



TAX REVENUE IN ASIAN COUNTRIES: CONTRIBUTION OF ECONOMIC SECTOR WITH THE RULE OF LAW AS A MODERATING VARIABLE

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Abstract

The implementation of government effectiveness aims to provide the best service to the community. The effectiveness of this organization can be measured by one of them using The Worldwide Governance Indicators (WGI) project index. From 2010 to 2019, there are seven Asian countries with effectiveness indexes above the world average, namely Georgia, Hong Kong, Thailand, Japan, South Korea, Singapore, and Malaysia. Through this study, it will be assessed whether this effectiveness supports tax revenue by conducting research on the effect of the contribution of the industrial sector and the service sector to Gross Domestic Product (GDP) on the effect of tax revenue. Then the author also conducts research whether the interaction of moderating variables, in this case the Rule of Law Index variable with the two independent variables (the contribution of the industrial sector and the service sector to Gross Domestic Product (GDP)) has an influence on the contribution of tax revenue to GDP considering that law enforcement is one of the steps in the implementation of controlling tax payments. The results obtained in this study state that before the interaction with moderating variables, the independent variables, namely the industrial sector and the service sector in GDP contribution, have a significant negative effect on tax revenue. Then when the moderating variable, namely the rule of law index, interacts with the industrial sector and the service sector, the effect of the two independent variables on the tax revenue variable has increased to a significant positive effect, so that the moderating variable in this study has a role that strengthens the influence of the independent variable on the dependent variable.

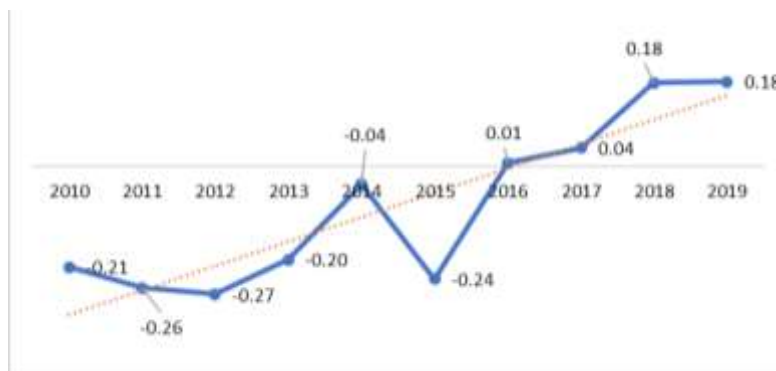
Keywords: Governance, Industry sector, Rule of law, Service sector, Tax revenue

INTRODUCTION

In government, government effectiveness is needed to provide the best service to the community. Government effectiveness is an index to measure the performance index of the government bureaucracy, in terms of measurement using the parameters of public service quality, the degree of bureaucratic independence from political intervention, the quality of policy formulation, and government credibility (Winata, 2021). The government effectiveness index is one of the indices in The Worldwide Governance Indicators (WGI) project. In the WGI index, it is stated that the project reports aggregate and individualized governance for more than 200 countries and territories over the period 1996-2021, for six dimensions of governance, namely voice and accountability, political stability and absence of violence/terrorism, government effectiveness, regulatory quality, rule of law, and control of corruption. WGI Index is measured from the lowest end of a scale of -2.5 to 2.5. The closer the number is to 2.5, the better the effectiveness in government performance. This effectiveness is expected to support tax revenue efforts in the quality of public services, the degree of bureaucratic independence from political intervention, the quality of policy formulation, and government credibility in the field of taxation. Based on data from the *worldbank*, Indonesia has an average value of government effectiveness indexivity from 2010 to 2019 of -0.08, which is still below the *world* average of 0.11. Although it still shows an average figure below the world, it shows an increasing trend regarding the effectiveness of the Indonesian government from 2010 to 2019. The effectiveness of this government is one of the factors where the provision of effective government services will affect the level of tax revenue (Anastasiou et al., 2022). Different results were shown by Tujo (2021), according to Tujo (2021), government effectiveness is not a major factor in influencing the contribution of tax revenue to GDP so that it is considered to



have no influence on tax revenue. According to him, the influence of sector development factors has a more significant role than government effectiveness.



Source: *Worldbank* data, processed by the author

The government in carrying out its activities requires funding, in this case the main support is taxation. This tax revenue is also determined by the conditions of various sectors of the economy, such as the industrial sector and the service sector. The industrial and service sectors are related to the modernization of a country's economy. Based on the theory of economic structural change, which states that there is an economic transformation mechanism by developing countries, which initially has a subsistence nature to meet its own needs to lead to the non-agricultural sector (Todaro, 2011). Developing countries are also inseparable in the process of development and sustainable economic growth in accordance with Kuznet's theory (1992) in the theory of structural transformation in which changes that occur are interrelated with each other in the composition of aggregate demand, international trade (in terms of exports and imports), aggregate supply (in terms of production and use of production factors such as labor and capital) (Suwarni, 2006). The development of this change in economic structure to non-agriculture can also be shown in the development of the industrial sector and the service sector. The development of the characteristics of the industrial sector is shown in W. Arthur Lewis's theory of the industrial economy with its high level of productivity and being a shelter for labor transferred from the subsistence sector. This high productivity is expected to stimulate income growth from the sector and increase the potential for state tax revenue. The theory of structural change supports Piancastelli's (2001) research which shows that one of the determinant factors of tax revenue is the contribution of the manufacturing sector (industry). The influence of the industrial sector is considered to have a broader impact, not only through increased productivity that can increase the income and taxes of a company, but also plays a role in the transformation of labor structure changes from subsistence labor to non-subsistence labor that is more commercial in nature. This is in line with the research of Gobachew (2017), in his research in Ethiopia which states that the contribution of the industrial sector to GDP has a significant effect on tax revenue. However, there are differences in the research of Chaudhry I S & Munir (2010) in Pakistan where the factor conditions of the manufacturing sector in GDP have no effect on tax revenue. The difference in research that has been done encourages the author to conduct further research in a different scope of research.

Meanwhile, in the service sector, according to Professor Chris Findlay as CEO of Talk The Walk in the event "The Service Sector as a Driver of Change: Indonesia Experience in the ASEAN Context" revealed that the service sector is considered to reduce poverty in Indonesia. According to the former Minister of Tourism and Creative Economy Mari Elka Pangestu, also stated that the service sector has the potential to improve the economy, in this case the increase occurs in its contribution to national GDP, job creation, and poverty reduction. The service sector is seen as an opportunity to grow in various sectors, such as tourism, logistics, and



transportation. Research by Piancastelli (2001) shows that in addition to the contribution of the industrial sector to GDP that determines tax revenue, the contribution of the service sector to GDP has a positive influence on a country's tax revenue. The service sector is considered to have potential because it can be done individually with a simpler labor implementation system than the industrial sector. However, different things are shown in research Kiang et al. (2021), Ikhatua & Ibadin (2019), and Castro & Camarillo (2014) which states that the industrial sector has a negative relationship with tax revenue. This difference certainly requires further research to find out the factors that occur in the place that is used as the locus of research. The industrial sector in other studies is also mentioned that it is not the main factor that has a significant effect on tax revenue, this is because tax policy is considered more important (Albimana & Hemedb, 2022).

Technological developments also increase the development of the service sector, one of which is *financial technology* services. Based on research revealed by Aliyudin (2020), the increase in the service sector in the *financial technology* sector has an impact on increasing state revenue. This economic transformation theory according to Mr. Jusuf Kalla, at the Industrial Summit 2019 stated that the transformation process is not only to the industrial sector but also through transformation from Natural Resources (SDA) to a value-added-based economy such as the service sector with the aim of increasing competitiveness and responding to shifts in economic structure. An increase in economic activity in the service sector can stimulate and in line with the increase in state revenue (Tamburian et al., 2017). Meanwhile, economic growth in the service sector did not show a comparable response to tax revenue in Pakistan in Chaudhry & Munir (2010). This can occur because the increase in tax revenue in Pakistan is influenced by other factors that have a more significant effect than the service sector.

In addition to focusing on economic growth in the industrial and service sectors, supervision efforts by the government are needed through law enforcement efforts. Law enforcement is expected to be one of the efforts to ensure that taxes paid, deposited, or collected are in accordance with the amount that has been regulated in the legislation. The legal efforts referred to here are not only related to disputes in court, but also related to internal processes that take place in the taxation authority in the form of regulations and implementation of tax legislation related to audit and collection. Law enforcement efforts are one of the measurements of the WGI index, namely the rule of law. Rule of law index This index is measured through the parameters of constraints on government powers, absence of corruption, open government, fundamental rights, order and security, regulatory enforcement, civil justice, and criminal justice. The rule of law index is used to strengthen more comprehensive oversight of the performance of judicial and law enforcement officials. In this study, the rule of law index is used as a moderating variable for the contribution of the industrial sector and the service sector to GDP. So that this study can see the effect of the contribution of the industrial sector and the service sector on tax revenue before interacting with the role of the rule of law index moderating variable and after interacting with the rule of law index moderating variable. In addition, it can also be seen the effect of the rule of law index on tax revenue partially. The effect of the rule of law index in terms of regulatory enforcement *is* considered to have an impact on tax revenue (Dalimunthe et al., 2022). The existence of weak rule enforcement can weaken tax revenue by a country as well (Adi Prawira, 2016). The phenomenon of weak rule of law enforcement followed by weakening tax revenue is shown in Ethiopia, precisely in the Wolaita region (Manaye et al., 2019). However, different results are shown in the research of Rokhayatim & Setiawan (2022), in their research showing that the effect of law enforcement does not have a significant effect on state revenue because according to him tax revenue only through law enforcement only contributes 15 percent to the revenue structure while 85 percent is routine taxpayer revenue. For the differences in the results of the research conducted, it encouraged the



author to conduct a reassessment study but using the rule of law index as a moderator for other independent variables. Different results are shown in research Rokhayatim & Setiawan (2022) which states that the effect of law enforcement does not have a significant effect on state revenue because according to him tax revenue only through law enforcement only contributes fifteen percent to the revenue structure while eighty-five percent is routine taxpayer revenue. Due to this difference, the authors conduct further research on the effect of law enforcement on tax revenue and examine the effect of moderation of law enforcement variables on other independent variables, namely the industrial sector and the service sector.

From the above background, through the theory of economic structural change and structural transformation theory by taking the contribution of the industrial sector and the service sector, the effect on tax revenue will be calculated with the moderation of the rule of law index, so that the effect of the independent variable can be measured before and after being given a moderating variable. In this study, the control variable of government effectiveness is also used, where seven Asian countries with Government Effectiveness Index values above the average World Government Effectiveness index are taken, which can be used as an illustration by the Indonesian government in its regulation or implementation by the taxation authority. The seven Asian countries in question include Georgia, Hong Kong, Thailand, Japan, South Korea, Singapore, and Malaysia, with data in the form of panel data for a period of ten years, starting from 2010 to 2019.

LITERATURE REVIEW

Theory of Economic Structure Change

The theory of economic structural change formulated by Arthur Lewis is an economic transformation where eventually the agricultural sector will be overtaken by the industrial sector. Lewis's two-sector model states that if there is a surplus of labor from the traditional agricultural sector, it will be transferred to the modern industrial sector which will then drive sustainable development. As a result of this labor transfer, there is an expansion of output produced, which in this case can be attributed to the contribution of the industrial sector to GDP.

Changes in the economic structure as a result of growth in the economy or an increase in public welfare can affect the level and pattern of public consumption. Factors that can determine changes in economic structure (Esa Unggul University Lecturer Team, 2020), namely, labor productivity per sector, modernization in increasing the added value of raw materials, creativity and application of technology accompanied by the ability to expand markets, government policies in encouraging commodities, availability of infrastructure, the existence of new growth centers, passion in entrepreneurship and investment, and the opening of trade outside the region and abroad.

Based on the Outline of State Policy (GBHN) from 1999 to 2004, it was stated that Indonesia's economic development was deliberately directed towards industrialization (Subkhan, 2014). As a result, agriculture became the largest contributor to GDP, which began to be replaced by the Processing Industry sector. Thus, the transformation of the Indonesian economy is characterized by a decline in the market share of agriculture, forestry, and quarrying; an increase in the share of the manufacturing sector; and the share of the service sector tends to increase in line with economic growth.

Tax Revenue Theory

According to Prof. Dr. Rochmat Soemitro, tax is the transfer of wealth from the community to the state treasury to finance its routine expenditures, with the surplus which is then deposited into public savings as the main fund for public investment. Taxes are the main source of revenue in financing various government implementation activities. In the realization of state revenue in 2022, the contribution of taxes in revenue reached 79 percent. Seeing the



contribution of taxes that almost reaches 80 percent in state revenue, of course, tax revenue becomes a concern for the government if it cannot reach the target set given its important role. In his book Mardiasmo (2019) explains that taxes are contributions from the people based on laws and regulations that can be forced and by not causing direct reciprocity and are used to fulfill public interests. The function of the tax itself, Mardiasmo (2019) explains that taxes have two functions, namely as a regulerend function and a budgetair function, the explanation of each function is as follows.

1. The regulerend or regulating function is that taxes have a role to regulate or implement social and economic policies in society.
2. Budgetair function or revenue, taxes act as a source of funds for the government in financing its expenses.

Tax Law Enforcement

This law enforcement serves to realize what has been outlined in the legislation into real action if there is a violation so as to create a moral copyright expression in the law itself. According to Soekanto (1983) According to Soekanto (1983), law enforcement itself is an activity to harmonize the relationships that are contained in the rules, views of the final stage of value to create, maintain, and maintain peace of life. Law enforcement factors according to Soekanto (1983) are as follows:

1. the legal factor;
2. law enforcers who apply the law;
3. infrastructure to support law enforcement;
4. environment it is applied to;
5. culture in the form of the work, creation, and taste of mankind.

There are two forms of law enforcement in the field of taxation in its application, namely administrative law enforcement and criminal law enforcement. Law enforcement using administrative or criminal sanctions depends on the size of the violation committed. Administrative law enforcement is imposed in the form of fines, interest, or increases for delays or deficiencies in tax payments that should be owed. Administrative sanctions in taxation are *primum remedium* which is the first sanction that will be imposed on taxpayers if they violate the provisions of tax legislation. Meanwhile, criminal law enforcement is the last resort or commonly referred to as the *ultimum remedium*. Criminal law enforcement is the *ultimum remedium* because the tax function focuses primarily on the budgetair function in terms of helping collect state revenue. *Ultimum remedium* is the last resort if administrative sanctions are considered ineffective in overcoming a case.

Effect of Industry Sector to Tax Revenue

One element of state revenue in order to support government spending is tax revenue. Tax revenue of a country or region cannot be separated from the influence of economic conditions in the country or region. In Masyitah (2019) tax revenue in this case Value Added Tax (VAT) and Luxury Goods Sales Tax (STLG) is highly dependent on general revenue conditions. Likewise, when it comes to other types of taxes such as Income Tax, which is inseparable from the influence of individual economic capabilities or the economic conditions of the company. One of the tax revenues is supported by industrial companies in the form of corporate taxpayers.

Based on research conducted Piancastelli (2001). Based on research conducted by Piancastelli (2001), revenue from taxes with determinant factors in manufacturing has a significant positive contribution to tax revenue. The industrial sector has a greater influence due to the greater economic activities carried out when only compared to individual economic activities. The contribution of the industrial sector to GDP has a significant influence on tax revenue in Ethiopia (Gobachew, 2017). The study stated that the share of industry to GDP has



a statistically significant positive effect on tax revenue at 1% significance level. The results illustrate that one percent change in industry share of GDP will result in 27.5% change in tax revenue in Ethiopia. The wide scope of economic activities carried out by the industrial sector certainly has other impacts, such as the opening of jobs for the surrounding community. When the opening of these jobs takes place, it will absorb labor so that it can provide wages to the community and become the potential for taxation if it is above the predetermined taxable income limit. The increase in industrial sector activity as seen from its increase in its contribution to GDP has a significant positive effect on the contribution of taxes to GDP (Saptono & Mahmud, 2021). The significant positive effect of the contribution of the industrial sector in GDP on tax revenue is also stated in research conducted in Jordan, noting that this relationship has an effect in the short term (Al-Qudah, 2021).

Effect of Services Sector to Tax Revenue

In his book entitled *Marketing Management*, Kotler et al. (2016) provides a definition that services are actions / deeds that can be offered by parties to other parties which are basically intangible (not physically tangible) and do not result in ownership of something and their production is not tied to physical products. Unlike the industrial sector which can produce goods or final goods as a result of its production, this service sector provides services to consumers to provide satisfaction as a form of product. For the provision of this service, consumers provide reciprocity according to a predetermined price. This income is then ultimately a profit for companies or individuals with a service business field which can then be taxed. In research by Piancastelli (2001). In a study by Piancastelli (2001), in addition to the ability of the manufacturing industry, which affects tax revenue is revenue from the service sector with a significant positive effect. When the conditions of the service sector experience an increase in income, which can occur due to the opening of new branches or the number of consumers who increase compared to before, this can increase the potential for taxation of the service sector. This is in accordance with the research proposed by Tamburian et al. (2017), which states that the service sector has a significant influence on the amount of tax.

This service sector can be optimized by Indonesia considering that Indonesia is a country with a tourism sector that is known by foreign tourists. In the tourism sector in 2014, its growth reached 9.39 percent, which exceeded the national economic growth of only 5.7 percent (Santi & Puspitasari, 2017). The growth of the service sector in tourism will certainly have an impact on other service sectors such as the hotel service sector and transportation services. Another example of a service sector that is currently growing rapidly is the digital service sector that does not require a branch office to meet directly with consumers, such as Bukalapak and Tokopedia, which provide a marketplace for online shopping platforms. This of course can be an expansion of the tax base for domestic tax authorities in taxing both marketplace providers as renters and online sellers who certainly get income from the sale of their products. According to Aliyudin (2020), the increase in the service sector in the financial technology sector has an impact on increasing state revenue.

Effect of Rule of Law to Tax Revenue

Law enforcement in the field of taxation is an effort made by the tax authorities so that taxpayers or taxpayers carry out their tax obligations in accordance with the laws and regulations in the field of taxation. The efforts made can be in the form of tax audits, active collection efforts, or judicial efforts in order to obtain the tax revenue that should be. The existence of law enforcement in the field of taxation is the government's effort to increase tax revenue. One form of law enforcement carried out by the Indonesian tax authorities, in this case the tax authorities, is the hostage-taking (*Gijzeling*), which gives the effect to the taxpayer that the taxpayer pays the tax debt in full, resulting in increased revenue (Dalimunthe et al., 2022).



Law enforcement, which should be *supporting* tax revenue, shows similar results in research conducted by Adi Prawira (2016) which states that the increase in tax revenue is not optimal as a result of inadequate law enforcement. This weak law enforcement has a linear relationship with low revenue, this happened in the Wolaita region, Ethiopia, one of the causes that low tax revenue is the existence of low law enforcement (Manaye et al., 2019).

Effect of Government Effectiveness Index to Tax Revenue

In creating *good governance*, one of which is the effectiveness of government, where one of the indicators is the provision of effective public services that are straightforward, fast, and satisfying, plays a role in its influence on a country's tax revenue. The more satisfying the services provided, can have a positive effect on tax revenue (Natasya & Setiawan, 2016). So that a sufficient number of human resources are needed to reach and provide maximum service to taxpayers and strengthen the taxation authority (Ibrahim & Jairo, 2023).. Because by providing services through a quality tax authority, it can make it easier for taxpayers to carry out their tax obligations. In research Aizenman et al. (2018) states that government effectiveness has a positive influence on the contribution of tax revenue to GDP, where this study uses panel data by comparing several Asian countries with Latin American countries. In Asian countries, better government effectiveness is associated with higher tax revenues to GDP which indicates that for tax revenue and collection, improving government effectiveness is a priority for countries in Asia.

The more effective tax administration and government will have an impact on increasing tax revenue. The same thing happens in one type of tax, namely in Value Added Tax, where government effectiveness has a significant positive effect on VAT revenue (Permadi & Wijaya, 2022). Efficiency in tax administration is an important factor for the ability to collect VAT revenue (Sarmiento, 2016). The more complex the administrative system will reduce the efficiency of government which will also reduce the effectiveness of government which leads to a decrease in tax revenue (Cnossen, 2014). This is in line with research conducted by Sadeghi (2012) which states that the government effectiveness index has a positive and significant effect on tax revenue. From the various influences mentioned, it can be said that government effectiveness has an influence that can significantly affect the level of tax revenue collection (Anastasiou et al., 2022).

Research Hypothesis

Based on the literature study conducted, several hypotheses for the study were obtained as follows.

1. H_{1A} : There is a significant positive effect of the contribution of the industrial sector in GDP on tax revenue.
2. H_{1B} : There is a significant positive effect of the contribution of the service sector in GDP on tax revenue.
3. H_{1C} : There is a significant positive effect of law enforcement on tax revenue.
4. H_{1D} : There is a significant positive effect of the contribution of the industrial sector in GDP on tax revenue, with the interaction of rule of law as a moderating variables.
5. H_{1E} : There is a significant positive effect on the contribution of the service sector in GDP on tax revenue, with the interaction of rule of law as a moderating variables.

METHODS

The use of research methods in this study uses quantitative research methods with numerical data types which are secondary data from the organization's website, namely data from the Worldbank. The process of collecting data through the literature study stage through literature, either in the form of news articles, press releases, or related journals. Data on the contribution of the industrial sector and the services sector to GDP, the WGI index in the form



of the government effectiveness index and the rule of law index, and tax revenue data were taken from the website <https://data.worldbank.org/>. Data collection for this study is in the form of panel data with Asian countries, including Georgia, Hong Kong, Thailand, Japan, South Korea, Singapore, and Malaysia, within a period of ten years, starting from 2010 to 2019. The reason for using countries with government effectiveness values above the world average located on the Asian continent is that the more government effectiveness with the measurement parameters of public service quality parameters, the degree of bureaucratic independence from political intervention, the quality of policy formulation, and government credibility can increase a country's tax revenue, in this case measured through the percentage of tax revenue to GDP.

Before regression analysis is carried out, descriptive statistical testing is carried out. In the descriptive statistics stage, the average value (mean), standard deviation value, minimum value, and maximum value of all data are calculated. If the results obtained show that the results of the average value (mean) are between the minimum value and the maximum value, and the standard deviation is below the average value, it can be said that the data distribution is not too far away and can proceed to the next test step.

This research was conducted using panel data regression analysis. Panel data regression analysis is a modeling method to determine the effect of predictor or independent variables on response or dependent variables in several sectors observed in the research object with a certain time period. The predictor variables in question are contribution of the industrial sector and services sector to GDP, the rule of law index as a moderating variable, and the response variable in the form of contribution of tax revenue to GDP with government effectiveness index as the control variable. The use of moderating variables in the form of rule of law index. The use of a moderating variable in the form of the rule of law index is to determine the role of regulations and law enforcement in influencing other predictor variables, so that the results are not only obtained from the influence of the economy (industry and services sector) but also the results obtained after being influenced by the moderating variable, from the legal side.

Table 1 Description of Dependent and Independent Variables

Dependent Variable	Unit	Scale	Symbol
Percentage of tax revenue to GDP	Percentage	Ratio	Y
Independent Variable	Unit	Scale	
Percentage contribution of industry sector to GDP (<i>before moderation</i>)	Percentage	Ratio	X ₁
Percentage contribution of services sector to GDP (<i>before moderation</i>)	Percentage	Ratio	X ₂
Rule of Law Index (moderating variable)	Points	Ratio	Z
Percentage contribution of industrial sector to GDP (<i>after moderation</i>) (X ₁ .Z)	Percentage	Ratio	X ₃
Percentage contribution of services sector to GDP (<i>after moderation</i>) (X ₂ .Z)	Percentage	Ratio	X ₄
Government Effectiveness Index (control variable)	Points	Ratio	X ₅

Source: Data processed using STATA/MP 17.0

Model selection is done with three tests, namely, Chow test, Lagrange Multiplier (LM) test, and Hausman test with an α level of 0.05. In the test to determine the model between the Common Effect Model (CEM) or Fixed Effect Model (FEM), if the sign.prob value $F = 0.000 < \alpha (0.05)$ then the FEM model is better than the CEM model. For the LM test, it is used to determine whether REM modeling is better than CEM, if the sign.prob value $\chi^2 = 0.000 < \alpha (0.05)$, it means that the REM model is better than the CEM model. As for the Hausman



test, it is used to test whether the FEM or REM model is more appropriate, if the sign.prob value $\chi^2 = 0.000 < \alpha (0.05)$ then the FEM model is better than the REM model. The following is a framework for thinking in this study:

In this study, a classic assumption test was also carried out in the form of testing normality, multicollinearity, heteroscedasticity and autocorrelation. The normality test is a test of the residual value whether it is normal or not. A good regression model is a model with normally distributed residuals. Data is considered normally distributed if the test value of $\text{prob} > \chi^2 > \alpha (0.05)$, then reject H_0 . Multicollinearity test, is a test of high correlation between independent variables, if there is a high correlation between independent variables, the impact can interfere with the relationship between the independent variable and the dependent variable. The data is said to be stationary if the test value < 10 is obtained, then reject H_0 and the data is said to be free of multicollinearity. *Heteroscedasticity* test, is an indicator test whether it fulfills the condition that there is a similarity in the variance between the residues of one observation and another, which is also called *homoscedasticity*. It is said that the data is homogeneous if the sign.prob value $> \alpha (0.05)$, then reject H_0 so that the data is said to be homogeneous or non-heteroscedastic data variants. Then the last classic assumption test is the autocorrelation test. The autocorrelation test is a test to determine whether there is a correlation between a period and previous periods. Data is considered autocorrelation free if the test results sign.prob value $> \alpha (0.05)$, then reject H_0 . The formulation of the panel data regression used in the study is as follows:

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 Z + \beta_4 X_1 Z + \beta_5 X_2 Z + \beta_6 X_5 + \varepsilon$$

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 Z + \beta_4 X_3 + \beta_5 X_4 + \beta_6 X_5 + \varepsilon$$

Description:

Y	=	Percentage of tax revenue to GDP
β_0	=	Equation constant
β_1	=	Regression Coefficient Percentage contribution of industrial sector to GDP (before moderation)
X_1	=	Percentage contribution of the industrial sector to GDP
β_2	=	Regression Coefficient Percentage contribution of service sector to GDP (before moderation)
X_2	=	Percentage contribution of services sector to GDP
β_3	=	Coefficient of rule of law index
Z	=	Rule of law index (moderating variable)
β_4	=	Regression Coefficient Percentage contribution of industry sector to GDP after interacting with rule of law index variable
$X_1 Z$	=	Regression Percentage contribution of industry sector to GDP after interacting with rule of law index variable
X_3		
β_5	=	Regression Coefficient Percentage contribution of industry sector to GDP after interacting with rule of law index variable
$X_2 Z$	=	Regression Percentage contribution of service sector to GDP after interacting with rule of law index variable
X_4		
β_6	=	Regression Coefficient of Government Effectiveness Index (control variable)
X_5	=	Regression of Government Effectiveness Index (control variable)
ε	=	Residual Value

The initial hypothesis in the research based on the results of the literature study that has been carried out is:

H_{1A} : There is a significant positive effect of the contribution of the industrial sector in GDP on tax revenue.



- H_{1B} : There is a significant positive effect of the contribution of the service sector in GDP on tax revenue.
- H_{1C} : There is a significant positive effect of rule of law on tax revenue.
- H_{1D} : There is a significant positive effect of the contribution of the industrial sector in GDP on tax revenue, with moderation of rule of law.
- H_{1E} : There is a significant positive effect of the contribution of the service sector in GDP on tax revenue, with moderation of rule of law.

RESULTS AND DISCUSSION

Data testing was carried out using the StataMP17 application. The first test is a statistical test to obtain the distribution of research data from each variable in the average value, standard deviation, minimum value, and maximum value. If the results of testing the standard deviation number are smaller than the average value, with the average value between the minimum value and the maximum value, it can be said that the results of the data distribution are normal so that the next step test can be carried out. The following is a table of statistical test results that have been carried out.

Table 2 Descriptive Statistics

Variable	Obs	Mean	Std. dev.	Min	Max
TAX	70	15.64399	2.990416	11.91	23.17931
IND	70	26.88138	10.5427	6.25573	40.49893
SERV	70	64.56222	12.80026	47.76683	91.92164
LAW	70	0.934893	0.711354	-0.20962	1.878919
IND.LAW	70	21.72516	17.93953	-8.171977	47.01526
SERV.LAW	70	66.71765	56.74207	-13.22267	168.3503
EFF	70	1.233574	0.6466178	0.187761	2.241407

Source: Data processed using STATA/MP 17.0

After the statistical test is carried out and the test results show normal data distribution results, the panel data regression test is carried out using the Chow test, Lagrange Multiplier (LM) test, and Hausman test with an α level of 0.05. The panel data test results are obtained as follows.

Table 3 Model Selection in Panel Data Processing

Model Comparison	Testing Method	Prob Value	Model Selection
CEM and FEM	Chow Test	0.1695	CEM
CEM and REM	Lagrange Test	1.0000	CEM
FEM and REM	Hausman Test	Not Tested Because the Chow Test and LM show good model selection using the CEM model.	

Source: Data processed using STATA/MP 17.0

In the test to determine the model between the Common Effect Model (CEM) or Fixed Effect Model (FEM), the sign.prob value $F = 0.1695 > \alpha (0.05)$ means that the CEM model is better than the FEM model. For the LM test, it is used to determine whether REM modeling is better than CEM, the sign.prob value of $\chi^2 = 1.000 > \alpha (0.05)$ means that the CEM model is better than the REM model. Meanwhile, the Hausman test was not carried out because the two previous test results showed a better CEM model so there was no need for the Hausman test.

In this study, classical assumption testing was also carried out, namely in the form of testing normality, multicollinearity, heteroscedasticity, and autocorrelation. The test results are as follows.



Table 4 Classical Assumption Test

Classical Assumption Test	Testing	Prob
Normality	Skewness and Kurtosis Tests	0.0134
Multicollinearity	Variance Inflation Factor	646.51
Heteroscedasticity	Breusch-Pagan/Cook-Weisberg Test	0.0001
Autocorrelation	Wooldridge Test	0.2617

Source: Data processed using STATA/MP 17.0

Based on the results of the classical assumption test carried out on the normality test, it is found that the prob value is less than 0.05, so it does not pass the normality assumption test. However, based on the central limit theory (CLT), it is stated that due to the large amount of data with more than thirty sample data, it will follow a normal distribution, so it can ignore the test results of Skewness and Kurtosis (Triola, 2019). Then for the multicollinearity test, it gets a value of 646.51 which is greater than 10, so it does not pass the multicollinearity test. Based on research by Gujarati (2003). Based on research by Gujarati (2003), it is stated that this study uses panel data so that the multicollinearity problem can be ignored considering that combining cross section and time series data is one rule of thumb. For the heteroscedasticity test, the value is 0.0001 which has a value of less than 0.05, so it does not pass the heteroscedasticity test so that treatment will be carried out on the selected model using the SUR (Seemingly Unrelated Regression) method. The following table shows the effect and significance of the independent and dependent variables after *treatment* with the SUR method.

Table 5 STATA Processing Results: Common Effect Model

Variables	Coefficient	Value of t	Prob value> t	Influence
Cons	74.05263	7.27	0.000	Significant
IND	-0.7074653	-8.96	0.000	Significant
SERV	-0.5895037	-4.30	0.000	Significant
LAW	-58.56691	-6.16	0.000	Significant
IND.LAW	0.7453147	7.68	0.000	Significant
SERV.LAW	0.6238287	5.28	0.000	Significant
EFF	-3.55876	-3.35	0.001	Significant
Adjusted R-square		0.8023		
Prob > chi2		0.0000		

Source: Data processed using STATA/MP 17.0

The regression equation is as follows.

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 Z + \beta_4 X_1 Z + \beta_5 X_2 Z + \beta_6 X_5 + \varepsilon$$

$$Y = 74.05263 + -0.7074653 X_1 + -0.5895037 X_2 + -58.56691 Z + 0.7453147 X_3 + 0.6238287 X_4 + -3.55876 X_5 + \varepsilon$$

Description:

- Y = Percentage of tax revenue to GDP
- X₁ = Percentage contribution of the industrial sector to GDP
- X₂ = Percentage contribution of services sector to GDP
- Z = Rule of law index (moderating variable)
- X₁ Z = Percentage of industrial sector contribution to GDP after moderated by rule of law index variable
- X₂ Z = Percentage of service sector contribution to GDP after moderated by rule of law index variable
- X₄ = Government Effectiveness Index (control variable)
- X₅ = Residual Value



Based on the panel data regression results, the results show that for the independent variables, namely the percentage contribution of the industrial sector to GDP, the percentage contribution of the services sector to GDP, the rule of law index as a moderating variable, the percentage contribution of the industrial sector to GDP after being moderated by the rule of law index variable, the percentage contribution of the services sector to GDP after being moderated by the rule of law index variable, and the Government Effectiveness Index as a control variable, have a significant effect simultaneously with a $\text{prob} > \chi^2$ value of 0.0000 below 0.05 with its influence shown through an adjusted R-square of 80.23 percent. Meanwhile, the partial effect on each variable is shown as follows.

The effect of contribution of the industrial sector on tax revenue

Based on the panel data regression test that has been carried out, before moderation with the rule of law index, the percentage contribution of the industrial sector to GDP to the percentage of tax revenue on GDP has a significant effect with a coefficient that shows inversely proportional results with a coefficient value of -0.7074653 which means a 1 percent increase in the percentage contribution of the industrial sector to GDP causes a decrease of 0.7074653 to the percentage of tax revenue on GDP. So that the hypothesis H_{1A} is rejected, because the test results state that the contribution of the industrial sector to GDP to the percentage of tax revenue on GDP has a significant negative effect. This can happen because, although the economic conditions of the industrial sector have increased in accordance with the theory of changes in economic structure, this is not in line with the increase in tax revenue. These results contradict previous research, in the research of Piancastelli (2001), Gobachew (2017), and Al-Qudah (2021), all three stated that the industrial sector has a significant positive effect on tax revenue.

This inverse relationship can occur due to other factors, such as the level of tax compliance of the taxpayer. As economic activity increases, the income base subject to tax increases, the tax cost will also increase. At this stage not all taxpayers will be compliant, there are actions such as tax avoidance or tax evasion to reduce the cost of taxation. This is in accordance with research conducted by Mu et al. (2023) which states that tax evasion and psychological egoism which have an impact on disobedience in fulfilling tax obligations have a negative effect on the performance of tax revenue collection. The existence of tax evasion can reduce tax revenue for the government to manage the economy and can weaken the government's ability to improve financial system stability (Ozili, 2020).

The effect of contribution of the service sector on tax revenue

Based on the panel data regression test that has been carried out, before moderation with the rule of law index, the percentage contribution of the service sector to GDP to the percentage of tax revenue in GDP has a significant effect with a coefficient that shows inversely proportional results with a coefficient value of -0.5895037 which means that a 1 percent increase in the percentage contribution of the industrial sector to GDP causes a decrease of 0.5895037 to the percentage of tax revenue in GDP, so the hypothesis H_{1B} is rejected. This is in line with the research in Jabari (2020) which states that in the short term the contribution of the service sector to GDP has a negative relationship with the percentage of tax revenue in GDP. This inverse relationship contradicts the results of research from Aliyudin (2020) and Piancastelli (2001) regarding the service sector having an increasing influence on state revenue.

The percentage contribution of the service sector to GDP that has a negative effect on the percentage of tax revenue on GDP can be possible because the service sector that has increased is the service sector engaged in the informal sector so that it can not be detected by the tax authorities, considering also the tax system in Georgia, Hong Kong, Thailand, Japan, South Korea, Singapore, and Malaysia is self-assessment. So that tax revenue depends on compliance with the fulfillment of tax obligations by taxpayers, because taxpayer compliance has a significant positive effect on state tax revenue (Waluyo, 2018). This is in line with research



from Hasanah et al., (2022) also, that the factor of taxpayer compliance has a significant positive effect on state revenue.

Effect of rule of law index on tax revenue

Based on the panel data regression test that has been conducted to check the rule of law index has a significant effect with a coefficient that shows inversely proportional results with a coefficient value of - 58.56691 which means a 1 percent increase in the rule of law index on GDP causes a decrease of 58.56691 to the percentage of tax revenue on GDP. So it can be concluded that hypothesis H_{1C} is rejected. The existence of law enforcement is expected to find potential taxes that have not been reported or not received. In a study conducted by Tuğay Günel and İrem Didinmez (2022) in 59 countries with research data in the range 2002 to 2018, the results showed that the rule of law has a positive effect on tax revenue in developed countries with per capita income above \$20,000 has a negative effect in countries with per capita income below \$20,000. The negative relationship between law enforcement and tax revenue has the opposite result with law enforcement having a positive effect on revenue in Ethiopia (Manaye et al., 2019).

Seeing the condition that the rule of law is positively correlated in developed countries while in countries with per capita income below \$20,000, shows that law enforcement factors cannot be fulfilled optimally, with limited funds that can result in infrastructure in law enforcement is less than optimal, and the environment applied is less supportive of both legal awareness by the community or Human Resources as a limited law enforcement party.

The effect of contribution of the industrial sector on tax revenue with the rule of law as moderation

After moderation with the rule of law index, it has a significant effect with a prob>|t| value of 0.000 below 0.05 and causes the coefficient effect to be positive so that it shows the relationship between the percentage contribution of the industrial sector to GDP and the percentage of tax revenue on GDP has a comparable relationship with the role of moderating variables strengthening, with the coefficient value being 0.7453147 which means that a 1 percent increase in the percentage contribution of the industrial sector to GDP causes an increase of 0.7453147 to the percentage of tax revenue on GDP. So it can be concluded that the hypothesis H_{1D} is accepted.

The existence of a shift in economic structure with an increase in the contribution of the industrial sector which has a positive effect on tax revenue is supported by research by Minh Ha et al. (2022), Hamdan & Rana (2021), and Sett (2016) which states that an increase in the industrial sector will result in an increase in tax revenue due to an increase in contribution to GDP indicates an increase in profits so that it is followed by an increase in added value which causes higher taxable income to increase the contribution of tax revenue to GDP. The condition of the industrial sector that is experiencing growth by causing a unidirectional effect which results in an increase in tax revenue also occurs in Ghana, where the value added in the manufacturing industry has a significant positive effect on the contribution of tax revenue to GDP (Amoh & Adom, 2017). And this also happened in six Southeast Asian countries, namely Indonesia, Malaysia, Thailand, Singapore, the Philippines, and Cambodia in the 2008 to 2019 research years that the effect of increasing the contribution of the industrial sector to GDP had a significant positive effect on the contribution of tax revenue to GDP. The same phenomenon also occurs in research conducted in Africa, where the contribution of the industrial sector there has a significant positive effect in encouraging tax revenue (Ariwayo, 2018). Interaction with the rule of law moderation variable has a role to strengthen the relationship between the industrial sector and tax revenue which was previously significantly negative without moderation to be significantly positive, in line with research data on ASEAN countries from



2003 to 2012, showing that the rule of law index has a significant positive effect on tax revenue (Syadullah, 2015).

The effect of contribution of the service sector on tax revenue with the rule of law as moderation

After moderation with the rule of law index, it has a significant effect with a probability value of 0.000 below 0.05 and causes the coefficient effect to be positive so that it shows the relationship between the percentage contribution of the service sector to GDP and the percentage of tax revenue to GDP has a comparable relationship with the role of moderating variables strengthening, with the coefficient value being 0.6238287 which means that a 1 percent increase in the percentage contribution of the industrial sector to GDP causes an increase of 0.6238287 to the percentage of tax revenue to GDP.

This is in line with previous research, which shows that the relationship between the contribution of the service sector to GDP has a significant positive effect on the percentage of tax revenue on GDP in Uzbekistan in the long run (Kitessa & Jewaria, 2018). The more revenue from the service sector increases, the more the tax base increases. The condition of increasing economic activity in the service sector allows the service sector to determine the growth of *gross tax revenue* (Sett, 2016). The effect of the contribution of the service sector to GDP with a significant positive effect on tax revenue on GDP is in accordance with research from Piancastelli (2001) and Chilima (2020). Then it is strengthened by the moderation of the *rule of law index*, where the higher the *rule of law* index of a country represents that law enforcement there is running effectively so that one of them has an impact on eradicating tax crimes and corruption, when this happens, the increase in tax revenue will also increase (Epaphra & Massawe, 2017). In realizing fair law enforcement, the quality of tax regulations is also needed (Cung et al., 2013).

CONCLUSION

In the results of a study conducted on seven Asian countries including Georgia, Hong Kong, Thailand, Japan, South Korea, Singapore, and Malaysia, with data in the form of panel data for a period of ten years, starting from 2010 to 2019 which has a government effectiveness index above the world average, simultaneous results between the variables of the contribution of the industrial sector and the service sector to GDP, the *rule of law* index, the interaction of the *rule of law index* moderation variable with the industrial sector contribution variable to GDP, and the interaction of the rule of law index moderation variable with the service sector contribution variable to GDP together have a significant effect on the contribution of tax revenue to GDP.

As for the partial results, it is found that, it is found that before the interaction with moderation variables, the dependent variable, namely the effect of the industrial sector and the service sector on GDP contribution, has a significant effect on tax revenue, but has a negative relationship with the contribution of tax revenue to GDP. The moderating variable of the *rule of law* index itself has a significant negative relationship with the tax contribution to GDP. Then when the moderating variable, namely the *rule of law* index, interacts with the industrial sector and the service sector, the influence of the two independent variables on the tax revenue variable has increased to a positive influence with a level of influence that remains significant, so that the moderating variable in this study has a role that strengthens the influence of the independent variable on the dependent variable.



REFERENCES

- Adi Prawira, I. F. (2016). Organizational culture, law enforcement, and Indonesian tax revenue. *International Journal of Accounting and Economics Studies*, 4(2), 152. <https://doi.org/10.14419/ijaes.v4i2.6706>
- Aizenman, J., Jinjark, Y., Jungsuk, K., & Donghyun, P. (2018). Tax Revenue Trends in Latin America and Asia: A Comparative Analysis. *Emerging Markets Finance and Trade*, 55(2), 427-449. <https://doi.org/10.1080/1540496X.2018.1527686>
- Albimana, M. M., & Hemedb, I. M. (2022). The Determinants of Tax Revenues among EAC members. *Impact of Technology in Tax and Custom Administration*.
- Aliyudin, R. S. (2020). The Role of Financial Technology in Increasing Tax Revenue in Indonesia. *Journal of Financial Accounting and Information Systems*, 1(1), 56-67.
- Al-Qudah, A. M. (2021). The Determinants of Tax Revenues: Empirical Evidence From Jordan. *International Journal of Financial Research*, 12(3), 43. <https://doi.org/10.5430/ijfr.v12n3p43>
- Amoh, J. K., & Adom, P. K. (2017). The determinants of tax revenue growth of an emerging economy - the case of Ghana. *International Journal of Economics and Accounting*, 8(3/4), 337. <https://doi.org/10.1504/ijea.2017.10013451>
- Anastasiou, A., Kalligosfyris, C., & Kalamara, E. (2022). Determinants of Tax Revenue Performance in European Countries: A Panel Data Investigation. *International Journal of Public Administration*. <https://doi.org/10.1080/01900692.2022.2111578>
- Ariwayo, O. R. (2018). *A Study on the Determinants of Tax Revenues in Africa* [Dissertation, Universidade de Lisboa]. <https://www.proquest.com/openview/7b86140eb5d644cffab1cd4c303e6172/1?pq-origsite=gscholar&cbl=2026366&diss=y>
- Castro, G. Á., & Camarillo, D. B. R. (2014). Determinantes de ingreso fiscal en países de la OECD en el periodo 2001-2011. *Contaduría y Administración*, 59(3), 35-59. [https://doi.org/https://doi.org/10.1016/S0186-1042\(14\)71265-3](https://doi.org/https://doi.org/10.1016/S0186-1042(14)71265-3)
- Chilima, I. Y. (2020). Determinants of Tax Revenue Performance in Malawi: Evidence of Direction and Dynamic Inference by ARDL Modeling. *Departmental Bulletin Paper*, 24(3), 53-75. <https://doi.org/info:doi/10.18880/00012898>
- Cnossen, S. (2014). Mobilizing VAT Revenues in African Countries. *SSRN*, 22(6), 1077-1108. <https://doi.org/https://doi.org/10.1007/s10797-015-9348-1>
- Cung, N. H., Zhou, Q., & Liu, H. (2013, January 1). Determinants of Revenue of Personal Income Tax in Vietnam. *SpringerLink*. https://doi.org/https://doi.org/10.1007/978-3-642-40060-5_26
- Dalimunthe, A. F., Ginting, B., Sunarmi, & Barus, U. M. (2022). Optimizing the Implementation of Hostage Taking (Gijzeling) as a Law Enforcement Effort in Tax Revenue (Case Study of Hostage Taking Implementation at the Regional Office of the Directorate General of Taxes of North Sumatra I). *Scientific Journal of Law Enforcement*, 9(2), 207-218.
- Epaphra, M., & Massawe, J. (2017). Corruption, governance and tax revenues in Africa. *Business and Economic Horizons*, 13(1-4), 439-467. <https://www.ceeol.com/search/article-detail?id=665463>
- Gobachew, N. (2017). Determinants of Tax Revenue in Ethiopia. *Economics*, 6(6), 58. <https://doi.org/10.11648/j.eco.20170606.11>
- Gujarati, D. R. (2003). *Basic Econometrics* (4th ed.). McGraw-Hill.
- Hamdan, S., & Rana, F. (2021). *Determinants of Tax Revenue in Emerging Countries*. 18(13), 98-106. <https://archives.palarch.nl/index.php/jae/article/view/8073>



- Hasanah, U., Bramasto, A., & Sutrisna, T. (2022). The Influence of Taxpayers, Tax Services and Taxpayer Compliance on Tax Revenues at the Cimahi Pratama Tax Service Office. *JASa (Journal of Accounting, Auditing and Accounting Information Systems)*, 6(1), 135-147. <https://doi.org/10.36555/jasa.v6i1.1812>
- Ibrahim, A. J., & Jairo, I. J. (2023). Determinants of tax Revenue Performance in the East African Countries. *African Journal of Economic Review*, 11(2), 55-73. <https://www.ajol.info/index.php/ajer/article/view/243014>
- Ika. (2016). *Service Industry Has Great Potential to Improve Indonesia's Economy*. Gajah Mada University. <https://www.ugm.ac.id/id/berita/11510-industri-jasa-berpotensi-besar-terhadap-peningkatan-ekonomi-indonesia>
- Ikhatua, J. O., & Ibadin, P. O. (2019). Tax Revenue Effort in Nigeria. *Accounting and Finance Research, Sciedu Press*, 8(1), 103-103. <https://ideas.repec.org/a/jfr/afr111/v8y2019i1p103.html>
- Jabari, R. (2020). *Determinants Of Tax Revenue Mobilization In Lesotho* [Thesis, African Economic Research Consortium]. http://publication.aercafricalibrary.org/bitstream/handle/123456789/1280/REFILOE%20JABARI_thesis.pdf?sequence=1&isAllowed=y
- Coordinating Ministry for Economic Affairs. (2019, April 15). *Indonesia's Economic Transformation Strategy: Build Villages, Improve Supply Side, and Value-Added Industry*. Coordinating Ministry for Economic Affairs. <https://ekon.go.id/publikasi/detail/1086/strategi-transformasi-ekonomi-indonesia-bangun-desa-tingkatkan-supply-side-hingga-industri-berbasis-nilai-tambah>
- Kiang, B. K., Chiew, C. H., Hao, C. W., & Foong, L. Y. (2021). *Determinants of Tax Revenue in Malaysia* [Research Project, Universiti Tunku Abdul Rahman]. http://eprints.utar.edu.my/4319/1/fyp_FE_2021_BKK_-_1702975.pdf
- Kitessa, D. T., & Jewaria, T. (2018). Determinants of tax revenue in East African countries: An application of multivariate panel data cointegration analysis. *Journal of Economics and International Finance*, 10(11), 134-155. <https://doi.org/10.5897/jeif2018.0924>
- Kotler, P., Keller, K. L., Maulana, A., & Sabran, B. (2016). *Marketing management* (13th ed.). Erlangga.
- Manaye, M. K., Patnaik, B. C. M., & Satpathy, I. (2019). Determinants of revenue collection efficiency and administration: The case of local government authorities in wolaita fzone, Ethiopia. *International Journal of Engineering and Advanced Technology*, 8(6), 5249-5253. <https://doi.org/10.35940/ijeat.F8301.088619>
- Mardiasmo. (2019). *Taxation: 2019 edition*. Andi Yogyakarta.
- Masyitah, E. (2019). Factors Affecting VAT and STLG Revenue. *Accumulated Journal*, 1, 89-102. <https://doi.org/http://dx.doi.org/10.22303/accumulated.1.2.2019.89-104>
- Minh Ha, N., Tan Minh, P., & Binh, Q. M. Q. (2022). The determinants of tax revenue: A study of Southeast Asia. *Cogent Economics and Finance*, 10(1). <https://doi.org/10.1080/23322039.2022.2026660>
- Mu, R., Fentaw, N. M., & Zhang, L. (2023). Tax evasion, psychological egoism, and revenue collection performance: Evidence from Amhara region, Ethiopia. *Frontiers in Psychology*, 14. <https://doi.org/10.3389/fpsyg.2023.1045537>
- Natasya, I. A. A., & Setiawan, P. E. (2016). Factors Affecting the Effectiveness of Motor Vehicle Title Tax Revenue in Bali Province. *E-Journal of Accounting, Udayana University*, 14(2), 862-892. <https://garuda.kemdikbud.go.id/documents/detail/1918157>
- Ozili, P. K. (2020). Tax evasion and financial instability. *Journal of Financial Crime*, 27(2), 531-539. <https://doi.org/10.1108/JFC-04-2019-0051>



- Permadi, D. G., & Wijaya, S. (2022). Analysis of determinants of value added tax revenue in Asia. *JPPI (Journal of Indonesian Educational Research)*, 8(3), 622-631.
- Piancastelli, M. (2001). Measuring the Tax Effort of Developed and Developing Countries: Cross Country Panel Data Analysis. *IPEA Working Paper No. 818*.
- Rokhayatim, J. Putri, & Setiawan, B. (2022). The Effect of Budget Realization, Law Enforcement, Compliance Level, and Inflation Rate on Tax Revenue. *E-QIEN Journal of Economics and Business*, 9(1), 227-235.
- Rosari, M. (2019, January 17). *Indonesia Rule of Law Index by Maria Rosari*. Antaranews. <https://www.antaranews.com/berita/788632/indeks-negara-hukum-indonesia-oleh-maria-rosari>
- Sadeghi, S. K. (2012). The Effects of Control of Corruption and Government Effectiveness Indices on Tax Revenue: The Case of Upper Middle Income Countries. *J Tax Res*, 20(14), 229-248. <http://taxjournal.ir/article-1-62-en.html>
- Santi, A. R., & Puspitasari, V. A. (2017). Analysis of the Potential of the Hospitality and Tourism Services Sector on the Indonesia Stock Exchange for the Period 2010-2014: A Macroeconomic Perspective. *Journal of Hospitality and Tourism*, 2(1), 15-35.
- Saptono, P. B., & Mahmud, G. (2021). MACROECONOMIC DETERMINANTS OF TAX REVENUE AND TAX EFFORT IN SOUTHEAST ASIAN COUNTRIES. *Journal of Developing Economies*, 6(2), 253. <https://doi.org/10.20473/jde.v6i2.29439>
- Sarmento, J. (2016). The Determinants of Value Added Tax Revenues in the European Union. *European Journal of Management Studies*, 21(2), 79-99.
- Sett, K. (2016). Determinants of Growth Rate in Gross Tax Revenue of Government of India: An Assessment. *IUP Journal of Applied Finance Hyderabad*, 22(1), 86-101. <https://www.proquest.com/openview/af86b5617219d586bab28f8e97fe8a9f1?pq-origsite=gscholar&cbl=54442>
- Soekanto, S. (1983). *Law Enforcement*. Bina Citra.
- Soekanto, S. (2008). *Factors affecting law enforcement* (1st ed., Vol. 1). Raja Grafindo Persada.
- Subkhan, I. (2014). GBHN and Changes in Development Planning in Indonesia. *DPR Journal*, 131-143. <https://jurnal.dpr.go.id/index.php/aspirasi/article/view/455/352>
- Suwarni, E. (2006). Changes in Indonesia's Economic Structure. *Journal of Development Economics*, 4(1), 19-29.
- Syadullah, M. (2015). Governance and Tax Revenue in Asean Countries. *Journal of Social and Development Sciences*, 6(2), 76-88. <https://doi.org/10.22610/jsds.v6i2.845>
- Tamburian, L., Kawung, G. M. V, & Sumual, J. I. (2017). Analysis of the Effect of Service Sector and Industrial Sector on Tax Revenue in Manado City. *Jurnal Berkala Ilmiah Efisiensi*, 17(3), 155-164.
- Todaro, M. (2011). *Economic Development: Vol. One* (Eleventh). Erlangga.
- Triola, M. (2019). *Essentials of Statistics* (6th ed.). Pearson.
- Tujo, D. B. (2021). Tax revenue Determinants and Tax Efforts in Ethiopia from 2000 - 2019-ARDL Approach. *International Journal of Public Administration and Management Research (IJPAMR)*, 7(2), 1-18. <http://journals.rcmss.com/index.php/ijpamr/article/view/568>
- Waluyo, W. (2018). THE EFFECT OF ADDITION OF TAXPAYERS NUMBER, TAX AUDIT, TAX BILLING, AND TAXPAYERS COMPLIANCE TOWARD TAX REVENUE. *The Accounting Journal of Binaniaga*, 1(1). <https://doi.org/10.33062/ajb.v1i1.75>
- Winata, D. K. (2021, September 27). *Government Effectiveness Index Rises, Moeldoko: Bureaucratic Reforms Continue*. Media Indonesia. <https://mediaindonesia.com/politik-dan-hukum/435669/indeks-efektifitas-pemerintah-naik-moeldoko-reformasi-birokrasi-terus-dijalankan>



- Worldbank. (2021a). *Government effectiveness - Country rankings*. The Global Economy.Com. https://www.theglobaleconomy.com/rankings/wb_government_effectiveness/
- Worldbank. (2021b). *Industry (including construction), value added (% of GDP)*. The Worldbank Data. <https://data.worldbank.org/indicator/NV.IND.TOTL.ZS>
- Worldbank. (2021c). *Services, value added (% of GDP)*. The Worldbank Data. <https://data.worldbank.org/indicator/NV.SRV.TOTL.ZS>
- Worldbank. (2021d). *Tax revenue (% of GDP)*. The Worldbank Data. https://data.worldbank.org/indicator/GC.TAX.TOTL.GD.ZS?most_recent_year_desc=true
- Worldbank. (2022a). *World Development Indicators: Government Effectiveness Index*. The Worldbank Data. <https://databank.worldbank.org/source/world-development-indicators>
- Worldbank. (2022b). *World Development Indicators: Rule of Law Index*. The Worldbank Data. <https://databank.worldbank.org/source/world-development-indicators>