



# The influence of taxable entrepreneurs and the rupiah exchange rate on value-added tax revenues in Indonesia

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## ABSTRACT

Value-added tax is a type of tax that is the second-largest contributor to income in the taxation system. This research aims to understand and empirically test the determinants of VAT revenue. The research was conducted in Indonesia during the period 1993–2022, with a sample size of 30 observations. The sampling method used was a nonprobability sampling method with a saturated sampling technique, where the entire population was sampled. The analysis technique used is multiple linear regression analysis. Based on the results of the analysis, it is concluded that partially entrepreneurs are taxed and the rupiah exchange rate influences value-added tax revenues. Simultaneously, taxable entrepreneurs and the Rupiah exchange rate together have an influence on VAT revenues.

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## 1. INTRODUCTION

As a developing country, Indonesia is active in implementing national development to create a just, prosperous, and prosperous society. This national development requires a sustainable increase in capital and adequate budget allocation. The APBN revenue component comes from both tax revenue sources and non-tax revenue sources (Cristina, 2023). Taxes provide a very important contribution to realizing the welfare of all Indonesian people in all fields and development in Indonesia. Meanwhile, additional income from sources other than taxes generally only functions as additional income, and the amount is not as large as the income from taxes received (Permadi & Wijaya, 2022). Government tax revenues include domestic taxes and international trade taxes. Government tax revenues include domestic taxes and international trade taxes. Domestic taxes include value-added tax (VAT), income tax (PPh), luxury goods sales tax (PPnBM), and land and building tax (PBB-P3) (Sinambela & Rahmawati, 2019).

APBN tax revenue is the main source of revenue for the government, and VAT is the second largest source of tax revenue after PPh. Similarly, OECD countries heavily depend on value-added tax (Simon & Harding, 2020). Data from the Ministry of Finance shows that tax revenues until the end of April 2023 remain positive. However, growth in tax revenue is still relatively slow due to the decline in prices of main commodities and the decline in export and import activities (Putri, 2023). Here are the details: hat revenue from income tax (non-oil and gas PPh) reached IDR 410.92 trillion, or 47.04% of the target, which is the largest amount compared to other types of taxes. Meanwhile, revenue from value-added tax (VAT) and PPnBM until the end of April 2023 reached IDR 239.98 trillion, or 32.30% of the target. Revenue from oil and gas taxes was recorded at IDR 32.33 trillion. Apart from that, land and building tax (PBB) and other types of taxes experienced growth of 102.62%, or IDR 4.92 trillion, and have reached 12.30% of the target.

The government is carrying out reforms in the reporting system for periodic SPT VAT 1111 for PKP using electronic invoice version 3.0. This process is carried out through a web-based electronic invoicing platform, as explained by (PERTAPSI, 2020). Electronic tax invoices, or eFaktur, were introduced in 2013 with the provisions regulated in the Law on General Provisions and Tax Procedures. This step is part of the Directorate General of Taxes' efforts to reform tax administration to improve services to taxpayers. The aim is to make taxpayers more motivated to fulfill their tax obligations, which in turn is expected to increase tax compliance (Susilawaty & Azzahra, 2023; Junawan; Adiman, 2023; Sumardi, 2022; Rioni, 2023; Rizkina et al., 2023; Susilawaty & Azzahra, 2023a). Tax revenues increase along with increased taxpayer compliance. Likewise, tax revenues and state treasury decreased along with low taxpayer compliance (Susilawaty & Azzahra, 2023a). Data from the Ministry of Finance shows that the projected potential growth in value-added tax from 2010 is IDR 323.8 trillion and will almost double in 2015 to IDR 607.2 trillion.

Based on Law Number 42 of (2009), VAT is a tax imposed on the consumption of goods and services within the customs area, applied in stages at each stage of production and distribution. The increasing level of public consumption has a direct effect on income from VAT. Economic activities play a crucial role in the sustainability of the country. Therefore, it is necessary to maintain internal and external factors to maintain the stability of economic activity and make it a source of income, especially through consumption, which ensures that income from VAT remains stable (Renata, 2016; Sinambela & Rahmawati, 2019).

One of the internal factors that influences VAT revenues is the policy of the Directorate General of Taxes, which aims to ensure that VAT tax subjects, or what are known as Taxable Entrepreneurs, comply with tax obligations in accordance with applicable general and taxation regulations. Cooperation from all parties is needed to achieve this goal. The more Taxable Entrepreneurs comply with their VAT obligations, the more VAT revenues tend to increase (Putri & Wijaya, 2022). Based on data from the Ministry of Finance, it can be seen that the number of PKP (taxable entrepreneurs) in Indonesia from 2012 to 2016 has increased every year. 2012: 781,321, 2013: 810,542, 2014: 843,968, 2015: 871,375, and 2016: 880,276. This increase shows consistent growth from year to year. The increase in the number of PKPs is in line with the average growth in VAT (Value Added Tax) and PPnBM (Sales Tax on Luxury Goods) revenues, namely 5.33% per year. value-added tax in 2012: 337.584 billion, in 2013: 384,713 billion, in 2014: 409,181, in 2015: 423,710 billion, and in 2016: 412,213 billion. The increase in the number of PKPs has a direct impact on increasing revenues from VAT and PPnBM because PKPs are tax subjects who pay VAT and PPnBM on their transactions. This is in accordance with the findings of research by (Renata, 2016; Asiah et al., 2023; Arifatunnisa & Witono, 2022), which show that the level of Taxable Entrepreneurs compliance has a positive effect on VAT revenues. However, there are other studies that have found different results. (Masyitah, 2019) and (Sinambela & Rahmawati, 2019) found that Taxable Entrepreneurs compliance did not have a significant effect on VAT revenues.

A significant external factor is the rupiah exchange rate. Exchange rate refers to the comparison or ratio of value between two currencies used for current or future payments (Asiah et al., 2023). This exchange rate shows how many units of one country's currency are needed to buy one unit of another country's currency. Based on data from the Ministry of Finance, we can see that the rupiah exchange rate per US dollar in 2019 was 14,146. 2020: 14,577, 2021: 14,262, 2022: 15,655, while value-added tax revenues in that year are 531,577, 2020: 450,428, 2021: 551,900, and 2022: 687,610. From this data, we can see that when the exchange rate decreases, domestic prices of goods tend to increase, which has an impact on people's consumption levels (Renata, 2016; Kotlinska et al., 2020). However, in 2022, the rupiah exchange rate will weaken compared to previous years, but value-added tax revenues will also increase. This is because in 2022, the HPP Law will be implemented, which includes an increase in the value-added tax rate of 11%, which will take effect in April 2022. Research conducted by (Rizqi & Ekowati, 2022; Sapridawati et al., 2021; Renata, 2016) found that the rupiah exchange rate influences VAT revenues. However, (Sinambela & Rahmawati, 2019) concluded that the rupiah exchange rate does not have a significant effect on VAT revenues.

## 2. RESEARCH METHOD

This study employs an associative quantitative approach, focusing on examining relationships between multiple variables. It utilizes a time series documentation study method, a time series is a series of data collected and recorded at regular time intervals, in this research starting from 1993 to 2022, with a sample size of 30 observations. The greater the amount of historical data, the more information will be added to the time series analysis (Agung, 2021). The sampling technique used is a saturated sample, which involves sampling all members of the population (Sugiyono, 2019). Data for this research were sourced from publications by the Ministry of Finance via [www.kemenkeu.go.id](http://www.kemenkeu.go.id), [www.bi.go.id](http://www.bi.go.id) and the Central Statistics Agency via [www.bps.go.id](http://www.bps.go.id), as well as from various relevant books and other sources pertaining to the variables under investigation, namely Taxable Entrepreneur Variables and the Rupiah Exchange Rate. These two variables originate from internal factors and external factors that are closely related to value-added tax revenue, as explained in the introduction. Data analysis in this research uses several linear regression techniques, including the traditional assumption test, t test, F test, and D test.

## 3. RESULTS AND DISCUSSIONS

### Results

#### Multiple Linear Regression Method

The equation for multiple linear regression used in this study is stated as follows:

$$Y = a + \beta_1 X_1 + \beta_2 X_2 + e$$

Details:

Y : Value Added Tax Revenue

a : Constant

$\beta_1 X_1$  : Taxable employers;

$\beta_2 X_2$  : Rupiah exchange rate

e : Error

To evaluate whether the regression model exhibits a significant and valid relationship and to determine its adherence to classical assumptions, several key tests are typically conducted. These include the normality test, the multicollinearity test, and the heteroscedasticity test.

#### Normality test

According to (Ghozali, 2018), the normality test in research is conducted to assess whether the data distribution of both the dependent and independent variables used in the regression model follows a normal distribution or not. In this study, to test normality using statistical methods, the Kolmogorov-Smirnov test is employed.

**Tabel 1.** Normality test results one-sample kolmogorov-smirnov test

		Unstandardized Residual
N		30
Normal Parameters <sup>a,b</sup>	Mean	,0000000
	Std. Deviation	,03586685
Most Extreme Differences	Absolute	,122
	Positive	,122
	Negative	-,103
Test Statistic		,122
Asymp. Sig. (2-tailed)		,200 <sup>c,d</sup>

From table 1, it is evident that the significance value is 0.200 ( $0.200 > 0.05$ ). This indicates that the residual data follows a normal distribution and is therefore suitable for use in the analysis.

#### Multicollinearity test

The purpose of this test is to determine whether there is a correlation between the independent variables in the regression model. The results of multicollinearity testing, based on tolerance and variance inflation factor (VIF) values, provide insights into the extent of multicollinearity among the independent variables.

**Tabel 2.** Multicollinearity test results  
Coefficients<sup>a</sup>

Model	Unstandardized Coefficients		Standardized Coefficients Beta	Collinearity Statistics	
	B	Std. Error		Tolerance	VIF
(Constant)	-4,037	,274			
PKP	2,951	,180	,845	,229	4,360
Rupiah Exchange Rate	,096	,022	,198	,285	3,506

From table 2, it is observed that each independent variable has a tolerance value greater than 0.10, and the VIF value for each independent variable is less than 10. Therefore, with tolerance > 0.10 and VIF < 10, we can conclude that there is no significant multicollinearity present in this research.

### Heteroscedasticity test

The heteroscedasticity test is conducted to assess whether there is unequal variance in the residuals among observations within a regression model. Residual variance in this context refers to the variability or spread of the residual values across different observations in the regression model. In this research, the heteroscedasticity test was performed using the Glejser test, a statistical method aimed at detecting heteroscedasticity.

**Tabel 3.** Heteroscedasticity test results

Coefficients <sup>a</sup>			
Model		t	Sig.
1	(Constant)	2,152	,042
	PKP	-1,481	,152
	Rupiah Exchange Rate	1,792	,086

From table 3 above, it is apparent that the p-values associated with all independent variables are greater than 0.05. Therefore, based on this result, we can conclude that heteroscedasticity is not present in the regression model.

## Discussions

### The Influence of Taxable Entrepreneurs on Value-Added Tax Revenue

Previous research findings confirmed that the hypothesis was supported. Taxable entrepreneurs have a significant impact on value-added tax (VAT) revenue. The calculated t-value for the Taxable Entrepreneurs variable was 16.381. Compared to the t-table value at a 5% significance level, which is 2.059, it is evident that the t-value (16.381) far exceeds the critical t-value (2.059). Furthermore, the significance value obtained was 0.041 (less than 0.05), indicating that the association between taxable entrepreneurs and VAT revenue is statistically significant.

This finding corroborates (Renata, 2016) research, which posited that higher compliance among taxable entrepreneurs with VAT obligations leads to increased VAT revenues. The Directorate General of Taxes continues to pursue tax intensification and extensification efforts, aiming to expand the taxpayer base through programs like DJP's extensification program. This expansion is anticipated to bolster tax revenues, as discussed in (Sinambela & Rahmawati, 2019).

### Influence of the Rupiah Exchange Rate on Value Added Tax Revenue

Based on the findings of the previous research, it was determined that the research hypothesis was accepted. The Rupiah Exchange Rate has a significant impact on Value Added Tax (VAT) Revenue. The calculated t-value for the Taxable Entrepreneur variable is 4.290. Comparing this with the t-table value at a 5% significance level, which is 2.059, it is evident that the calculated t-value (4.290) exceeds the critical t-value (2.059). Additionally, the significance value obtained was 0.010 (less than 0.05), indicating that the relationship between the Rupiah Exchange Rate and VAT Revenue is statistically significant.

This finding reinforces the research conducted by (Rizqi & Ekowati, 2022) and (Sapridawati et al., 2021), which asserts that the Rupiah exchange rate significantly impacts VAT revenues due to its influence on the prices of taxable goods and/or taxable services. When the rupiah weakens

against the dollar, it leads to an increase in the selling price of goods and services. These price increases affect consumer purchasing power, which tends to decrease, thereby reducing domestic VAT revenues. Additionally, higher exchange rates increase the production costs of goods and services, subsequently raising their final selling prices. This further diminishes consumer purchasing power and contributes to a decline in VAT revenues.

#### **The Effect of Taxable Entrepreneurs and Rupiah Exchange Rate Together on Value Added Tax Revenue**

Based on the results provided F-test Results Fcount (4.451) is greater than Ftable (2.76) at a significance level of 0.01. Since Fcount exceeds the critical Ftable value, we reject the null hypothesis (H0) and accept the alternative hypothesis (Ha). This indicates that the variables Taxable Entrepreneur and Rupiah Exchange Rate together (simultaneously) have a statistically significant effect on Value Added Tax (VAT) Revenue in Indonesia. The Adjusted R-squared value of 0.982 suggests that approximately 98.2% of the variation in VAT Revenue can be explained by the combined influence of Taxable Entrepreneurs and the Rupiah Exchange Rate in the regression model. These results underscore the importance of both economic activity among Taxable Entrepreneurs and the external economic factor of exchange rate fluctuations in shaping VAT collections in the country.

#### **4. CONCLUSION**

Based on the findings and analysis conducted on value-added tax (VAT) revenues in Indonesia from 1993 to 2022, it is evident that both internal factors (taxable entrepreneurs) and external factors (the rupee exchange rate) exert influence on VAT revenues. This influence has been observed both partially and simultaneously, as indicated by the results of t-tests and F-tests. Recommendations for Future Research: Future researchers are encouraged to expand the sample size. A larger sample can provide more representative insights into the relationship between taxable entrepreneurs, the Rupiah exchange rate, and VAT revenues over a broader period. In this research, only two variables are used, namely those originating from internal and external factors so that additional variables can be Include additional variables: Incorporating new variables from both internal (e.g., economic policies, business regulations) and external factors (e.g., global economic conditions, trade policies) can enrich the analysis. These variables may offer deeper insights into other determinants influencing VAT revenues beyond taxable entrepreneurs and the Rupiah exchange rate. And can use other types of analytical techniques and research methods, such as qualitative studies. The government, or DJP, can find out the factors that influence value-added tax revenues, make policies, socialize them with taxable entrepreneurs, keep the rupiah exchange rate stable, and encourage the growth of the Indonesian economy.

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