

The Effects of Inflation, Exchange Rate, and Import on Value Added Tax and Sales Tax of Luxury Goods

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Abstract

This study aims to examine the effects of inflation, exchange rate, and import on value added tax (PPN) and sales tax of luxury goods (PPnBM) over the period 2016-2020. This type of research is quantitative using the purposive sampling technique. Based on the predetermined criteria, a sample of external macroeconomic indicators that are subject to PPN and PPnBM is selected in 2016-2020. The results of this study indicated that both inflation and exchange rate had no significant effect on value added tax and sales tax of luxury goods. In contrast, import produced a positive and significant effect on value added tax and sales tax of luxury goods.

Keywords

inflation; exchange rate; import value added tax; sales tax of luxury goods



I. Introduction

In carrying out its function to create a prosperous society, a country needs financing (Masyitah, 2019). Every country needs financing because it cannot be done without cost for the welfare of the people. There are several sources of financing for the community’s welfare, one of which is from taxes. Tax is a collection made by the state. Without tax collection, countries that rely on sources of financing from taxes will experience a financial cripple. The main source of financing is not collected, while the government must continue to run to meet the community’s needs and protect the community’s rights. Without financing, the state's performance will be disrupted. In essence, carrying out programs to meet the community’s needs is not something that is free. Therefore stable financing is one of the important things for the state (Masyitah, 2019).

According to Mustaqiem (2014), the tax revenues that are quite influential for the state are Value Added Tax (PPN) and Sales Tax of Luxury Goods (PPnBM). Both PPN and PPnBM are one type of tax in Indonesia. Indirect taxes such as PPN and PPnBM are imposed on consumption at every level whether in the form of production or distribution. In principle, state revenues from PPN and PPnBM have always experienced significant developments since they were introduced to the general public. The following graph is the State Budget and Realization of PPN and PPnBM Revenue.



Source: Data processed, 2021

Figure 1. The State Budget and Realization of PPN & PPnBM Revenue

Based on the graph above, PPN and PPnBM receipts increased by an average of 4% per year during the period of 2016-2020. The growth rate of PPN and PPnBM increased by 14% in 2017, but in 2018 it decreased to 11%, followed by a significant decline by -1% in 2019. In 2020, it fell again to -19% due to the temporary stagnation of the economy.

The revenue size in the tax sector is also influenced by external indicators of PPN and PPnBM revenues, namely the macroeconomy. Macroeconomic instability can adversely affect financial activity (Pasaribu, 2011). If instability persists, the level of domestic consumption and the number of international trade activities may decline, which in turn, give a negative impact on the revenue from PPN and PPnBM. All in all, the stability of price in goods and services can be gauged by the inflation rate, while the currency's stability can be measured by the level of the exchange rate (Boediono, 1985).

The economic condition of the population is a condition that describes human life that has economic score (Shah et al, 2020). Economic growth is still an important goal in a country's economy, especially for developing countries like Indonesia (Magdalena and Suhatman, 2020).

In principle, each country has always experienced inflation, a phenomenon where the level of price in goods and services soared significantly (Boediono, 1985). This level of inflation can basically affect the economic conditions and thus, policymakers should maintain both the stability of price and the pace of inflation rate. The aftermath of high inflation will impact the exchange rate of the Rupiah against the USD.

Apart from this phenomenon, there are also problems in other economic sectors, namely the decline in imports. From 2016 to 2020, import in Indonesia decreased significantly, although the decline was still relatively small. Based on the data from the Ministry of Trade, the number of imports in 2016 was about IDR 1,934,802.46 billion, which then jumped to IDR 2,018,544.58 billion in 2020. From the similar data, we also knew that the number of imports in Indonesia was and still higher than its exports.

Based on the mentioned background, this study aims to investigate the effects of inflation, exchange rate, and import on value added tax (PPN) and sales tax of luxury goods (PPnBM) over the period 2016-2020.

II. Review of Literature

2.1 Taxation

According to Mustaqiem (2014), taxes are contributions from citizens who pays it according to regulations without getting the performance back, in which the purpose is to finance the general expenses related to the state's duty to administer the government. Similarly, Soemitro (1994) views taxes as the citizen's contributions that can be forced to the State Treasury without receiving reciprocal services (contra-achievements) and can be optimized to finance the general state expenditure. The definition of tax then develops as the transfer of wealth from the citizen to the State Treasury to finance the so-called "routine expenditures". The surplus of this fiscal space can be used for the public saving, which is the main source for financing the public investment. The conclusion from the definition of tax is as follows (Mustaqiem, 2014):

- a. Tax is a contribution or an obligation to give up part of the wealth (income) to the State.
- b. The transfer or delivery of such contributions is mandatory.
- c. There is no reciprocal service that can be appointed, meaning no direct relationship between tax payments and the state's achievements.

2.2 Value Added Tax and Sales Tax of Luxury Goods

According to Mustaqiem (2014), value added tax is a tax imposed on every value-added when conducting transactions and delivery of taxable goods or services in their distribution from producers to consumers in the customs area. It is an indirect tax, where the basis for the imposition comes from the level of people's ability to consume. Precisely, this tax is imposed on the entrepreneurs who deliver goods or services to consumers so that they will take into account this tax into the selling price of the goods or services. Meanwhile, according to the Law No. 18 of 2020, sales tax of luxury goods (PPnBM) is a tax levied on the delivery of taxable goods, which are classified as luxury goods in the customs area.

2.3 Inflation

Inflation is the tendency of prices to rise in general and lasts continuously. An increase in the price of one or two goods alone cannot be called inflation unless the price increase extends to a large part of the prices of other goods (Boediono, 1985). Inflation is a condition of the value of money falling continuously and prices rising continually (Pasaribu, 2011).

Both Value Added Tax and Sales Tax of Luxury Goods are directly related to people's behaviour through consuming goods or services that have a close relationship with inflation. Inflation affects PPN and PPnBM receipts because if the inflation rate rises, it will increase the selling price, which is the basis for imposing taxes on PPN and PPnBM. The size of the tax sector revenue is influenced by the inflation rate (Wantara, 1997).

Inflation is a symptom that indicates an increase in the general price level continuously. If there is a temporary price increase, it cannot be inflation. With the general price increase, all economic units (consumers and producers) will buy fewer goods with the same rupiah expenditure. In other words, they reduce real consumption in the presence of inflation (Irawan et al., 1992).

2.4 Exchange Rate

The definition of the exchange rate is the price of one country's currency against another country's currency. The rupiah exchange rate is one rupiah needed to be exchanged for one US dollar, determined by supply and demand against the exchange rate (Kuncoro, 2001). Based on the theory of purchasing power parity, a decrease in the purchasing power of the domestic currency (an increase in the price of domestic goods) will be accompanied by a depreciation of the currency. Depreciation results in an increase in the domestic price level in general and results in a decrease in consumer purchasing power and can impact decreasing VAT receipts (Pasaribu, 2011).

The exchange rate shows the domestic currency in foreign currencies. A weakening rupiah results in high exports so that conversions to rupiah are higher, it will increase VAT receipts, while a stronger rupiah will make exports decline (Ginting, 2013). One of the potential tax revenues depends on the level of people's per capita income, whose value is determined by macroeconomic conditions. One indicator that can be seen is the rupiah's exchange rate per US dollar. The increase or decrease in the taxpayer's income due to fluctuations in the currency exchange rate will affect the receipt of Value Added Tax and Sales Tax on Luxury Goods.

2.5 Import

The definition of import is any activity that tries to enter the foreign goods into the customs area, which is based on the Law No. 17 of 2006. The higher the import, the income for both PPN and PPnBM will be higher. Previous research conducted by Masyitah (2019) on the factors that influence PPN and PPnBM receipts shows that imports of PPN and PPnBM affect PPN and PPnBM receipts, namely the increase in import income per year. In the last three years, technological developments have made it easier for people to buy goods from outside the customs area, increasing their purchasing power. Of course, this can affect VAT and PPnBM receipts.

III. Research Method

Following the background described previously, the objects of this research include Inflation, Exchange Rates, and Imports of Value Added Tax and Sales Tax of Luxury Goods. This type of research is quantitative research. The data source used in this study is secondary data, namely by collecting data using documentation techniques, collecting, recording, and reviewing secondary data in the form of periodic data from 2016 to 2020.

Inflation Rate is a condition of the value of money falling continuously and prices rising continually. The definition of an exchange rate or exchange rate is the price of one country's currency against another country's currency. The definition of import is the activity of entering goods into the customs area based on the Law No. 17 of 2006.

Table 1. Variables, Indicators, Measurement

Variables	Variable Definition	Measurement	Scale
Inflation	Figures inflation rate in Indonesia in 2016-2020	$\text{Inflation} = (\text{CPI this year} - \text{CPI last year}) \div \text{CPI last year} \times 100\%$	Ratio
Exchange Rate	Exchange Rate Movements in 2016-2020	$\text{Middle Rate} = (\text{Buying Rate} + \text{Selling Rate}) \div 2$	Ratio
Import	Import movement in 2016-2020	Import value of all oil and non-oil obtained from abroad are measured in Million US \$ in Indonesia in 2016-2020	Log Natural (import)

Source: Data processed, 2021

The regression equation model that has been formulated in this study is as follows:

$$Y = \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \varepsilon$$

Description:

Y: Dependent Variable (Admissions VAT and Tax)

α : Constant

β : Coefficient of independent variable

X_1 : Inflation

X_2 : Exchange Rate

X_3 : Import

ε : Error terms

IV. Results and Discussion

4.1 Results

a. Classical Assumption Test Results

From the Kolmogorov-Smirnov statistical test, the results for Value Added Tax (VAT) and Sales Tax on Luxury Goods (PPnBM) (Y) give a probability of $0.200 > 0.05$. This indicates that the data used in this study are normally distributed. The regression model is feasible to predict the effect of Inflation, Rupiah Exchange Rate, and Imports on VAT and PPnBM Revenues.

The results of multicollinearity testing using Variance Inflation (VIF) show that there is no multicollinearity problem between independent variables. The results of heteroscedasticity testing using a scatterplot show no heteroscedasticity. The results of autocorrelation testing using Durbin-Watson (DW) show no autocorrelation problem in the regression model.

b. Hypothesis Testing Results

The results of the f test show that the variables of Inflation (X1), Exchange Rate (X2), and Imports (X3) affect VAT and PPnBM revenue (Y). The magnitude of the coefficient of determination (Adjusted R Square) is 23%. This number means that the dependent variable of PPN and PPnBM receipts can be explained by 23% by the independent variables, namely Inflation (X1), Exchange Rates (X2), and Imports (X3).

The evaluation of the inner model in the partial least square analysis is carried out to determine the suitability of the structural model that has been prepared. The review of the inner model will describe the value of R-squared (R^2) and test the research hypothesis.

Table 2. Test Results of Multiple Linear Analysis

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	17.400	6.951		2.503	.015
Inflation	.154	.123	.145	1.248	.217
Exchange Rate	.670	.743	.107	.902	.371
Import	.786	.196	.469	4.016	.000

The results of the multiple linear analysis in table 2 show several things, namely:

1. A constant of 17,400 means that if all the independent variables, namely Inflation, Rupiah Exchange Rate, and Imports, are considered constants or (0) zero, then the VAT and PPnBM receipts increased by 17,400.
2. The inflation regression coefficient is 0.154, meaning that if the value of the variable increases by one unit and the other variables are constant, it will affect VAT and PPnBM revenues by 0.154.
3. The regression coefficient of the rupiah against the USD is 0.670, meaning that if the value of the rupiah exchange rate against the USD variable increases by one unit and the other variables are constant, it will affect the increase in VAT and PPnBM revenues by 0.670.

4. The import regression coefficient is 0.786, meaning that if the value of the import variable increases by one unit and the other variables are constant, it will affect the increase in VAT and PPnBM revenues by 0.786.

4.2 Discussion

a. The Effect of Inflation on VAT and PPnBM Revenue

Based on the results of the analysis of research data testing that has been carried out, it is known that the inflation results have a value of Sig. 0,217 > 0.05. If inflation rises, then prices will rise. This will result in the purchasing power of the people decreasing and will impact PPN and PPnBM receipts, as well as when inflation falls, and prices will decrease so that purchasing power will increase and will increase VAT receipts and PPnBM. In this study, it was found that inflation does not affect PPN and PPnBM receipts. It is said to be 0 or "offset" because inflation will not increase or decrease VAT and PPnBM receipts. The results of this study are in line with research conducted by Masyitah (2019), which says that partially inflation did not affect PPN and PPnBM receipts in Indonesia in 1987-2016.

b. The Effect of Exchange Rate on VAT and PPnBM Revenue

Based on the results of the analysis of research data testing that has been carried out, it is known that the Exchange Rate results have a Sig value. 0.371 > 0.05. The strengthening rupiah exchange rate will impact public consumption of foreign products because imported goods are easy to obtain due to their low prices; it will benefit business actors who need basic imported materials for their products. PPnBM will increase. Likewise, when the rupiah exchange rate weakens, if the exchange rate weakens, it will result in domestic production factors that still rely on imports for raw materials; if raw materials are difficult to obtain, then production activities will stop. If these production activities stop, business actors cannot trade, and there are no buyers. This will result in decreased VAT and PPnBM receipts. In the research results, the exchange rate has an effect of 0 or "offsite," which means that the exchange rate will neither increase nor decrease VAT and PPnBM receipts. The results of this study are in line with research conducted by Sinambela & Rahmawati (2019), which said that the Rupiah Exchange Rate did not affect domestic VAT receipts.

c. The Effect of Imports on VAT and PPnBM Revenue

Based on the results of the analysis of research data testing that has been carried out, it is known that the imported results have a Sig value. 0.000 < 0.05. In this case, imports have a positive influence; PPN and PPnBM receipts from imports will increase – *ceteris paribus* – if purchasing power in the community also increases. Judging from the phenomenon that shows the technology has become more sophisticated and makes it easier for the community, the Government has enacted a new law regarding the collection of Trade Taxes through the Electronic System in 2020; with this government regulation, the import of VAT and PPnBM revenues will increase. The results of this study are in line with research conducted by Masyitah (2019), which states that imports partially affect VAT and PPnBM receipts in Indonesia.

V. Conclusion

Based on the results of the analysis of the Effect of Inflation, Rupiah Exchange Rate, and Imports on Value Added Tax Revenue and Sales Tax on Luxury Goods in Indonesia. The sample data used in this study is periodic data taken through a government website for five years, 2016-2020. This study can be concluded as follows:

1. Inflation has no effect on PPN and PPnBM receipts because the inflation value is "offset" or 0. Such condition will not increase or decrease the income of Value Added Tax and Sales Tax on Luxury Goods.
2. The rupiah exchange rate has no effect on PPN and PPnBM receipts, because the exchange rate in the last 5 years turned out to be 0. This means that it will not affect the increase or decrease in PPN and PPnBM
3. Imports have a positive effect on PPN and PPnBM receipts because the price differences attract people to buy or consume imported goods. This causes both PPN and PPnBM revenues to increase with other things remaining the same if people's purchasing power increases.

Future research can pay attention to other macroeconomic variables that have a role in PPN and PPnBM receipts, such as Gross Domestic Product and the price of Fuel Oil, in order to maximize or minimize the factors that cause the increase or decrease in PPN and PPnBM receipts.

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