicle tax revenue. The study uses the age, education, gender, and level of activity as control variables. The research methodology utilized is quantitative, relying on primary data. The analytical method applied in this research is linear regression. The findings of this research indicate that the ease of use of the SIGNAL application influences the acceptance of motor vehicle tax. Age and gender also have a direct and indirect impact on motor vehicle tax acceptance, whereas education level and level of busyness do not have a direct or indirect effect on motor vehicle tax acceptance.

Keywords: Tax, Taxpayer, Tax Revenue, SIGNAL Application, Samsat.

I. INTRODUCTION

Taxes are mandatory contributions to the state owed by individuals or entities that are compelling based on the Law, with no direct reward and are used for state purposes for the greatest prosperity of the people. The regulations regarding taxes as one of the regional revenues are regulated in Law Number 1 of 2022 concerning Financial Relations between the Central Government and Regional Governments (HKPD Law) as a replacement for the previous laws and regulations. However, in this research the author uses the previous regulation, Law Number 28 as a reference for the regulations used when the SIGNAL application was established. What is intended is stated in Law Number 28 concerning general provisions and tax procedures (Law of the Republic of Indonesia, 2007). Taxes are divided into two types, including central taxes that are collected and managed by the central government and local taxes that are collected and managed by the local government. One type of local tax is motor vehicle tax or commonly known as PKB. According to Law Number 28 concerning regional taxes and levies (Law of the Republic of Indonesia, 2009), Motor Vehicle Tax is a tax on ownership and / or control of motorized vehicles, both two or more wheeled motorized vehicles and their trailer used on all types of land roads, and driven by technical equipment in the form of a motor or other equipment that functions to convert a certain energy resource into the propulsion of the motor vehicle concerned, including heavy equipment and large equipment whose operation uses wheels and motors and is not permanently attached and motorized vehicles operated in water. Motor Vehicle Tax is addressed to motor vehicle owners

every year according to the due date. In Government Regulation No. 65 on Local Taxes (Government Regulation of the Republic of Indonesia, 2001), it is stated that the object of motorized vehicles is the ownership and or control of motorized vehicles. Meanwhile, the subject of motor vehicle tax is an individual or entity that owns and or controls a motor vehicle. Motor Vehicle Tax is regulated in Law Number 34 Year 2000 which was previously regulated in Law Number 18 Year 1997. The changes resulted in the expansion of the terminology of motor vehicles and the separation between motor vehicles and vehicles on water.

Motor Vehicle Tax has a very important role as one of the sources of Regional Original Revenue in the development and management of regional policies. This is in line with research by (Ferdiansyah, 2020) entitled The Effect of Motor Vehicle Tax and Motor Vehicle Title Transfer Fees on Local Original Revenue with Motor Vehicle Fuel Tax as Moderation which states that Motor Vehicle Tax has a positive and significant effect on Local Original Revenue. Regional Original Revenue (PAD) is revenue obtained by the region in accordance with local regulations and applicable laws. The purpose of PAD is to provide authority to the Regional Government to finance the implementation of regional autonomy by considering the potential owned by the region as a concrete step in realizing decentralization. PAD is an important component of local revenue in measuring financial independence for local governments. By relying on internal revenue sources, local governments can reduce dependence on central government funds or transfer funds. This is in line with research (Malau et al., 2020) entitled The Effect of Regional Original Revenue (PAD) and Capital Expenditure on Regional Financial Independence which states that Regional Original Revenue has a positive effect on Regional Financial Independence. Motorized vehicle tax as one of the sources of PAD revenue is expected to provide greater income than other sources. This is because the condition of an increasingly advanced society due to technology encourages the ownership of motorized vehicles in daily activities. This is supported by Table 1 regarding the development of the number of motorized vehicles in DKI Jakarta in seven years.

Table 1. Development of the Number of DKI Jakarta Motorized Vehicles by Type (Unit)

Year	Passenger Cars	Bus	Trucks	Motorcycle	Total
2016	2570433	29336	553320	13338593	16491682
2017	2827399	31593	587860	14137126	17583978
2018	3082616	33419	631156	15037359	18784550
2019	3310426	34905	669724	15868191	19883246
2020	3365467	35266	679708	16141380	20221821
2021	3544491	36339	713059	16711638	21005527
2022	3766059	37180	748395	17304447	21856081

Source: BPS (2023)

Based on Table 1, it can be seen that all types of motorized vehicles in DKI Jakarta show a steady increase in number from 2016 to 2022. The number of vehicles is dominated by motorcycles, which are higher than other types of vehicles and continue to increase from year to year. The second largest vehicle type is passenger cars, which also show steady growth from year to year. This growth is also in line with buses and trucks, which are much smaller than motorcycles and passenger cars, but still show a growth trend every year. This phenomenon is also supported by tables 2 and below, which show a comparison of the development of the

number of motorized vehicles in DKI Jakarta and West Java as provinces with the largest population in Indonesia.

Table 2. Comparison of the Development of the Number of Motorized Vehicles in DKI Jakarta and West Java by Type (Unit)

Year	Province	
	DKI Jakarta	West Java
2016	16491682	12844197
2017	17583978	13771596
2018	18784550	14813501
2019	19883246	15771589
2020	20221821	16107497
2021	21005528	16848545
2022	21911811	17600134

Source: BPS (2023)

Based on the data above, although West Java is the province with the largest population in Indonesia, DKI Jakarta still leads in the number of motorized vehicles so that motor vehicle tax in DKI Jakarta has a greater opportunity to be able to provide a significant increase in PAD each year through an increase in motor vehicle tax revenue. This is supported by the results of research (Febriyanti, 2011) which states that the number of motorized vehicles has a significant and positive influence on motor vehicle tax revenue. The importance of motor vehicle tax revenue for PAD forces the optimization of motor vehicle tax revenue. The factors that affect motor vehicle tax revenue are understanding of the Self Assessment system, Education Level, Income Level, Taxpayer perceptions of tax sanctions, and Service Quality (Rustiyaningsih, 2011). Service quality factors can be supported by efforts to streamline the system and service procedures so that they can be organized efficiently and effectively, in this case making it easier for taxpayers to pay taxes.

The SIGNAL (National Digital Samsat) application is a digital service that provides an annual STNK validation process, payment of Motor Vehicle Tax (PKB), and Payment of Mandatory Contribution to Road Traffic and Transportation Funds (SWDKLLJ). Using Polri database, motor vehicle data, and population information from the Directorate General of Dukcapil Kemendagri, this application is integrated nationally as an artificial intelligence (AI) system based on a mobile platform. This system provides digital services to the public by considering the interests of various related parties such as Bapenda, Jasa Raharja, and Regional Development Banks, and still paying attention to the function of monitoring the ownership of vehicles by the National Police. The various facilities offered by the SIGNAL application can support motor vehicle tax revenue through improving the quality of efficient and effective services. With this application, people have more time and flexibility to take care of tax payments and motor vehicle documents.

The benefits and ease of running the SIGNAL application in reality do not always run smoothly. Table 3 shows that from 2017 to 2020, the percentage of motor vehicle tax revenue in DKI Jakarta experienced quite striking variations. In 2017, the percentage of revenue reached 101%, indicating success in motor vehicle tax revenue seen from the realization and budget set. However, in the following year, the figure jumped to 106.9%, reflecting a higher achievement than the previous year. However, in 2019, when the National Digital Samsat

(SIGNAL) was introduced, the percentage of motor vehicle tax revenue reached 100.5%. Although still above target, there was a decline compared to the previous year. This situation became even more striking in 2020 and 2021, where the percentage of revenue only reached 82.9% and 93.8%, respectively.

Table 3. Motor Vehicle Tax Revenue 2017-2020 DKI Jakarta

Year	Budget	Realization	Percentage
2017	7.900.000.000.000	8.005.898.498.574	101%
2018	8.000.000.000.000	8.553.632.204.643	106,9%
2019	8.800.000.000.000	8.844.155.231.721	100,5%
2020	9.500.000.000.000	7.879.223.484.468	82,9%
2021	9.100.000.000.000	8.532.903.649.938	93,8%
2022	9.102.553.000.000	9.404.927.298.262	103,3%

Source: Ministry of Finance

The inability to achieve 100% in 2020 and 2021, especially after the introduction of the National Digital Samsat (SIGNAL) in 2019, shows a contradiction between the objectives of the National Digital Samsat (SIGNAL) in improving efficiency in tax collection. Although in that year the COVID-19 phenomenon hit the world, it did not have a negative impact on tax revenue. On the contrary, technological improvements will encourage the growth of tax revenue, especially in the motor vehicle sector. This is supported by research (Hasna & Nurhayati, 2022) which states that the adoption of the e-Samsat system as a form of evidence of technological development is one of the main factors for people to pay motor vehicle taxes during the COVID-19 period. Through the e-Samsat system, people can pay Motor Vehicle Tax (PKB) non-cash with an easier process and reduce face-to-face interactions to avoid the spread of the COVID-19 virus. With the convenience of online motor vehicle tax payments, people are more likely to comply with their obligations, so that tax revenues not only remain stable, but also increase. Some factors that may explain the decline in revenue in the year after the SIGNAL application are potential technical constraints in the implementation of the National Digital Samsat (SIGNAL), failure to manage data effectively, and perceived ease of use. Perceived ease of use is the extent to which a person believes that a technology is easy to understand and run so that it creates a benefit. Based on this background, this study will raise a discussion of the Effect of Ease of Use of the SIGNAL (National Digital Samsat) Application on Motor Vehicle Tax Revenue with the variables of age, education, gender, and level of busyness as control variables which are variables that are indicated to have an influence on motor vehicle tax revenue in DKI Jakarta, especially when the National Digital Samsat (SIGNAL) application is realized as a motor vehicle tax payment.

II. LITERATURE

A. Demand Theory

According to Gregory Mankiw, demand is the amount of goods or services that the public is able to buy or pay for. In the context of this study, demand refers to the amount of tax paid by motor vehicle taxpayers. The demand function according to (Boediono in Rendy, 2018) is the relationship between the amount of demand for goods or services and the factors that can influence it. According to (Tasman and Aima in Andarwati, 2019), the variable that can affect demand is the seller's service strategy which, when associated with this research, seller services

refer to the government's strategy by utilizing the SIGNAL application in improving the efficiency of public services so that the demand function can be written as follows:

$$Qd = f(P,U)$$

Qd = number of people who pay motor vehicle tax
P = motor vehicle tax cost
U = use of the SIGNAL application

In this study, the focus is on the use of the SIGNAL application in this case the ease of use of SIGNAL in influencing the number of people who pay motor vehicle taxes.

B. Motor Vehicle Tax Revenue

According to Law No. 28 on local taxes and levies (Law of the Republic of Indonesia, 2009), motor vehicle tax is a tax on the ownership and/or control of motor vehicles. Based on this definition, what is meant by motorized vehicle tax revenue is the total amount of tax revenue obtained from motorized vehicles.
motor vehicle owners. The motor vehicle tax revenue is obtained through the following formula

$$R = PxQ$$

R = motor vehicle tax revenue
P = motor vehicle tax rate
Q = number of people who pay motor vehicle tax

C. Motor Vehicle Tax

Motor Vehicle Tax is a tax on the ownership and/or control of motorized vehicles, either two-wheeled or more motorized vehicles. The motor vehicle tax collection process is carried out at the Samsat joint office and involves several government agencies, including the Regional Revenue Agency, the Indonesian National Police, and PT (Persero) Jasa Raharja Loss Insurance. Thus, this provision confirms that motor vehicle tax involves an administrative process that involves collaboration between government agencies and business entities, with the aim of ensuring that motor vehicle tax collection takes place transparently and in accordance with applicable legal provisions.

D. National Digital Samsat (SIGNAL)

On September 21, 2021, the government presented a new innovation in the form of an application called Samsat Digital Nasional (SIGNAL) which can be used to pay motor vehicle taxes via Android and iOS. The SIGNAL application will make it easier for people to pay taxes (Devaranti et al., 2023). SIGNAL allows people to pay motor vehicle taxes more easily and practically. Through this application, the annual STNK validation process and payment of motor vehicle tax along with SWDKLLJ can be done easily, online, anywhere and anytime, "One Stop Service". Signal uses artificial intelligence technology in recognizing the faces of application users who are connected to the Population and Civil Registry (Dukcapil) database. User data will be compared with the motor vehicle registration database, namely the Electronic Registration and Identification (ERI) managed by the Police Traffic Corps. Using this application

can be done easily, simply by registering yourself and stating individual vehicle ownership data. Currently, SIGNAL is widely recognized by the public in Indonesia. This is supported by the wide reach of this application to 27 Provinces in Indonesia so that the convenience can be felt by the wider community with the number of downloaders currently reaching more than 1,000,000 users.

E. Ease of Use

According to (Sati & Ramaditya, 2020), perceived ease of use can influence individuals in using a system. The TAM (Technology Acceptance Model) theory developed by Davis in 1989 has the main objective of predicting how systems are accepted and used by users. This theory is designed to describe users' understanding and perceptions of the benefits of using technology and information. According to (Charness & Boot, 2015), individual behavior when using a system is influenced by two key factors, namely perceived ease of use and perceived usefulness. In the context of this study, researchers focus on the perceived ease of use aspect, which is one of the key elements in TAM theory. The main focus of this theory is an understanding of the extent to which users feel that using a system is easy and can be accessed smoothly so that it can affect user attitudes and behavior towards the system being studied.
According to (Davis, 1989), ease of use refers to the level or condition in which an individual believes that the use of a system does not require significant effort (free of effort) or that the technology can be easily understood by users. Meanwhile, according to (Yogananda & Dirgantara, 2017), ease of use refers to the extent to which information technology is considered relatively easy for users to understand and use. Meanwhile, according to (Joan & Sitinjak, 2019), individual interest in utilizing technology will increase if they have high confidence that technology can be used easily without difficult effort.

F. Research Hypothesis

1. There is an Effect of Ease of Use of the SIGNAL Application on Motor Vehicle Tax Revenue in DKI Jakarta
2. There is a Direct Effect of Age, Education, Gender, and Busyness Level on Motor Vehicle Tax Revenue in DKI Jakarta.
3. There is an Indirect Effect of Age, Education, Gender, and Busyness Level on Motor Vehicle Tax Revenue in DKI Jakarta.

III. RESEARCH METHODOLOGY

A. Data Type and Source

This research uses quantitative methods. The quantitative approach according to (Sugiyono, 2022) is a method that uses data in the form of numbers and statistical analysis to produce conclusions that can be applied in general based on the sample that has been analyzed. The data source in this study is primary data which comes from the research source directly by the researcher.

B. Population and Sample

Population refers to a generalization area consisting of objects or subjects with specific quantities and characteristics that have been determined by researchers to study and draw conclusions (Sugiyono, 2022). Researchers determine the population in this study are people who have used the National Digital Samsat (SIGNAL) application.

The sample is part of the properties or characteristics that exist in the population (Sugiyono, 2022). This study uses a nonprobability sampling method with purposive sampling as the sampling technique. The purposive sampling technique is a sample selection method that is carried out by considering certain criteria set by the researcher (Sugiyono, 2022). The criteria for respondents in this study include domicile in DKI Jakarta, already have a driver's license, own a motorized vehicle, have / are using the SIGNAL application. Due to the unknown population, the number of samples in this study was determined by the Cochran formula with a minimum sample of 96.04 or rounded up to 96 samples.

C. Data Collection Method

The data collection technique used is a questionnaire distributed online related to users of the National Digital Samsat application (SIGNAL). The questionnaire distributed contains several statements and answer options where each respondent is asked to choose the most appropriate answer from the options provided. Each answer given by the respondent has a numerical score or value. The assessment in this study uses a Likert scale as a measurement instrument used to analyze questionnaire data.

D. Operational Definition of Variables

Table 4. Operational Definition

Variables	Definition	Indicator	Question Item	Measurement Scale
Ease of Use (X)	Ease of use refers to the extent to which information technology is considered relatively easy for users to understand and use.	Easy to learn	Using the SIGNAL app is easy to learn	Ordinal
			Features on the SIGNAL app are easy to learn	
			The payment stages in the SIGNAL app are easy to learn	
		Easy to use	SIGNAL app is easy to operate	
			SIGNAL app is easy to access	
			SIGNAL app is easy to install	
		Clear and easy to understand	Information on the SIGNAL app is clear and easy to understand	
			The main display of the SIGNAL app is clear and easy to understand	
			The SIGNAL app has features that are clear and easy to understand	
Motor vehicle tax revenue (Y)	Motor vehicle tax revenue measured in the short term. Motor vehicle tax is a tax on the ownership and/or control of	Taxpayer discipline in motor vehicle tax payments	I have an awareness of the importance of paying motor vehicle tax	Ordinal
			I tend to be obedient in paying motor vehicle tax	

Variables	Definition	Indicator	Question Item	Measurement Scale
	motorized vehicles.		I have never been in arrears in motor vehicle tax payments	
Age (C1)	Age of Individual	-	Age (Year)	Year
Education (C2)	Highest level of education attended	-	Last Education	Elementary, middle school, high school, university
Gender (C3)	Individual Gender	-	Gender (1=Female, 0=Male)	Dummy
Busyness Level	The level of busyness and limited time owned by taxpayers	Busyness level	I find it difficult to remember or take the time to make motor vehicle tax payments due to the busyness of your daily activities.	Ordinal
		Time Limitations	I find it difficult to remember or take the time to make motor vehicle tax payments due to time constraints in your daily activities.	Ordinal

Source: Author (2023)

E. Data Analysis Method

This study uses multiple linear regression analysis methods. Multiple linear regression analysis is a technique used to assess the influence or relationship between the independent variable and the dependent variable (Sugiyono, 2022). In this study, multiple linear regression equations were used to determine how much influence the ease of use of the National Digital Samsat (SIGNAL) application (X) had on motor vehicle tax discipline (Y). The multiple linear regression formula in this study is as follows:

$$Y=\beta0+\beta1\cdot SGL+\beta2\cdot U+\beta3\cdot PEND+\beta4\cdot JK+\beta5\cdot TK+\beta6\cdot (SGL\cdot U)+\beta7\cdot (SGL\cdot PEND)+\beta8\cdot (SGL\cdot JK)+\beta9\cdot (SGL\cdot TK)+\epsilon$$

Description:

Y = Motor Vehicle Tax Discipline

SGL = Ease of Use of the SIGNAL Application

U = Age

PEND = Education

JK = Gender

TK = Busyness Level

SGL.U = Interaction of SGL variable with U

SGL.PEND = Interaction of SGL variable with PEND

SGL.JK = Interaction of SGL variable with JK

SGL.TK = Interaction of SGL variable with TK

β0 = Constant

$\begin{bmatrix} \beta1, \beta2, \beta3, \beta4, \\ \beta5, \beta6, \beta7, \beta8, \beta9 \end{bmatrix}$ = Regression Coefficient

ϵ = Error

IV. RESULT AND DISCUSSION

A. Respondent Characteristics

The respondents totaled 150 and met the criteria set. Distribution analysis on the questionnaires that have been distributed provides a grouping of respondents based on the variables used, including the following:

1. By Age
   Respondents in this study were aged from 22-24 years as many as 24 people, respondents aged 25-27 years were 43 people as well as the largest number in the age category, while respondents aged 28-30 years were 34 people, and respondents aged 31-33 were 27 people, while respondents aged 34-36 were 22 people.
2. Based on Education
   The number of respondents who had the latest tertiary education or had studied for 16 years was 50 people or 33.3% of the total respondents. Meanwhile, respondents who had the latest high school / MA / equivalent education or had studied for 12 years amounted to 92 people or 61.3% of the total respondents, as well as being the largest number of respondents in the education category. Meanwhile, for respondents with the last education of SLTP / MTs / equivalent or equivalent to 9 years, there were 8 people or 5.3% of the total respondents.
3. By Gender
   The number of respondents with either female or male gender has the same number, namely 75 people or 50% of the total respondents.
4. By Ease of Use Type

Table 5. Characteristics of Respondents Based on Ease of Use

Question Item	Frequency of each score										Total
	5	Total	4	Total	3	Total	2	Total	1	Total	
Using the SIGNAL app is easy to learn	94	470	36	144	20	60	0	0	0	0	674
Features on the SIGNAL app are easy to learn	84	420	28	112	30	90	8	16	0	0	638
The payment stages in the SIGNAL app are easy to learn	81	405	29	116	33	99	7	14	0	0	634

Question Item	Frequency of each score										Total
	5	Total	4	Total	3	Total	2	Total	1	Total	
SIGNAL app is easy to operate	81	405	33	132	22	66	14	28	0	0	631
SIGNAL app is easy to access	85	425	38	152	20	60	7	14	0	0	651
The SIGNAL app is easy to install	81	405	46	184	21	63	2	4	0	0	656
Information on the SIGNAL app is clear and easy to understand	76	380	29	116	35	105	10	20	0	0	621
The main display of the SIGNAL app is clear and easy to understand	95	475	37	148	16	48	2	4	0	0	675
The SIGNAL app has features that are clear and easy to understand	97	485	37	148	15	45	1	2	0	0	680

Source: Primary Data Processing (2024)

Table 5 shows that the highest total score is on the ninth question item, namely the SIGNAL application has clear and easy to understand features with a score of 680. This shows that respondents agree that the item of using the SIGNAL application that best supports users in paying motor vehicle taxes is a clear and easy to understand feature of the SIGNAL application. Meanwhile, the lowest score is on the seventh question item, namely the information in the SIGNAL application is clear and easy to understand with a total score of 621. This shows that respondents agree that the item using the SIGNAL application that hinders paying motor vehicle taxes is information on the SIGNAL application that is less clear and difficult to understand.

B. Validity Test

Variable indicators have been considered valid after going through the validity test, namely if the value of r count> t table. With a total of 150 respondents and a significance level of 5%, the t table is 0.159 the test results of all indicators representing each variable in the questionnaire have been considered valid with the following results.

Table 6. Results of the Validity Test of Variable X (Ease of Use of the SIGNAL Application)

Question Item	R Count	R table	Description
SGL1	0.2180	0.159	VALID
SGL2	0.5937	0.159	VALID
SGL3	0.5529	0.159	VALID
SGL4	0.6328	0.159	VALID
SGL5	0.6054	0.159	VALID
SGL6	0.2669	0.159	VALID
SGL7	0.5578	0.159	VALID
SGL8	0.4908	0.159	VALID
SGL9	0.4221	0.159	VALID

Source: Primary Data Processing (2024)

Table 7. Results of Validity Test of Variable Y (Motor Vehicle Tax Discipline)

Question Item	R Count	R table	Description
PP1	0.7579	0.159	VALID
PP2	0.8189	0.159	VALID
PP3	0.8673	0.159	VALID

Source: Primary Data Processing (2024)

C. Reliability Test

Reliability is considered valid if the Cronbachs' alpha value is> 0.6. Based on the test results that have been carried out, it is stated that all variables are reliable with the following test results.

Table 8. Reliability Test Results

Variables	alpha	Description
Ease of Use of the SIGNAL Application	0.6101	RELIABLE
Motor Vehicle Tax Discipline	0.7487	RELIABLE

Source: Primary Data Processing (2024)

D. Normality Test

The normality test is used to test whether the independent and dependent variables are normally distributed. The data requirements are normally distributed if the significant value is greater than alpha (0.05). The results of the normality test in the study are as follows:

Table 9. Normality Test Results (Shapiro Wilk Test)

Variable	Sig	Alpha	Description
Motor Vehicle Tax Discipline	0.65369	0,05	NORMALLY DISTRIBUTED
Ease of Use of the SIGNAL Application	0.11455	0,05	NORMALLY DISTRIBUTED
Age	0.05923	0,05	NORMALLY DISTRIBUTED
Education	0.12972	0,05	NORMALLY DISTRIBUTED

Variable	Sig	Alpha	Description
Gender	1.00000	0,05	NORMALLY DISTRIBUTED
Busyness Level	0.06100	0,05	NORMALLY DISTRIBUTED
Motor Vehicle Tax Discipline	0.65369	0,05	NORMALLY DISTRIBUTED
Ease of Use of the SIGNAL Application	0.11455	0,05	NORMALLY DISTRIBUTED
Age	0.05923	0,05	NORMALLY DISTRIBUTED

Source: Primary Data Processing (2024)

From the test results in table 9, all variables show a significant value greater than alpha (0.05) so it can be concluded that the data is normally distributed.

E. Multicollinearity Test

The multicollinearity test is used to test whether there is a relationship between the independent variables in the regression model. If the VIF value <10 or the tolerance value> 0.01, it can be concluded that there is no multicollinearity. The multicollinearity test results are as follows:

Table 10. Multicollinearity Test Results

Variable	VIF	Tolerance	Description
Ease of Use of the SIGNAL Application	6.76	0.147822	No Multicollinearity Problem
Age	9.55	0.104695	No Multicollinearity Problem
Education	2.61	0.383842	No Multicollinearity Problem
Gender	3.83	0.261162	No Multicollinearity Problem
Busyness Level	9.69	0.103217	No Multicollinearity Problem
Ease of Use of the SIGNAL Application	6.76	0.147822	No Multicollinearity Problem
Age	9.55	0.104695	No Multicollinearity Problem
Education	2.61	0.383842	No Multicollinearity Problem
Gender	3.83	0.261162	No Multicollinearity Problem

Source: Primary Data Processing (2024)

From table 10, it is known that all variables have a VIF value <10 and a tolerance value> 0.01 so it can be concluded that all variables do not have multicollinearity problems.

F. Heteroscedasticity Test

The heteroscedasticity test is a test used to see if there is an inequality in the residual variance from the residuals of one observation to another. Researchers use the Breusch-Pagan test with the conclusion that there is no heteroscedasticity if the significant value> 0.05. The results of heteroscedasticity testing are as follows:

Table 11. Heteroscedasticity Test Results

Sig	Description
0.1975	No Heteroscedasticity Problem Occurs

Source: Primary Data Processing (2024)

From table 11, it is known that the significance value> 0.05 so it can be concluded that there is no heteroscedasticity.

G. Coefficient of Determination (R^2)

The coefficient of determination test is a test used to measure how much the model's ability to explain the dependent variables. The results of testing the coefficient of determination in this study are as follows:

Table 12. Results of the Coefficient of Determination (R^2)

R-square	%
0.9855	98%

Source: Primary Data Processing (2024)

Based on table 12, the *R-Square* value is 0.9855 or 98% so it can be concluded that the influence of the independent variable has an influence on the dependent variable by 98% then the remaining 2% is influenced by other variables not explained in the model.

H. Test t (Partial Test)

The t test or passive hypothesis test is used to determine whether the independent variables individually have a significant relationship to the dependent variable and how far the influence of each independent variable is on the dependent variable. If the p-value of each independent variable is less than alpha or <0.05, it can be concluded that the independent variable has a significant effect on the dependent variable.

Table 13. t Test Results (Partial Test)

Variable	Sig	Description
Ease of Use of the SIGNAL Application	0.000	Significant
Age	0.046	Significant
Education	0.490	Not Significant
Gender	0.000	Significant
Busyness Level	0.245	Not Significant
KP SIGNAL*Age	0.002	Significant
KP SIGNAL*Education	0.246	Not Significant
KP SIGNAL*Gender	0.000	Significant
KP SIGNAL*Busy Level	0.117	Not Significant

Source: Primary Data Processing (2024)

Based on table 13, it is obtained that the variables of ease of use of the SIGNAL application, age, gender both directly and indirectly partially have a significant influence on the discipline of motor vehicle taxpayers. Meanwhile, for the education variable, the level of busyness either directly or indirectly partially does not have a significant effect on the discipline of motor vehicle taxpayers.

I. Test f (Simultaneous Test)

The f test or simultaneous hypothesis test is used to determine the effect of the independent variables together on the dependent variable. The independent variables are said to have a significant effect together on the dependent variable if the significance <0.05. The results of the f test are as follows:

Table 14. Test Results f (Simultaneous Test)

Prob > F
0.0000

Source: Primary Data Processing (2024)

Based on table 14, obtained *Prob>F of* 0.0000 or smaller than 0.05 so it can be concluded that simultaneously the ease of use of the SIGNAL application, age, education, gender, and level of busyness have a significant effect on the discipline of motor vehicle taxpayers.

J. Multiple Linear Regression Analysis

Multiple linear regression is an analysis used to see the direct and indirect effects between the ease of use of the SIGNAL application, age, education, gender, and level of busyness on the discipline of motor vehicle taxpayers in DKI Jakarta. The results of linear regression in this study are as follows:

Table 15. Multiple Linear Regression Results

Variable	Coefficient	Standarized Coefficient
Ease of Use of the SIGNAL Application	.731927	1.504701
Age	.3233078	.6623831
Education	-.1448527	-.1636593
Gender	17.39258	4.664681
Busyness Level	.3317204	.391197
KP SIGNAL*Age	-.0135022	-.4654217
KP SIGNAL*Education	.0062977	.4292416
KP SIGNAL*Gender	-.4366802	-4.956248
KP SIGNAL*Busy Level	-.0115806	-.3991781

Source: Primary Data Processing (2024)

Based on the results of multiple linear regression tests in table 15, the direct and indirect effects of the independent variables on the dependent variable are known with the following interpretation:

1. The variable ease of use of the SIGNAL application has a positive coefficient value of 0.731927. From these results it can be concluded that every increase in the ease of use of the SIGNAL application felt by users, it will increase the discipline of taxpayers in DKI Jakarta in paying motor vehicle taxes by 0.731927 times.
2. The age variable has a positive coefficient value of 0.3233078. From these results it can be concluded that every increase in the age of motor vehicle taxpayers in DKI Jakarta, it will increase the discipline of taxpayers in DKI Jakarta in paying motor vehicle taxes by 0.3233078 times.
3. The education variable has a negative coefficient value with a coefficient value -0.1448527. From these results it can be concluded that every increase in taxpayer education in DKI

Jakarta, it will reduce the discipline of taxpayers in DKI Jakarta in paying motor vehicle taxes by 0.1448527 times.

4. The gender variable has a positive coefficient value of 17.39258. From these results it can be concluded that women tend to be more disciplined in paying motor vehicle taxes than men by 17.39258 times.
5. The level of busyness variable has a negative coefficient value with a coefficient value of 0.3317204. From these results it can be concluded that every increase in the level of taxpayer busyness in DKI Jakarta will increase the discipline of taxpayers in DKI Jakarta in paying motor vehicle taxes by 0.3317204 times.
6. The interaction between the ease of use of the SIGNAL application and age has a negative coefficient value of -0.0135022. From these results it can be concluded that every increase in the interaction between the ease of use of the SIGNAL application and the age of taxpayers in DKI Jakarta, it will reduce the discipline of taxpayers in DKI Jakarta in paying motor vehicle taxes by 0.0135022 times.
7. The interaction between the ease of use of the SIGNAL application and education has a positive coefficient value with a coefficient value of 0.0062977. From these results it can be concluded that every increase in the interaction between the ease of use of the SIGNAL application and education in DKI Jakarta will increase the discipline of taxpayers in DKI Jakarta in paying motor vehicle taxes by 0.0062977 times.
8. The interaction between the ease of use of the SIGNAL application and gender has a negative coefficient value of -0.4366802. From these results it can be concluded that men when using the SIGNAL application tend to be more disciplined in paying motor vehicle taxes than women by 0.4366802 times.
9. The interaction between the ease of use of the SIGNAL application and the level of busyness has a negative coefficient value with a coefficient value of -0.0115806. From these results it can be concluded that every increase in the interaction between the ease of use of the SIGNAL application and the level of busyness of taxpayers in DKI Jakarta, it will reduce the discipline of taxpayers in DKI Jakarta in paying motor vehicle taxes by 0.0115806 times.
10. Standarized Coefficient is a measure used to compare the magnitude of the influence of each independent variable on the dependent variable in the model in regression analysis. The results of the existing coefficient have been adjusted so that independent variables that have different units of measure can be compared directly in the analysis so that researchers can assess the greatest contribution of the independent variable to the dependent variable. In this study, it can be seen that the gender variable has the greatest influence on motor vehicle tax revenue in DKI Jakarta with a Std Coefficient of 4.664681 followed by the ease of use of the SIGNAL application with a Std Coefficient of 1.504701 and age with a Std Coefficient of 0.6623831.

K. Discussion

Based on the results of multiple linear regression testing that has been carried out, it is concluded that the ease of use of the SIGNAL application, age, gender directly and indirectly partially have a significant influence on the discipline of motor vehicle taxpayers, Meanwhile, for the education variable, the level of busyness both directly and indirectly partially does not have a significant influence on the discipline of motor vehicle taxpayers. The description of how the influence of each independent variable on the dependent variable will be explained below.

1. The Effect of Ease of Use of the SIGNAL Application on the Discipline of Motor Vehicle Taxpayers in DKI Jakarta

Based on the results of linear regression analysis, a positive coefficient of 0.731927 is obtained with a significance of 0.000 (<0.05), which indicates that hypothesis H1 is accepted and H0 is rejected. This shows that the ease of use of the SIGNAL application has a significant positive effect on the discipline of motor vehicle taxpayers. The easier the SIGNAL application is used, the higher the level of taxpayer discipline in paying motor vehicle tax.

This convenience makes the tax payment process more practical, thus increasing taxpayer discipline. This finding is consistent with the TAM (Technology Acceptance Model) theory, which states that perceived ease of use (Perceived Ease of Use) influences attitudes and behavior towards the system. In this context, the ease of use of the SIGNAL application affects taxpayer discipline.

This result is also in line with Paul Romer's Endogenous Growth Theory, which states that economic development is influenced by technology, physical capital, and human resources, where an increase in one of these factors will increase output. Research (Farmansyah & Isnalita, 2020) supports this, that the use of technology can increase the efficiency of the public sector. This research is also in line with the findings of (Lauwrenza, 2023), which states that the easier it is to use the SIGNAL application, the higher the compliance of motor vehicle taxpayers.

2. The Effect of Age, Education, Gender, and Busyness Level Directly on the Discipline of Motor Vehicle Taxpayers in DKI Jakarta

The results of the regression analysis show that age has a significant positive effect on the discipline of motor vehicle taxpayers in DKI Jakarta, with a positive coefficient of 0.3233078 and a significance value of 0.046 (<0.05). This means that the older a person is, the higher the discipline in paying motor vehicle taxes. Taxpayers with higher age tend to have better financial stability, more mature legal understanding, and awareness of the importance of taxes for infrastructure and public services. This result is in accordance with research (Hariyanis et al., 2023), which states that higher age groups have better levels of tax compliance.

Education does not have a significant influence on the discipline of motor vehicle taxpayers in DKI Jakarta, with a negative coefficient of -0.1448527 and a significance value of 0.490 (> 0.05). This shows that a high level of formal education does not guarantee an understanding of the importance of paying taxes. This result is different from research (Widia & Yasa, 2021), which found that education has a positive effect on taxpayer compliance. Formal education has not fully provided relevant knowledge about tax responsibilities. Other factors such as taxpayer knowledge (Barlan et al., 2021) and taxpayer awareness (Aswati et al., 2018) have a greater influence on taxpayer discipline than formal education.

Gender has a significant positive effect on the discipline of motor vehicle taxpayers in DKI Jakarta, with a positive coefficient of 17.39258 and a significance value of 0.000 (<0.05). Women have a higher level of discipline than men. This is consistent with research (Hai and See in Fitriyani et al., 2014) and (Asante and Baba in Fitriyani et al., 2014), which show that women are more compliant in paying taxes. Women tend to be more involved in household finances, have a higher perception of legal risk, and comply with the rules set by the government, so they are more disciplined in paying motor vehicle taxes.

The level of busyness does not have a significant influence on the discipline of motor vehicle taxpayers in DKI Jakarta, with a positive coefficient of 0.3317204 and a significance value of 0.245 (> 0.05). A person's busyness does not directly influence the decision to pay taxes. Other

factors such as income have a more significant effect on taxpayer discipline, as stated in research (Fatmawati & Adi, 2022). In this study, respondents tended to consider income more than their level of busyness in fulfilling motor vehicle tax obligations.

3. The indirect effect of age, education, gender, and busyness level on the discipline of motor vehicle taxpayers in DKI Jakarta.

The regression analysis results show that the interaction of age and ease of use of the SIGNAL application has a significant negative effect on the discipline of motor vehicle taxpayers in DKI Jakarta, with a negative coefficient of -0.0135022 and a significance value of 0.002 (<0.05). This means that younger taxpayers tend to have higher discipline in paying motor vehicle taxes when using the SIGNAL application. Younger age groups are more familiar with technology and are quicker to adopt digital payment options than older age groups. By using the SIGNAL application, they find the process more efficient and convenient, thus increasing discipline in tax payments. This is in line with research (Rais et al., 2018), which states that age affects understanding and utilization of technology, where young people have a higher understanding of utilizing technology.

The interaction of education and ease of use of the SIGNAL application has no significant effect on the discipline of motor vehicle taxpayers in DKI Jakarta, with a positive coefficient of 0.0062977 and a significance value of 0.246 (> 0.05). This shows that a high level of formal education does not always guarantee an understanding of the use of the SIGNAL application. Formal education does not fully cover education related to technology development and its application in everyday life, so individuals with higher education may experience limitations in using the SIGNAL application. In addition, the digital divide is a factor that affects the ability to access and use digital technology, including the SIGNAL app.

The interaction of gender and ease of use of the SIGNAL application has a significant negative effect on the discipline of motor vehicle taxpayers in DKI Jakarta, with a negative coefficient of -0.4366802 and a significance value of 0.000 (<0.05). The results show that men have a higher level of discipline than women in using the SIGNAL application to pay motor vehicle taxes. Men tend to be more interested in technology and have wider access to technology, so they have better skills in its use. Men are also more likely to choose efficient solutions, such as the SIGNAL app, to make tax payments easier.

The interaction of the level of busyness and ease of use of the SIGNAL application does not have a significant influence on the discipline of motor vehicle taxpayers in DKI Jakarta, with a negative coefficient of -0.0115806 and a significance value of 0.117 (> 0.05). This means that even though individuals have a lower level of busyness, it does not affect their decision to pay motor vehicle tax when using the SIGNAL application. Less busy taxpayers may still face limited access or technological knowledge in using the SIGNAL app. Other factors, such as tax awareness and sanctions, are more influential on taxpayer discipline, as mentioned in research (Harlia et al., 2022), which shows that tax awareness and sanctions affect taxpayer compliance.

V. CONCLUSION

This study shows that the ease of use of the SIGNAL application has a significant influence on the discipline of motor vehicle taxpayers in DKI Jakarta. The higher the perceived ease of use, the higher the taxpayer discipline. This result is consistent with previous research.

Education and busyness do not have a significant influence, either directly or indirectly, on taxpayer discipline. Other factors, such as income, awareness, and sanctions, may play a greater role in influencing motor vehicle tax payments.

Age has a significant influence both directly and indirectly. Directly, age has a positive effect as older generations tend to have financial stability and a better understanding of legal obligations. However, indirectly, age has a negative effect as younger generations are more skilled at using SIGNAL apps.

Gender has a significant influence both directly and indirectly. Directly, women are more disciplined in paying taxes as they are often involved in household financial management. Indirectly, men are more skilled at using technology such as the SIGNAL application, which increases the efficiency of motor vehicle tax payments.

Overall, this study provides important insights for the government and service providers to increase motor vehicle tax revenue by paying attention to factors that influence taxpayer discipline.

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