The Effect of Inflation Rate, Rupiah Exchange Rate and Economic Growth on Income Tax in Indonesia for the Period January 2018 – September 2021

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Abstract

Income tax is a type of tax that is imposed fairly, but in fact a fair income tax is an income tax that is actually levied on income or on additional economic capacity. From several types of tax revenues, Income Tax was chosen because it is the largest contributor to state revenue to the APBN. And because of the role of PPh as a source of revenue, the researcher wants to know and look for empirical evidence how the Influence of Inflation Rate, Rupiah Exchange Rate and Economic Growth on Income Tax Revenue in Indonesia for the period January 2018 - September 2021. Through a decrease in the inflation rate, an increase in the rupiah exchange rate and the increase in economic growth is expected to increase Income Tax Revenue (PPh). The method used in this research is descriptive quantitative method. This research was conducted using secondary data sourced from the website of the Central Statistics Agency, Bank Indonesia, and the Directorate General of Taxes. This study used 36 samples. Data collection is carried out by examining inflation

data, the rupiah exchange rate, and economic growth in the period 2018-2021. The results show a correlation of 0.353 or 35.3% indicating that income tax revenues can be explained by the inflation rate. While the rest (100% - 35.3% = 64.7%) is explained by other reasons outside the model. Testing the hypothesis by using the t-test, the t_{count} value is 0.015 <0.05, which means that the test results show that the Inflation Rate has a partial effect on Income Tax Revenue (PPh).

Keywords: *Inflation Rate, Rupiah Exchange Rate, Economic Growth, Income Tax Revenue.*

INTRODUCTION

Background

Income tax is a type of tax that is imposed fairly, but in fact a fair income tax is an income tax that is actually levied on income or on additional economic capacity. Fair tax collection must be based on ability to pay, namely income, wealth and consumption. Whatever the basis that will be chosen as the ability to pay that will be the object of tax, but the provisions covering tax subjects, tax objects, tax rates, and tax procedures must be applied in a general and equitable manner so that justice is achieved.[1] Income tax revenue is one source of tax revenue in financing development which is affected by interior variables and outside factors, outer elements incorporate macroeconomics, such as the influence of macroeconomic variables contained in this study in the form of inflation, rupiah exchange rate and economic growth.

Domestic Tax is all state revenues originating from Income Tax (PPh), Value Added Tax of Goods and Services (PPN), and Sales Tax on Luxury Goods (PPnBM), Land and Building Tax (PBB), land rights acquisition fees and building, excise, and other taxes. [2]

From the type of tax revenue, Income Tax was chosen because it is the largest contributor to state revenue to the APBN. In the 2021 APBN, tax revenues are targeted at Rp. 1,229.6 trillion or 14.7% higher than the realization of tax revenues in 2020. With details, PPh is targeted at Rp. 638 trillion or 15.1% higher than the realization in 2020 and VAT and PPnBM targeted at Rp518.5 trillion or 15.1% higher than the realization in 2020. [3]

With such a large target, tax revenues will contribute 44.7% of the total 2021 State Budget. The target is sufficient to support the need for spending on handling the pandemic and supporting the national economic recovery program. However, with the basis of economic growth in 2020 minus (-) 2.07 percent and the first quarter of 2021 still contracting 0.74%, the 2021 tax revenue target will be quite difficult[4].

To measure this, as an early indication, it is necessary to look at the realization of tax revenues until April 30, 2021. Realized tax revenues amounted to Rp. 374.9 trillion or a contraction of 0.46% compared to last year. This realization is better than the same period in 2020 which contracted 3.01%. In detail, the realization of Non-Oil and Gas PPh amounted to Rp216.3 trillion or a contraction of 4.52% and PPN and PPnBM by Rp137.5 trillion or grew 3.56% compared to the realization in 2020. Furthermore, Land and Building Tax (PBB) and Other Taxes amounted to 3.9 trillion or growing 67.3% and oil and gas PPh realized Rp17.2 trillion or grew 14.9% compared to the same period last year. [4]

The non-oil and gas PPh contraction which was quite deep was due to, among other things, the combined effect of the economic slowdown, incentives to reduce PPh Article 25 installments by 50%, lower corporate income tax rates to 22% and increase tax refunds. [4]

The size of the revenue in the tax sector is also influenced by the inflation rate[5]. Inflation is something that must be experienced by every country so that every country always tries to keep the inflation rate under control and stable. So if the price level is high then inflation is also high. Inflation occurs when the process of increasing prices continues and affects each other[6].

Economic growth is also very influential on tax revenue, because with increasing economic growth, government revenue through taxes will be better too, because the development that occurs comes from the people[7].

Apart from this phenomenon, another macroeconomic variable is the exchange rate. The conversion scale is an examination between the money worth of a country with other countries.

The weakening of the rupiah against the US dollar is also a problem that must be addressed by the government. In order to improve economic conditions, of course, the government needs quite a lot of funds so it must try to explore all the potential revenues that exist to the fullest.

The variables of inflation, economic growth, and the rupiah exchange rate are closely related to this, the three variables are fluctuating data. This research is considered important because it is known that PPh plays a role as a source of income, so the researcher wants to know how the three variables above affect income tax revenue.

Formulation of the problem

By looking at the background of the problem and the limitations of the problems that have been described, it can be formulated several problem formulations, namely as follows:

1. Does the inflation rate affect the income tax (PPh) revenue in the period 2018-2021?
2. Does the rupiah exchange rate affect the income tax revenue (PPh) in the period 2018-2021?
3. Does economic growth affect Income Tax (PPh) in the period 2018-2021?

Theoretical Background

Definition of Tax

According to [8] Tax is a tax levied by an individual or entity from an area or a taxpayer's contribution. There are no balanced direct rewards. Can be enforced in accordance with applicable laws and regulations and then used to manage government and regional development.

According to [9], Annual Expense is an assessment forced on pay, which can be forced occasionally and more than once inside a specific timeframe, either during the duty time frame or in the expense year.

Definition of Inflation

Inflation is the general and ceaseless expansion in costs. An expansion in a couple of products alone can't be called expansion except if the increment broadens (or brings about an increment in the cost) of different merchandise. Something contrary to expansion is called emptying[10].

Definition of Exchange rate

The exchange rate of one currency against another is part of the foreign exchange process. The exchange rate is how much homegrown cash that should be paid to get one unit of unfamiliar money.

As indicated by [11] "*An exchange rate is defined as the amount of one currency that can be exchanged per unit of another currency, or the price of one currency in terms of another currency*"

Definition of Economic growth

Economic growth is one sign of the achievement of advancement in an economy. The government assistance and progress of an economy is controlled by the size of development demonstrated by changes in public result. The presence of changes in yield in the economy is a short-run monetary investigation, as far as[12].

Monetary development is firmly identified with the most common way of expanding the creation of labor and products locally's financial exercises. According to [13] economic growth is the process of increasing output per capita in the long term.

The Relationship between Inflation and Income Tax Revenue (PPh)

The rate of inflation can affect income tax revenue because with inflation, people will reduce their level of spending because the price of goods is increasing and the value of the currency is shrinking. This is because the amount of money circulating in the community is a lot so that it lowers the value of the currency. Many industries or business entities are scattered in marketing their products due to the level of spending of citizens facing a decline which results in a decrease in income received which has an impact on reducing the amount of taxes paid to the country.

This is supported by research researched by[14], the results of this study indicate that an increase in inflation has a significant positive impact on increasing tax revenues.

$H_{1:}$ Inflation rate has a positive effect on Income Tax Revenue (PPh).

The Relationship between Exchange Rate and Income Tax Revenue (PPh)

International trade will encourage the exchange of two or more different currencies. This transaction will generate demand and supply for a particular currency. The cost in the trading of 2 unique monetary forms, there will be a correlation of the worth or cost between the two specific monetary forms, this examination of qualities is known as the conversion scale.

In conditions of a stable exchange rate, it will encourage the business world to carry out their activities calmly, especially for businesses that use foreign currencies in their transactions. Extreme exchange rate fluctuations can cause the industry to lose money or even collapse and cannot continue its business activities.

This is also supported by research conducted[15], the results of this study prove the value of the rupiah exchange rate has a positive effect on income tax receipts. This means that an increase in the exchange rate will cause an increase in income tax revenues and the exchange rate will affect the depreciation of income tax revenues.

H_2: The Rupiah Exchange Rate has a positive effect on Income Tax Revenue (PPh).

The Link between Economic Growth and Income Tax Revenue (PPh).

Economic growth is the development of economic activity which results in an increase in the aggregate number of goods and services produced by the community[16]. A country can be said to be able to face positive economic development if the quantity of products and services produced by that country has increased.

At a time when the economy is facing developments which are generally interpreted as increasing public consumption, the demand for products and services has increased. Rising demand will force the industry to increase supply by increasing production. The increase in production will increase income for both industry and society. This will increase the Income Tax base.

H3: Economic Growth Rate has a positive effect on Income Tax Revenue (PPh).

Research Methods

The examination technique utilized in this exploration is distinct quantitative exploration. Techniques Quantitative examination is an orderly examination of a peculiarity by gathering information that can be measured using statistical, mathematical or computational techniques. Quantitative research is widely used in both the natural and physical sciences. [17]

In this research, a descriptive method is used to describe the relationship or influence of the inflation rate, rupiah exchange rate, and economic growth on income tax revenues in Indonesia for the period January 2018–September 2021.

Object of Research

This research was conducted using secondary data sourced from the websites www.bps.go.id (Central Statistics Agency), www.bi.go.id (Bank Indonesia), and www.pajak.go.id (Directorate General of Taxes). Data collection is carried out by examining inflation data, the rupiah exchange rate, and economic growth in the period 2018-2021.

Data Processing Techniques

The examination procedure utilized is numerous straight relapse, to be specific the traditional supposition test, including ordinariness test, autocorrelation test, multicollinearity test, heteroscedasticity test and hypothesis testing, including the coefficient of determination test (R2), partial hypothesis test (t test) and F test. This research uses the IBM SPSS Statistics program.

Classic assumption test

The traditional supposition test is done to decide the state of the current information to decide the suitable investigation model[18]. Traditional supposition test in this review comprised of ordinariness test, heteroscedasticity test, and multicollinearity test.

Multiple Linear Regression Test

Multiple linear regression analysis is a direct relapse to examine the greatness of the relationship and the impact of free factors whose number is more than two[19].

In this examination, different straight relapse investigation was utilized to demonstrate the degree of the connection between the Expansion Rate, Rupiah Conversion scale, and Financing cost on Annual Duty Receipts at the Directorate General of Charges.

Hypothesis testing

Hypothesis testing is a process for evaluating the strength of evidence from a sample, and providing a basis for making decisions regarding the population. The purpose of hypothesis testing is to decide whether the hypothesis being tested is rejected or accepted. [20]

Hypothesis testing that aims to draw conclusions about a population based on data obtained from the population sample[20].

1. Coefficient of Determination (R^2)

The coefficient of determination R^2essentially gauges how far the model's capacity to clarify the reliant factors is. The worth of the coefficient of assurance goes from zero to one. A little worth of R2 implies that the capacity of the autonomous factors in clarifying the variety of the reliant variable is exceptionally restricted. A worth near one implies that the free factors give practically all the data expected to anticipate the variety of the reliant variable. [21]

2. Partial Test (t Test)

According to (Wijaya & Rahayu, 2021) Fractional huge test or t test intends to decide the impact of every free factor somewhat on the reliant variable. The t-test was directed by looking at the likelihood esteem (p-esteem) on every autonomous variable with an importance level of 5%.

3. Staristic Test (F Test)

According to [22]The F statistic test is utilized to test whether the relapse model is doable to use to clarify the impact of the free factors on the reliant variable.

a. If the significant number $\alpha \leq 0{,}05$, then the relationship of the free factor to the reliant variable is critical and the exploration model is accepted.

b. If the significant number $\alpha > 0{,}05$ then the relationship of the independent variable to the dependent variable is not significant and the research model is rejected.

Results and Discussions

Classical Assumption Test Results

1. Normality Test

The normality test of the data is carried out in two ways, namely by looking at the histogram graph and looking at the spread of data or points on the diagonal axis of the Normal Probability Plot graph.

From the classical assumption test that has been done, the data used in this study did not pass the Normality Test and Heteroscedasticity Test. To overcome these data problems, data screening is carried out through outlier data. Researchers detect outlier data slowly based on significant values, until in the end the problems of normality and heteroscedasticity can be overcome when the remaining data is data with a significant value of 0.05. Of the 45 samples in the initial study, the researcher performed outliers on 9 samples so that the significant value became 0.05 of 0.170 until the final sample consisted of 36 samples, and the classical assumption test was carried out again. The results of the classical assumption test from the data used for the regression model can

be concluded that the data used has passed the classical assumption test requirements as shown in Table 1 below:

Table 1

Hasil Uji Normality One Sample Kolmogorov Smirnov Test

		Unstandardized Residual
N		36
Normal parameter (a,b)	Mean	.00000
	Std. Deviation	7.01704717
Most Extreme difference	Absolute	.125
	Positive	.125
	Negative	-.107
Test Statistics		.125
Asymp. Sig. (2 tailed)		.170

The aftereffects of the ordinariness test show that the likelihood esteem is 0.170. This worth is more noteworthy than 0.05, so it very well may be clarified that the model utilized in this review doesn't have residuals or upsetting elements or is regularly circulated or the ordinariness of the information is assumed to have been met.

2. Multicollinearity Test

Table 2

Hasil Uji Multikolinearitas

Model	Unstandardized Coefficients		Standardized Coefficients Beta	t	Sig	Collinearity Statistics	
	B	Std. Error				Tolerance	VIF
Constant	53.708	65.258		.823	.417		
Tingkalinflasi (%)	5.086	1.988	.451	2.558	.015	.595	1.679
Nilai Tukar Rupian	-.001	.004	-.039	-.259	.798	.817	1.224
Pertumbuhan Ekonomi (%)	.584	.430	.235	1.357	.184	.619	1.616

The results of the multicollinearity test showed that there was no VIF value below 1 and above 10. So that in the model in this study there was no multicollinearity problem. This means that there is no multicollinearity between the two independent variables.

3. Heteroscedasticity Test

The consequences of the heteroscedasticity test led by the specialist show that the information focuses spread haphazardly and don't shape an example either above or underneath the number 0 on the Y hub, along these lines it tends to be inferred that the relapse model in this review doesn't happen heteroscedasticity.

Panel Data Regression Test Results

Table 3

Hasil Uji Multikolinearitas

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
Constant	53.708	65.258		.823	.417		
Tingkalinflasi (%)	5.086	1.988	.451	2.558	.015	.595	1.679
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Pertumbuhan Ekonomi (%)	.584	.430	.235	1.357	.184	.619	1.616

Based on table 3 above, a multiple linear regression equation model can be obtained as follows:

$$Y = 53{,}708 + 5{,}086\ X_1 - 0{,}001\ X_2 + 0{,}584 X_3 + e$$

In the model of the multiple regression equation above, it can be interpreted as follows:

1. The constant coefficient value of 53.708 units indicates that if the independent variables, namely inflation, rupiah exchange rate, and economic growth are constant, then income tax revenue will be positive or increase by 53.708 units.
2. The regression coefficient value of the inflation rate variable (X1) is positive, namely 5.086 units, meaning that if there is a decrease in inflation, income tax revenue will increase by 5.086 units, and vice versa.
3. The regression coefficient value of the rupiah exchange rate variable (X2) is negative, namely - Rp. 0.001 unit, indicating that if there is a decrease in the rupiah exchange rate, it will reduce income tax revenues by Rp. 0.001 unit, and vice versa.
4. The value of the positive economic growth variable regression coefficient of 0.584 indicates that if there is a decrease in economic growth, the income tax revenue will increase by 0.584, and vice versa.

Coefficient of Determination Test Results

Table 4

Uji Koefisien Determinasi Hasil Uji KoeFisien Determinasi

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.639	.408	.353	7.33860

In view of the aftereffects of estimations utilizing the SPSS program, it tends to be shown that the coefficient worth of R square is 0.408 or 40.8%, which implies that the impact of the autonomous variable (X) on the reliant impact (Y) is 40.8%.

In the table above, R shows a different connection between's at least two free factors on the reliant variable. The worth of R goes from 0 to 1, assuming it is near 1 then the relationship is drawing nearer and in the event that it is near 0 then the relationship is getting more fragile. The R worth of 0.639 demonstrates that the connection between the free and ward factors is close.

The coefficient of assurance test shows how much the free factor (expansion rate, rupiah conversion standard, and monetary development) can clarify the reliant variable (PPh Income). The table above likewise shows that the Changed R Square coefficient of 0.353 or 35.3% demonstrates that the reliant variable can be clarified by the free factor. While the rest (100% - 40.8% = 59.2%) is clarified by different reasons outside the model.

Autocorrelation Test Results

Table 5

Hasil Uji Autocorrelation

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.639	.408	7.33860	7.33860

Based on the results of the autocorrelation test, it can be seen that $d_L < d < 4 - d_U$ yaitu 1,10 < 1,760 < 2,56 which indicates that the value of d lies between the upper bound (d_U) and (4 – (d_U) then the autocorrelation coefficient equals zero. This means there is no autocorrelation.

Hypothesis Testing Results

1. Results of hypothesis testing (t test)

Table 6

Uji Koefisien Determinasi Hasil t Coeficents

Model	Unstandardized Coefficients		Standardized Coefficients Beta	t	Sig
	B	Std. Error			
Constant	53.708	65.258		.823	.417
Tingkalinflasi (%)	5.086	1.988	.451	2.558	.015
Nilai Tukar Rupian	-.001	.004	-.039	-.259	.798
Pertumbuhan Ekonomi (%)	.584	.430	.235	1.357	.184

The result of the calculation of the regression coefficient shows the value of the constant coefficient of 53.708. The results of partial hypothesis testing between the independent and dependent variables can be analyzed as follows:

a. Testing the Inflation Rate Hypothesis on Income Tax Revenue

In view of the consequences of the incomplete test (t-test) on the relapse model, the expansion variable shows an importance level of 0.015 <0.05, which implies that the expansion variable affects income tax revenues.

b. Hypothesis Testing the Rupiah Exchange Rate on Income Tax Revenue

Based on the results of the partial test (t-test) on the regression model of the rupiah conversion scale variable, it shows an importance level of 0.798 > 0.05, which implies that the rupiah swapping scale variable has no effect on income tax revenues.

c. Testing the Economic Growth Hypothesis on Income Tax Revenue

In view of the consequences of the halfway test (t-test) on the monetary development variable relapse model, it shows an importance level of 0.184 > 0.05, which implies that the variable financial development has no impact on income tax revenues.

2. Hypothesis testing results (F test)

Table 7

Hasil Uji F ANOVA

Model	Sum Of Square	df	Mean Square	F	Sig
Regression	58272829.841	3	19424276.614	3.156	0.38
Residual	19647402.459	32	6154606.317		
Total	255220232.000	35			

The consequences of the F test in the table above, acquired a determined F of 3.156 with a critical degree of 0.038 (more modest than 0.05), it very well may be reasoned that the factors of expansion, rupiah swapping scale, and financial development have a synchronous and huge impact on income tax revenues.

Discussions

Effect of Inflation on Income Tax Revenue (PPh)

The results showed that there was a significant effect between the inflation rate (X1) on income tax revenues (Y). This means that H0 is rejected and H1 is accepted. This is in accordance with the framework of thinking that inflation affects income tax revenues.

Based on the hypothesis test, the results show that the effect of inflation has a positive effect, which means that if there is a decrease in inflation, the income tax revenue will increase. This is because the value of the inflation rate is caused by increased demand for goods and services in the market, more money in circulation because the state uses a deficit budget, and there is pressure on production costs that are in line with the number of unemployed in a region. The results of research are in line with research conducted by [3, 12, 20] which states that the Inflation Rate has a direct effect on Value Added Tax Revenue.

The Effect of Rupiah Exchange Rate on Income Tax Revenue(PPh)

The outcomes showed that there was no critical impact between the impact of the rupiah conversion scale (X2) on annual duty income (Y). This implies that H0 is acknowledged and H2 is dismissed. This is in accordance with the framework of thinking that the rupiah exchange rate has no impact on personal expense revenues.

Based on the hypothesis test, the result is that the effect of the rupiah conversion scale has an adverse consequence, which means that if there is a decrease in the rupiah exchange rate, it will reduce income tax revenues. This is because the rupiah exchange rate can affect income tax receipts obtained by individuals or companies that export and import, as well as individuals or companies working in tourism areas. The aftereffects of this review are not the same as the consequences of examination led by [11, 12] which states that the Rupiah Exchange Rate has a direct positive effect on Value Added Tax Revenue.

The Effect of Economic Growth on Income Tax Revenue (PPh)

The results showed that there was no significant effect between the effect of economic growth (X3) on income tax revenue (Y). This means that H0 is accepted and H3 is rejected. This is in accordance with the framework of thought that economic growth has no effect on income tax revenues.

In light of the theory test, the outcomes show that the impact of monetary development has a constructive outcome, which implies that assuming there is a decline in financial development, the income tax revenue will increase. This is due to the impact of Covid-19 which has been felt throughout the world economy, including Indonesia. The aftereffects of this exploration are in accordance with the consequences of examination directed by [1] which expresses that Economic Growth does not directly affect Value Added Tax Revenue.

Conclusions

In general, this research uses samples from the Central Statistics Agency, Bank Indonesia, and the Directorate General of Taxes for the 2018-2021 period, with a total sample of 36. The factors in this exploration are the Inflation Rate, Rupiah Exchange Rate, and Economic Growth as the dependent variable.

This research aims to see how the dependent variable has a partial effect on Income Tax Revenue (PPh). In view of the consequences of information examination and conversations that have been done in the past part, toward the finish of this review the accompanying ends can be drawn:

1. On average, the inflation rate fluctuated and tended to be high during the research period. This is indicated by the acquisition of the probability value of t_{count} 0.015 < 0.05. The test results show that the Inflation Rate has a partial effect on Income Tax Revenue (PPh).
2. The price of the Rupiah exchange rate fluctuated during the study period. This is shown from the acquisition of the probability value of t_{count} 0.798 > 0.05. The test results show that the Rupiah Exchange Rate has no partial effect on Income Tax Revenue (PPh).
3. Economic growth fluctuated during the study period, even in total Indonesia's Economic Growth in 2020 experienced a minus. This is indicated by the acquisition of the probability value of t_{count} 0.184 > 0.05. The test results show that Economic Growth has no partial effect on Income Tax Revenue (PPh).

The results show that the inflation rate has a significant effect on Income Tax Revenue based on the Adjusted R Square coefficient of 0.353 or 35.3%, indicating that income tax revenue can be clarified by the expansion rate. While the rest (100% - 35.3% = 64.7%) is clarified by different reasons outside the model.

Suggestions

There are a few constraints in the review that might influence the aftereffects of the review. The first is restricted to the examination test. In this review, the information utilized were just 36 examples that met the perception standards to distinguish the elements that influence annual assessment income. Accordingly, the analyst recommends that further exploration utilizes a more extensive examination test, for example 5 (five) years back or 10 (ten) years back, so that the results obtained are better.

The second is the set number of autonomous factors. In this review, scientists just utilized the factors of Inflation Rate, Rupiah Exchange Rate and Economic Growth. Thus, the researcher suggests replacing or adding other variables such as interest rates, international oil prices, crude oil production or other factors that are thought to affect Income Tax Revenue (PPh)

References

1. Slemrod, J., *The economics of corporate tax selfishness.* National Tax Journal, 2004. **57**(4): p. 877-899.DOI: https://doi.org/10.17310/ntj.2004.4.06.
2. Sari, D., *Analysis Of Covid-19 Tax Incentives On Tax Revenues.* Turkish Journal of Computer and Mathematics Education (TURCOMAT), 2021. **12**(8): p. 1710-1715.
3. Syamsurijal, C.A., *Public Financial Analysis in the Preparation of Indonesia State Budget (APBN) 2018.* Jurnal Perencanaan Pembangunan: The Indonesian Journal of Development Planning, 2019. **3**(2): p. 203-224.DOI: https://doi.org/10.36574/jpp.v3i2.75.
4. Kennedy, P.S.J., *Evaluation of the COVID-19 Handling Programs and National Economic Recovery in Indonesia.* Fundamental Management Journal, 2021. **6**(1): p. 21-33.
5. Feldstein, M., *Inflation, income taxes, and the rate of interest: A theoretical analysis*, in *Inflation, tax rules, and capital formation*. 1983, University of Chicago Press. p. 28-43.DOI: https://doi.org/10.7208/chicago/9780226241791.001.0001.
6. Rowthorn, R.E., *Conflict, inflation and money.* cambridge Journal of Economics, 1977. **1**(3): p. 215-239.
7. King, R.G. and S. Rebelo, *Public policy and economic growth: developing neoclassical implications.* Journal of political Economy, 1990. **98**(5, Part 2): p. S126-S150.DOI: https://doi.org/10.1086/261727.
8. Borden, B.T., *The Federal Definition of Tax Partnership.* Hous. L. Rev., 2006. **43**: p. 925.
9. Wilson, J.D., *A theory of interregional tax competition.* Journal of urban Economics, 1986. **19**(3): p. 296-315.DOI: https://doi.org/10.1016/0094-1190(86)90045-8.
10. Frisch, H., *Inflation Theory 1963-1975: A" second generation" survey.* Journal of Economic Literature, 1977: p. 1289-1317.
11. Shapiro, A.C., *Exchange rate changes, inflation, and the value of the multinational corporation.* The Journal of Finance, 1975. **30**(2): p. 485-502.DOI: https://doi.org/10.1111/j.1540-6261.1975.tb01824.x.
12. Hanushek, E.A. and L. Woessmann, *The economics of international differences in educational achievement.* Handbook of the Economics of Education, 2011. **3**: p. 89-200.DOI: https://doi.org/10.1016/B978-0-444-53429-3.00002-8.
13. Akram, N., P. Ihtsham ul Haq, and M. Khan, *The long term impact of health on economic growth in Pakistan.* The Pakistan development review, 2008: p. 487-500.DOI: https://doi.org/10.30541/v47i4IIpp.487-500.
14. Abata, M.A., *The impact of tax revenue on Nigerian economy: Case of Federal Board of Inland Revenue.* Journal of Policy and Development studies, 2014. **289**(1849): p. 1-13.
15. Harahap, M., et al., *Impact of policies and macroeconomic variables on tax revenue and effective tax rate of infrastructure, utility, and transportation sector companies listed in Indonesia Stock Exchange.* International Journal of Economics and Financial Issues, 2018. **8**(3): p. 95.
16. Sastri, I.I.D.A.M., L.K. Datrini, and N.P. Pertamawati, *The Role of Tax Incentives During the Covid-19 Pandemic Period and Stable Sustainable Economic Growth.* International Journal of Environmental, Sustainability, and Social Science, 2021. **2**(2): p. 94-100.DOI: https://doi.org/10.38142/ijesss.v2i2.79.

17. Lydon, S., et al., *A quantitative examination of punishment research.* Research in Developmental Disabilities, 2015. **36**: p. 470-484.DOI: https://doi.org/10.1016/j.ridd.2014.10.036.
18. Lunev, I.S. and V.V. Neknitkin, *A remark on certain classic criteria of mathematical statistics.* Vestnik St. Petersburg University, Mathematics, 2019. **52**(2): p. 154-161.
19. Andrews, D.F., *A robust method for multiple linear regression.* Technometrics, 1974. **16**(4): p. 523-531.DOI: https://doi.org/10.1080/00401706.1974.10489233.
20. Snyder, M. and W.B. Swann, *Hypothesis-testing processes in social interaction.* Journal of personality and social psychology, 1978. **36**(11): p. 1202.DOI: https://doi.org/10.1037/0022-3514.36.11.1202.
21. Barrett, J.P., *The coefficient of determination—some limitations.* The American Statistician, 1974. **28**(1): p. 19-20.DOI: https://doi.org/10.1080/00031305.1974.10479056.
22. Shen, Q. and J. Faraway, *An F test for linear models with functional responses.* Statistica Sinica, 2004: p. 1239-1257.