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THE EFFECTS OF EXCHANGE RATE AND INFLATION TOWARD TAX REVENUE

(Empirical Study of Bank Indonesia for the Period of 2013 - 2017)

Yati Mulyati[1], Sendi Gusnandar Arnan[2], Dyah Purnamasari[3], Citra Mariana[4]

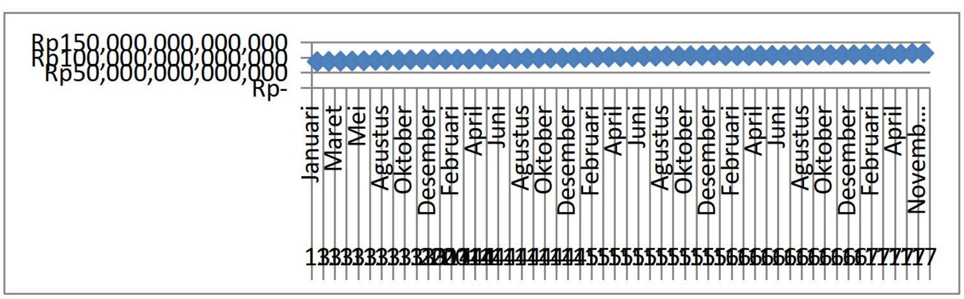
Abstract---*Tax as a function of budget always tries to increase tax revenue to run the life wheel of a country. Many factors can influence in increasing tax revenue. This research was conducted to find out how much influence partially from the exchange rate and inflation factors that occur in increasing tax revenue. The data used in this study are time series data sourced from the Central Statistics Agency and the Ministry of Finance. The Saturated sample is the method used in sample selection so that the entire sample used during the observation period 2 samples were selected as many as 60 samples were collected and analyzed using multiple regression analysis. inflation affects tax revenue.*

Keywords---*exchange rate, inflation, tax revenue*

I. Introduction

Tax is a state revenue sourced from the public to the government with the aim of financing infrastructure development, community services and improving the welfare of the community. When the tax revenue from the oil and gas sector is no longer excellent, the state revenue derived from taxes becomes the government's mainstay in financing development. Therefore, the government continues to strive to increase state revenue sourced from taxes.

Tax revenue has increased from year to year, although it still does not meet the target expected by the government. From a source of the Ministry of Finance of the Republic of Indonesia released, tax revenue in 2019 was only able to realize 86.5% of the expected target. This is not much different from what is reflected in graph 1.1, the growth of tax revenue is seen increasing but still has not reached the expected realization.



Graph 1: Indonesian Tax Revenue for 2013-2017

Source: www.bi.go.id (data reprocessed)

[1]*Faculty of Economics, Widyatama University, Bandung, Indonesia*
Corresponding author E-mail: yati.mulyati@widyatama.ac.id

The government continues to make efforts to increase tax revenue, but many factors can affect tax revenue, namely macroeconomic factors. The macro-environment is the external environment in general that studies the national economy. The macroeconomic environment studies the national economy as a whole such as consumers, the banking world, the government, and the business world. Macroeconomic environment that can directly affect company performance and stock performance include interest rates, economic cycles, inflation, government policies related to certain companies, exchange rates, tax regulations, budget deficits, foreign loan interest rates, international economic conditions, economic outlook, money supply, private investment, trade balance and payments, GDP (Tandelilin, 2010).

Table 1: Inflation Growth and Exchange Rates in Indonesia

Year	Growth	
	Exchange Rate	**Inflation**
2013	0,87	0,68
2014	0,88	0,67
2015	0,89	0,28
2016	1,00	0,25
2017	1,00	0,16

Source: reprocessed data

The exchange rate is the difference between the exchange rate of the currency of one country with another country's currency. Based on the data table above, the exchange rate increases every year. Changes in exchange rates, especially against the US dollar exchange rate are widely used in international trade transactions. Fluctuations in exchange rates do not provide certainty for entrepreneurs in conducting their business, so as a result of fluctuations in exchange rates, entrepreneurs are reluctant to speculate in their business. Therefore, the increase in the dollar exchange rate will also have an impact on the increase in the value of imports that occur and the payment of state debt to outsiders and will disrupt the country's financial balance and have an impact on tax revenues.

According to the data above, inflation that occurred in Indonesia during this period was still quite low and tended to decline. Thus inflation in Indonesia can be said to be still quite good with a value below 10% (Nainggolan, 2005). Inflation that grows in a country is closely related to the development of a country, the higher the inflation that occurs, the country's economy is in a bad situation. Inflation drives up prices, high production costs and investment will decrease, on this basis, it will have an impact on state revenue.

Several studies have revealed that the exchange rate affects tax revenue (Sumidartini, 2017). Based on the description above, researchers wish to find out how much influence the exchange rate has on tax revenue and the effect of the exchange rate on tax revenue that occurred in Indonesia during the 2013-2017 period.

II. Literature Review

The Exchange rate (exchange rate) is the amount of a certain currency that can be exchanged against one unit of another currency. Thus, the rupiah exchange rate is the amount of currency that can be exchanged against one unit of another country's currency, such as against the US dollar "(Joesoef, 2008). The exchange rate is the difference between the exchange rate of the currency of one country with another country's currency. Exchange rates are very closely related to international trade because at the time of transactions in international trade there was an exchange rate process.

The growth of exchange rates is not always stable, fluctuating exchange rate growth can affect prices. An increase or decrease in taxpayer income due to fluctuations in currency exchange rates will affect government tax revenue and potential taxpayer income tax burden (Mohammad Andika Ferdiawan, 2015).

With the exchange rate fluctuations that occur, companies in the use of imported raw materials will certainly have an impact on high costs so that there will be a decrease in profits and will affect tax revenue. However, if when the US dollar appreciates against the rupiah, companies that export goods will get more different because of differences in exchange rates and the excess is income which is a taxable object to increase tax revenue (Sumidartini, 2017). The research revealed that the exchange rate affects tax revenue (Mohammad Andika Ferdiawan, 2015).

H1: Rupiah exchange rate influences tax revenue

Inflation is a condition in which prices generally increase or a situation in which currency prices decline. Inflation occurs because of the increasing amount of money circulating in the community (Manullang, 1993). Inflation is a condition of general price increases. The tendency in question is that the increase did not happen for a moment. A momentary price increase is not considered inflation (Djohanputro, 2008).

An increase in the price of goods and services occurs where demand increases compared to the amount of supply or supply of goods on the market, in this case, more money circulating is used to buy goods compared to the number of goods and services, not all of which are called price increases are always identified with inflation. Inflation can be caused by high demand for goods and services, high import values and high production costs (Sukirno, 2012). But the price increase will continuously cause inflation so that people's purchasing power decreases because in real terms the level of income also decreases (Wijayanta and Widyaningsih, 2007: 112). Declining community income will have an impact on the amount of tax paid to the government to be small so that it will reduce tax revenue. Research (Mispiyanti, 2018) says that inflation affects tax revenue.

H2: Inflation affects tax revenue

III. Methodology

This type of research is an explanatory research with a quantitative approach (Azwar, 2010). This study uses time series data related to exchange rates and inflation from Bank Indonesia data during the 2013-2017 period. Sampling uses saturated sampling, with a total of 60 successful samples collected. Data processing uses descriptive statistical analysis and multiple regression analysis.

The classic assumption test has been carried out in this study. The normality test results obtained Jarque-Bera value is 0.603140, with a probability value of 0.739656, so the data has normal distribution. The multicollinearity test obtained a value of Variance Inflation Factors of 1.15, indicating that the data are free from multicollinearity. Obtaining the value of prob. Chi-square of 0.2888, this indicates there was no heteroscedasticity and the results of the autokoleration test showed no autocorrelation.

IV. Results and Discussion

Result

Table

Descriptive

	Kurs	**Inflation**	**Tax Revenue**

Min	9.687	2.79	1.077.307
Max	14.396	8.79	1.343.530
Mean	12.431	5.58	1.218.618

During the 2013-2017 observation period, the exchange rate experienced an increase, but this indicated that the rupiah exchange rate weakened against the foreign exchange rate. This can be indicated by the growth from the lowest exchange rate to the highest exchange rate with very significant growth.

The increase in the price of goods that occurred is felt in recent years, this is evidenced by the increase in inflation during the observation period which indicates a sharp increase, it tends to have an impact on reducing people's purchasing power.

An increase in the exchange rate or a weakening in the exchange rate and an increase in inflation indicate that there is no harmony with the increase in tax revenue, this can be seen with fluctuating tax revenues and the growth in the value of the increase in revenue looks insignificant.

Regression Model

Table

Regression Results

	Coefficient	Std Error	T-statistic	Prob
Tax Revenue	27.02591	0.258724	104.4583	0.000
Kurs	0.056673	0.026893	21.07135	0.000
Inflasi	-0.076666	0.008344	-9.188477	0.000
R-Squared	0.938999			
Adjusted R-squared	0.936559			
F-statistic	384. 8268			
Prob (F statistic)	0.000000			

Based on the regression test, the following equation is produced:

$$Y = 27{,}02591 + 0{,}566673\ (\text{exchange rate}) - 0{,}076666\ (\text{inflation}) + \mu$$

Tax revenue will be valued at 27.02591 if other variables are valued at 0, and each value of the tax revenue is 27.02591. R-Squared obtained a value of 0.93899 and Adj.R-Squared worth 0.936559. This shows the exchange rate and inflation affect tax revenue by 94%.

Hypothesis test results as shown in table 3 show that Deferred Tax Expense affects Earnings Management with a probability value of 0.026 <0.05. Furthermore, the second hypothesis test results show that Deferred Tax Assets do not affect Profit Management with a probability value of 0.300> 0.05. and the results of hypothesis testing prove that Tax Planning has no effect on earnings management with a probability value of 0.956> 0.05.

Discussion

Exchange Rates and Tax Revenue

The exchange rate of the rupiah from 2013 to 2017 experienced a weakening. In addition, the results of the study statistically show the t-statistic probability value of the X1 variable is equal to 0.0000, which means that the exchange rate has a significant effect on tax revenue. Based on the results of multiple linear regression analysis proves that the rupiah exchange rate is directly proportional to tax revenue, where when the rupiah strengthens, the tax revenue will increase. Vice versa, when the value of the rupiah weakens, the tax revenue will decrease.

This is in accordance with the framework of thought, where a decrease in the exchange rate (exchange rate) will cause domestic prices to increase (Mankiw, 2000). The increase in domestic prices causes the value of the rupiah to decline, where Rp 1.00 can only buy a few dollars (Mankiw, 2000). Furthermore, the impact caused by the increase in domestic prices due to the fall in the exchange rate will cause a weakening of the people's purchasing power, so that people are reluctant to pay taxes and will reduce tax revenue.

The results of the study indicate the best direction, where the exchange rate increases and tax revenues increase. This happened related to the increase in import VAT. As revealed by the chairman of the Directorate General of Taxes accessed via www.liputan6.com (2018), it is stated that the weakening of the rupiah will increase import VAT. This happens because with the weakening of the exchange rate, domestic prices are higher than those from abroad. This causes people to prefer importing goods from abroad because the price is cheaper.

This is consistent with research (Sumidartini, 2017) which states that exchange rate fluctuations cause an increase or decrease in taxpayer income so that it will affect government tax revenues and the US dollar appreciates the rupiah, companies that export goods will get more difference due to differences in exchange rates and the excess is income which is a taxable object.

Inflation and Tax Revenue

Inflation during the observation period decreased and the results of the study statistically showed that the t-statistic probability value of the inflation variable was equal to 0.0000. This shows that Ha is accepted, which means that the inflation value has a significant effect on tax revenue. The regression coefficient value of this variable is -0.76666. The sign - shows that the inflation rate is inversely proportional to tax revenue, where when there is an increase in the inflation rate, tax revenue will decrease, and when the inflation rate decreases the tax revenue will increase.

In general, when inflation occurs, the level of income received by the community is fixed but the prices of goods have increased continuously. This causes people's purchasing power to decline and the community is faced with a situation where they cannot afford to pay taxes. This inability to pay taxes causes a decrease in tax revenue.

The results of inflation research have decreased and tax revenue tends to be stable towards a slow increase. When inflation decreases, the price of goods becomes affordable so that people's purchasing power increases. The public can be more able to save income and have an impact on tax revenue.

This research is in line with what was stated by Mispiyanti and Ika (2017), the decreasing trend of inflation causes an increase in household income so as to increase tax revenue. Other research was also conducted by (Oktiya Damayanti, 2016) entitled "The Influence of Inflation, Economic Growth, and Tax Rates on Tax Revenues in Asian Countries", where the results of his research showed that inflation influences tax revenues.

V. Conclusion

Based on the analysis and discussion described above, it can be concluded that the rupiah exchange rate influences tax revenue and inflation affects tax revenue.

Limitations in this study, the first author only uses the variable inflation and the rupiah exchange rate in measuring the extent to which it can affect tax revenue. The two authors only used 40 research samples from ten companies during the 2013-2017 observation period so that it might not give maximum results.

Based on the limitations of this study, the authors advise the next researcher, first the research can be further developed against other variables that can affect tax revenue in terms of macroeconomic aspects. Both research samples can be more numerous and the observation period can be carried out longer to provide maximum results.

REFERENCES

[1] Amnesty, P. T. (2017). Pengaruh Tax Amnesty, Pertumbuhan Ekonomi, Kepatuhan Wajib Pajak dan Transformasi Kelembagaan DJP terhadap Penerimaan Pajak. *E Journal S1 Akuntansi Universitas Pendidikan Ganesha, 7*(1), 20-25.

[2] Andri Gunawan, I. M. (2016). Pengaruh Persepsi Tax Amnesty, Pertumbuhan Ekonomi dan Transformasi Kelembagaan DJP pada Penerimaan Pajak. *E Jurnal Akuntansi Universitas Udayana, 17*(3), 2036.

[3] Azwar, J. (2010). *Pasar Modal sebagai SArana Pembiayaan dan Investasi.* Yogyakarta: PT. Alumni Bandung.

[4] Basirat, M. (2014). ANALYZING THE EFFECT OF ECONOMIC VARIABLES ON TOTAL TAX REVENUES IN IRAN. *Asian Economic and Financial Review, 4*(6), 755-767.

[5] Dian Triastuti, D. P. (2016). The Influence of Economic Growth, Capital Expenditur, and Inflation rate toward Regional Tax Income. *e Proceeding of Management, 3*(2), 320.

[6] Djohanputro, B. (2008). *Prinsip-prinsip Ekonomi Makro.* Jakarta: PPM.

[7] Joesoef, J. R. (2008). *Pasar Uang dan Pasar Valuta asing.* Jakarta: Salemba Empat.

[8] Manullang. (1993). *Ekonomi Moneter.* Jakarta: Ghalia Indonesia.

[9] Mispiyanti. (2018). Analisis Pengaruh PDRB, Inflasi, Nilai Kurs dan Tenaga Kerja terhadap Penerimaan Pajak. *Jurnal Ilmiah Akuntansi dan KEuangan, 7*(1), 23.

[10] Mohammad Andika Ferdiawan, K. (2015). Pengaruh Inflasi, Tingkat Suku Bunga Sertifikat Bank Indonesia dan Nilai Tukar Kurs terhadap Penerimaan Pajak. *Jurnal Administrasi Bisnis - Perpajakan (JAB), 5*(2), 9.

[11] Oktiya Damayanti, S. M. (2016). Pengaruh Tingkat Inflasi, Economic Growth dan Tarif Pajak terhadap Penerimaan Pajak . *Jurnal Perpajakan (JEJAK)| Vol. 9 No. 1 2016, 9*(1), 9.

[12] Putri, P. I. (2013). Analisis Faktor Faktor yang mempengaruhi Penerimaan Pajak. *Journal of Economics and Policy, 6*(2), 103-213.

[13] Sukirno, S. (2012). *Makro Ekonomi Terori Pengantar.* Jakarta: PT. Raja Grafindo Persada.

[14] Sumidartini, A. N. (2017, Maret). PEngaruh Nilai Tukar serta Tingkat Suku Bunga terhadap Penerimaan Pajak pada Direktorat Jenderal Pajak. *TRANSPARANSI, Jurnal Ilmiah Ilmu Administrasi, 9*(1), 53.

[15] Vinny Azaria, A. I. (2019, March). Pengaruh Inflasi, Nilai Tukar Rupiah dan Harga terhadap Volume Ekspor Indonesia. *Journal of Applied Managerial Accounting, 1*, 1-8.

[16] Wijayanti, W. K. (2010). Faktor-Faktor Yang Mempengaruhi Total Penerimaan Pajak Negara Dan Efektifitas Peraturan Perpajakan. *Media Ekonomi, 18*(1), 30.