Engineering
And Technology
International Journal
(EATIJ)

Analysis System of the Effect of Tax Rates on the Number of Goods Sent at the Post Office

Albertus L. Setyabudhi*[1],

[1]Jln. Teuku Umar Lubuk Baja, Telp 0778 425 391 Fax 458394 Batam 29432
Program Studi Teknik Industri, Universitas Ibnu Sina, Batam
e-mail: *[1]abyan@ac.id,

Abstract

Application for changes to the minimum amount of Taxable Goods in PMK No. 19 the amount of tax owed. As a result, there is a decrease in interest in sending through the post office, this study was conducted to determine the extent of the impact of changes in tax rates on shipping so that it can be a reference for companies. Changes in tax rates affect the number of deliveries at the post office. and there is a very strong influence or 91.3% of the dependent variable can be influenced by the independent variable, while 8.7% is influenced by other variables not examined.

Keywords— Changes in Tax Rates, Shipping Amount

PRELIMINARY

As we know that in 2020, the transition to new policy regulations regarding the threshold for exemption (de minimis) of import duties via e-commerce has been lowered to $3 or the equivalent of Rp 42,000, - (exchange rate of Rp. 14,000, -) from the previous one. $75. This has been regulated in Minister of Finance Regulation (PMK) 199 of 2019 concerning provisions for customs, excise and import taxes on goods shipped from a city. So that it affects the number of shipments of goods to other parts of Indonesia on the number of deliveries at the Post Office.
The application of changes to the minimum number of goods subject to tax in PMK No. 199/2019 from the original US$75, fell sharply to US$3 and has been running since January 30, 2020. This policy applies to shipments to other parts of Indonesia, but does not apply to overseas destinations or international shipments.

Table 1.1 Policy on Tax and Duties Tariffs for one city

Kategori	≤ USD 3	> USD 3		
	Pajak	Bea Masuk	PPN	PPh (PPh 22)
Luggage and Bags	10%	15% - 20%	10%	7.5% - 10%
Shoes	10%	25% - 30%	10%	7.5% - 10%
Textile	10%	15% - 25%	10%	7.5% - 10%
Others	10%	7.5%	10%	0%

So that it makes consumers, especially online e-commerce business players, become quiet buyers and are more likely to buy products or goods from outside the city and make post office

consumers usually want to send goods to their families or relatives in the village to be constrained by the large tax costs incurred. must be paid.

RESEARCH METHODS

Data Processing and Data Analysis Methods
Validity test

Validity (validity) is related to the problem of "whether the instrument intended to measure something can indeed measure exactly what is being measured", in short it can be said that the validity of the tool questions whether the tool can measure what is being measured. The instrument validity test can use the Pearson Product Moment correlation technique. The product moment correlation formula according to Sugiyono (2014) is as follows:

$$r_{xy} = \frac{n\Sigma X_i Y_i - (\Sigma X_i)(\Sigma Y_i)}{\sqrt{\left[n\Sigma X_i^2 - (\Sigma X_i)^2\right]\left[n\Sigma Y_i^2 - (\Sigma Y_i)^2\right]}}$$

Information:
r_{xy} = Coefficient
Correlation N =
Number of Samples
ΣX = Total score for variable question items X
ΣY = Total score for variable question items Y

According to Sugiyono (2014), usually the minimum requirements to be considered eligible are as follows:

a. If r ≥ 0.30, then the question items from the questionnaire are valid,
b. If r ≤ 0.30, then the question items from the questionnaire are invalid.

Partial Test (t Test)

the effect of the independent variable partially on the dependent variable. The form of the test is as follows:

Ho : 1 = 0 meaning that changes in tax rates have no effect on the number of deliveries at the post office.
Ha : 1 ≠ 0 This means that changes in tax rates affect the number of deliveries at the post office.

This test aims to test how the partial effect of the independent variable on the dependent variable is by comparing ttable and tcount. Each t calculation result is then compared with the table obtained using a significance level of 0.05.

The following is the formula for testing the significance of the correlation coefficient obtained as follows:

$$t_{kit} = \frac{r_{xy}\sqrt{(n-2)}}{\sqrt{(1-r_{xy}^2)}}$$

Where :

t = Significant level (t count) which is then compared with t table
r = Correlation coefficient
n = Number of samples

This t distribution is determined by the degree of error dk = n-1 . The criteria used are as follows:

a. H0 is rejected if < 0.05 and tcount > ttable
b. H0 is accepted if > 0.05 and tcount < ttable

If H0 is accepted, it can be concluded that there is an insignificant effect, whereas if H0 is rejected, the effect of the independent variable on the dependent is significant.

Then determine the decision model using the t test statistic, by looking at the following assumptions:

a. Confidence interval = 0.05
b. Degrees of freedom = n-2

Then determine the decision model using the t test statistic, by looking at the following assumptions:

a. Confidence interval = 0.05
b. Degrees of freedom = n-2
c. View the results t table

The results of the t-count hypothesis are compared with the t-table with the following criteria:

a. If tcount > ttable at = 5% then Ho is rejected and H1 is accepted (influential)
b. If tcount < ttable = 5% then Ho is accepted and H1 is rejected (no effect)

RESULTS AND DISCUSSION

Research Respondent Identity

1. Respondents by Gender This study involved male and female respondents without a certain proportion:

Table 1 Respondents by gender

No	Gender	Number of Respondents	percentage
1	Man	15	30%
2	Woman	35	70%
Total		50	100%

Based on table 1 data collection from 50 respondents. The number of male respondents is 15 or 30% and the number of female respondents is 35 or 70%, so that the number of female respondents is more dominant than the number of male respondents.

Respondents by Age

Age is often a determinant of actions or decisions or behavior related to a product or service. The age scheduling of respondents who make transactions can be seen as follows:

Table 2 Respondents by Age

No	Age	Number of Respondents	Percentage
1	< 25	10	20%
2	25-40	30	60%
3	41-60	10	20%
	Total	50	100%

Based on table 3.2 that most of the age of respondents who make transactions between 25-40 years, as many as 30 consumers or 60% is the largest number of transactions aged respondents, while those aged 41-60 years are 10 consumers or 20%, and those aged <25 year as many as 10 consumers or 20%.

Respondents by Occupation

Work often influences actions or decisions or behavior related to products, goods or services. Scheduling of respondents based on work can be seen as follows.

Table 3 Respondents by occupation

No	Work	Number of Respondents	Percentage
1	Trader	30	60%
2	Businessman	15	30%
3	Private employees	5	10%
	Total	50	100%

Based on table 3.3, it can be seen that the work of some respondents is as a trader as many as 30 consumers or 60%, followed by respondents who work as entrepreneurs as many as 15 consumers or 30%, while respondents who work as private employees are 5 consumers or 10%.

Table 4 Impact of changes in tax rates

No	Month	Year	Total shipping volume (package)
1	November	2020	769
2	Desember	2020	805
3	January	2021	831
4	February	2021	403
5	March	2021	462
6	April	2021	428

Analysis and Discussion

Validity test

Validity test is used to test the validity of the instrument for each variable. An instrument is said to be valid if it can measure what is desired and can accurately reveal data from the variables studied. In this study, to measure the level of validity of an instrument using the SPSS Statistic 25 program. If the calculation result is greater than or equal to the table at a significance level of 0.05 then the statement item is valid.

However, if rcount is less than rtable, then the statement item is invalid. Instrument testing was carried out in September 2021 on 50 customers at the Mega Legendary Post Office. The questionnaire was compiled based on indicator variables of changes in tax rates which were developed into 5 statements, and the Total Submissions variable was developed into 5 statements. While the samples used were 50 samples.

Table 5 Number of Variables and Questionnaire Data to be Imported in SPSS 25

Variable Name	Number of questions	Sample
Changes in tax rates (x)	5	-
Number of shipments of goods (y)	5	-
Amount	10	10

To test the validity of this program using SPSS 25. The testing technique used by researchers to test the validity this time is to use the Pearson Bivariate Correlation (Pearson Moment Product). This analysis is done by associating the score of each item with the total score. The total value is the sum of all items. Question items that have a significant correlation with the total score indicate that these items are able to provide support in expressing the things they want to express. Legitimate. If r count $\geq$ r table (2-sided test with sig. 0.05) then the instrument or item has a significant correlation with the total score (declared valid).

Table 6 Validity Test Results of variable x With SPSS 25

Correlations

		X1	X2	X3	X4	X5	X
X1	Pearson Correlation	1	,871**	-0,157	0,069	,344*	,631**
	Sig. (2-tailed)		0	0,275	0,633	0,014	0
	N	50	50	50	50	50	50
X2	Pearson Correlation	,871**	1	-0,088	0,129	,406**	,692**
	Sig. (2-tailed)	0		0,545	0,373	0,003	0
	N	50	50	50	50	50	50
X3	Pearson Correlation	-0,157	-0,088	1	0,055	0,144	,290*
	Sig. (2-tailed)	0,275	0,545		0,705	0,317	0,041
	N	50	50	50	50	50	50
	Pearson	0,069	0,129	0,055	1	,795**	,689**

X4	Correlation						
	Sig. (2-tailed)	0,633	0,373	0,705		0	0
	N	50	50	50	50	50	50
X5	Pearson Correlation	,344*	,406**	0,144	,795**	1	,875**
	Sig. (2-tailed)	0,014	0,003	0,317	0		0

	N	50	50	50	50	50	50
X	Pearson Correlation	,631**	,692**	,290*	,689**	,875**	1
	Sig. (2-tailed)	0	0	0,041	0	0	
	N	50	50	50	50	50	50

The decision-making stage in testing the validity of a question variable in the questionnaire is to determine the value of r table. from r table Pearson's Moment product with a value of df = number of data - 2. The total data tested is 50, the value of df (degrees of freedom) = 50-2 = 48. Then the value of r table is 0.279. The question is declared valid if the value of r count > r table. From the output results above, there are five questions with r count > r table or r count > 0.279 with the following details:

Variable X (Changes in Tax Rates)
1. Question 1 of the tax rate change variable with a value of r count > r table (0.631 > 0.279) is declared valid.
2. Question 2 of the variable change in tax rates with a value of r count > r table (0.692 > 0.279) is declared valid.
3. Question 3 of the tax rate change variable with a value of r count > r table (0.290 > 0.279) is declared valid.
4. Question 4 of the tax rate change variable with a value of r count > r table (0.689 > 0.279) is declared valid.
5. Question 5 of the tax rate change variable with a calculated r value > r table (0.875 > 0.279) is declared valid.

Table 7 Validity Test Results for variable y with SPSS 25

Correlations

		Y1	Y2	Y3	Y4	Y5	Y
Y1	Pearson Correlation	1	,869**	-0,156	-0,007	0,188	,545**
	Sig. (2-tailed)		0	0,278	0,962	0,192	0
	N	50	50	50	50	50	50
Y2	Pearson Correlation	,869**	1	-0,077	0,118	,288*	,649**
	Sig. (2-tailed)	0		0,597	0,415	0,043	0
	N	50	50	50	50	50	50
	Pearson Correlation	-0,156	-0,077	1	0,12	0,112	,333*

Y3	Sig. (2-tailed)	0,278	0,597		0,408	0,439	0,018
	N	50	50	50	50	50	50
Y4	Pearson Correlation	-0,007	0,118	0,12	1	,817**	,721**
	Sig. (2-tailed)	0,962	0,415	0,408		0	0
	N	50	50	50	50	50	50
Y5	Pearson Correlation	0,188	,288*	0,112	,817**	1	,827**
	Sig. (2-tailed)	0,192	0,043	0,439	0		0
	N	50	50	50	50	50	50
Y	Pearson Correlation	,545**	,649**	,333*	,721**	,827**	1
	Sig. (2-tailed)	0	0	0,018	0	0	
	N	50	50	50	50	50	50

Variable Y (Number of Shipments) 1. Question 1 of the variable number of shipments of goods with a value of r count > r table (0.545 > 0.279) is declared valid. 2. Question 2 of the variable number of shipments of goods with a value of r count > r table (0.649 > 0.279) is declared valid. 3. Question 3 of the variable number of shipments of goods with a value of r count > r table (0.333 > 0.279) is declared valid. 4. Question 4 of the variable number of shipments of goods with a value of r count > r table (0.721 > 0.279) is declared valid. 5. Question 5 of the variable number of shipments of goods with a value of r count > r table (0.827 > 0.279) then it is declared valid.

Partial Test (t Test)

The t test is one of the research hypothesis tests in simple linear regression analysis and multiple linear analysis. The t-test is intended to determine whether the independent variable or independent variable (X) partially (alone) has an effect on the dependent variable or the dependent variable (Y). The hypotheses we propose are: There is an effect of changes in tax rates (X) on the number of shipments of goods (Y).

The basis for decision making in the t test there are two references that we can use as the basis for making decisions, namely:

Based on Significance Value (Sig.)
1. If the value of Significance (Sig). < probability 0.05 then there is an influence of the independent variable (X) on the dependent variable (Y) or the hypothesis can be accepted.
2. If the value of Significance (Sig). > 0.05 probability then there is no influence of the independent variable (X) to the dependent variable (Y) or the hypothesis is rejected.

Based on the comparison of the value of t count with t table
1. If the value of t count > t table then there is an influence of the independent variable (X) on the dependent variable (Y) or the hypothesis is accepted.
2. If the value of t count < t table then there is no effect of the independent variable (X) on the dependent variable (Y) or the hypothesis is rejected.

Table 8 T-Test Results (Partial)

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1,06	0,369		2,873	0,006
	Tarik Pajak	0,885	0,04	0,955	22,392	0

Based on the value of Sig. Table 4.9 above is known that the value of Sig. The tax rate variable (X) is 0.00. Because the value of Sig. 0.00 < 0.05, it can be concluded that the hypothesis is accepted. Meanwhile, based on the t-count value with t-table, it is known that the t-count value of the tax rate variable is 22.392, and the t-table is 2.010. because t count 22,392 > 2,010, it can be concluded that the tax rate variable (X) has a significant effect on the number of shipments at the mega legend office (Y).

CONCLUSION

Based on the results of the author's research analysis, it can be concluded as follows:
1. Changes in tax rates affect the number of deliveries at the post office.
2. Based on the table that we examine, there is a very strong influence or 91.3% of the dependent variable can be influenced by the independent variable, while 8.7% is influenced by other variables that are not examined.

SUGGESTION

Based on research that has been done at the Post Office, as for some suggestions from the author in order to increase income and consumer satisfaction itself, namely:

1. In connection with changes in government regulations that we must comply with, therefore the Company needs to further improve services to increase the acceptance of shipments of goods.
2. Provide socialization about changes in tax rates clearly to consumers. Improve service performance so that users feel comfortable when conducting service transactions.

REFERENCES

Lubis, F. S., Rahima, A. P., Umam, M. I. H., & Rizki, M. (2019). Analisis Kepuasan Pelanggan Dengan Metode Servqual Dan Pendekatan Structural Equation Modelling (SEM) Pada Perusahaan Jasa Pengiriman Barang Di Wilayah Kota Pekanbaru. *SITEKIN: Jurnal Sains, Teknologi Dan Industri*, *17*(1), 25-31.

Safari, L. M., Ceffi, M. S., & Suprapto, M. (2020). Optimasi Biaya Pengiriman Beras Menggunakan Model Transportasi Metode North West Corner (Nwc) Dan Software Lingo. *Jurnal Ilmiah Teknologi Infomasi Terapan*, *6*(3), 184-189.

Aprilianto, B., & Hidayat, A. (2020). Pengaruh Bisnis E-Commerce Dan Pemeriksaan Pajak Terhadap Penerimaan Pajak (Studi Kasus Wajib Pajak Yang Terdaftar Di KPP Kelapa Gading). *Ekopreneur*, *1*(2), 156-168.

Rachman, S. (2020). PROSEDUR PEMUNGUTAN PAJAK PERTAMBAHAN NILAI (PPN) ATAS JASA PENGIRIMAN PAKET PADA PT POS INDONESIA (PERSERO) MAKASSAR 90000. *Amnesty: Jurnal Riset Perpajakan*, *3*(2), 202-210.

Ridayati, E., Astuti, D., Nova, Y. S., Maulana, A., Sudjeni, A., & Hanif, A. (2020). Pengenaan Pajak E-Commerce Pasca Diundangkannya Undang-Undang Nomor 11 Tahun 2020 Tentang Cipta Kerja. *Jurnal Lex Specialis*, *1*(2).

Prathomo, J. (2022). Pengaruh Komunikasi Internal dan Disiplin Kerja Terhadap Kinerja Karyawan Pada PT. Bank SULTENG Cabang Tolitoli: The Influence of Internal Communication and Work Discipline on Employee Performance at PT. Bank SULTENG Tolitoli Branch. *Economics And Business Management Journal (EBMJ)*, *1*(02), 72-81.

Hartoni, S. (2022). Membudidayakan Wirausaha dalam Lingkup Keluarga Guna Mewujudkan Intrepreneur Keluarga: Cultivating Entrepreneurs in the Family Scope to Create Family Entrepreneurs. *Economics And Business Management Journal (EBMJ)*, *1*(02), 108-115.