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Analysis of determinants of value added tax revenue in Asia

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ABSTRACT

This study aims to obtain empirical evidence of factors that influence VAT receipts from various aspects, including the VAT rate itself, economic factors, tax administration factors, and legal factors. The VAT rate factor is explained by the standard rate and implicit rate variables. Economic factors are explained by the variables of imports, the service sector, and the fiscal deficit. Administrative factors are explained by the variable c-efficiency and government effectiveness. The legal factor is explained by the variables of controlling corruption and law enforcement. This study uses secondary data with the object of research being countries in the Asian continent from 2015 to 2019. The sample countries were selected with certain considerations so that 19 sample countries were obtained. The results of this study indicate that implicit tariffs, the service sector, and government effectiveness have a significant positive effect on VAT receipts, while imports have a significant negative effect on VAT receipts. Meanwhile, standard rates, fiscal deficits, c-efficiency, corruption control, and the rule of law have no significant effect on VAT revenues.

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Introduction

Taxes are one of the most important and largest sources of income for most countries in the world. Especially for countries that do not have sources of income such as natural wealth that can be traded. Other sources of income derived from natural wealth are usually only as an additional component of income and the portion is not as large as income from tax revenues. Therefore, taxes are an important factor in meeting the needs of state spending. The taxation system as an income instrument applied in the world has undergone many developments.

One of the innovations in taxation is the application of the concept of indirect tax on value added or in Indonesia known as Value Added Tax (VAT). In general, VAT is referred to as *Value Added Tax* (VAT) or some countries use the term *Goods and Services Tax* (GST). In its development, VAT has now become one of the most dominant state revenue instruments in the world (James, 2015). In the mid-19th century to the 20th century, many countries relied on income taxes as the main instrument of income (Gupta, 2017).

Data compiled from the World Bank (2019) shows that VAT contributed 32.62% of the total income of countries in the world in 2019. From this data, it can be seen that the role of VAT on state revenues is quite significant. The role of VAT on state revenues increased from 2010 to 2016. In that year, there was an increase from 33.38% in 2015 to 34.23% in 2016. However, the contribution of VAT revenues to global state revenues has decreased. After that. The decline that continued to occur in 2017 was 33.04%, in 2018 it was 33.38%, and in 2019 it was 32.62%. Based on the data above, there is a problem, namely the declining contribution of VAT

to state revenue, where in fact VAT has the potential to be an optimal source of state revenue with the advantages described previously.

Bogetic & Hassan (1993) examined the factors that influenced VAT receipts in the early days of VAT implementation in the international sphere. They found that tax rates and tax bases had a positive effect on VAT receipts. While the distribution of VAT rates has a negative effect on VAT receipts. The study also concluded that countries with a single VAT rate provide greater tax revenue than countries with multiple VAT rates. Bikas & Andruskaite's research (2013) states that Gross Domestic Product (GDP), consumption levels, both household consumption and government consumption, levels of imports, and exports are factors that affect VAT receipts in European Union countries. Subsequent research by Sarmento (2016) states that factors such as VAT rates, tax administration efficiency, and the government and legal environment have a positive effect on VAT receipts in the European Union. Meanwhile, economic factors such as the percentage of imports to GDP and the budget deficit have a negative effect on VAT revenues. Caro & Sacchi (2020) have also conducted research on VAT receipts in Italy and found that the informal sector has a negative effect on VAT receipts but sales to consumers have a positive effect on VAT receipts. Another study by Wijaya (2020) states that a single VAT rate results in more VAT receipts than VAT at a double rate. Kotlinska et al. (2020) states that the level of household consumption has an effect on VAT receipts. Bikas & Raškauskas (2011) stated that the standard VAT rate and the lower amount of the tariff have a positive relationship with VAT receipts, while unemployment has a major impact on decreasing consumption which has a negative impact on VAT receipts. Research by Ebrill et al. (2001) found that the increase in standard VAT rates, trade openness, year of application of VAT and tariff dispersion (the difference between the lowest and highest rates) will also increase VAT revenues. Godin & Hindriks (2015) state that the dependence of geographical space and the agricultural sector has a strong effect on VAT receipts but the quality of the government does not have a strong effect on VAT receipts. Sokolovska & Sokolovskyi (2015) found that the higher the level of corruption and the shadow sector economy will weaken the efficiency of VAT receipts.

In Indonesia, research on VAT receipts has also been carried out with research results that can still be developed. Research by Renata et al. (2016) found that the inflation rate, the rupiah exchange rate and the number of Taxable Entrepreneurs (PKP) had a significant positive effect on VAT receipts in the East Java region. Another study also conducted by Puspita & Supadmi (2018) found that economic growth factors had a positive effect on VAT receipts, while inflation in Bali had no effect on VAT receipts. Simarmata (2018) also conducted research on VAT and PPnBM receipts. The study also found that the number of PKP, GRDP, export rate, import level, consumption level, and population had a positive effect on VAT receipts, while inflation rates and interest rates had a negative effect on VAT receipts. Sinambela & Rahmawati (2019) examined the effect of inflation, the rupiah exchange rate, and the amount of PKP on VAT receipts in Indonesia from 2013 to 2017 and found that inflation, the rupiah exchange rate, and the amount of PKP had no significant effect. on VAT receipts.

Based on the studies above, it can be concluded that there are several factors that influence VAT receipts, but there are still few studies that examine the factors that can increase VAT revenues, especially in Asia. The variables studied still show inconsistent results, influenced by the country studied, the research period, and the research model used. This study is interested in examining the factors that influence VAT receipts with a broader view, namely from the internal factors of VAT itself and external factors consisting of the country's economic conditions, tax administration factors, and finally legal institutional environment factors. Research on the determinants of VAT receipts is mostly done on internal factors (Bogetic & Hassan, 1993; Keen, 2013; Sarmento, 2016; Wijaya, 2020) and external VAT (Bikas & Andruskaite, 2013; Sarmento, 2016; Tagkalakis, 2014; Wawire, 2017) .).

The effectiveness of tax administration is highly relevant to VAT receipts (Godin & Hindriks, 2015; Mustapha et al., 2017; Sarmento, 2016; Sokolovska & Sokolovskyi, 2015). Tax administration and more efficient government have an impact on increasing tax revenue. Institutional factors and a good legal environment are also related to the ability of a country to collect VAT receipts (Godin & Hindriks, 2015). The business ecosystem always coexists with the laws that govern it and the state institutions that govern it. The existence of corruption in the institutional and legal environment will have a negative impact on the efficiency of VAT (Sokolovska & Sokolovskyi, 2015).

This study uses Sarmento (2016) as a reference with several adjustments made. This study uses the objects of countries in the European Union. This study aims to determine how the influence of VAT rates, economic factors, tax administration, and legal factors on VAT receipts. There are still gaps in the study of tariff factors, economic factors, tax administration, and legal factors so that this research is interesting to do.

There are differences between this study and previous research on VAT receipts. Many previous studies have only examined economic factors and still rarely combine other factors such as administration, law and the VAT rate itself. Economic variables such as service activity and budget deficits are also rarely studied. Another difference, especially with previous research, lies in the object of research conducted in several countries. Most of the research related to VAT with multi-country objects is carried out in the European Region, it is still rare to conduct multi-country research in other regions such as the Asian Continent. Determinants of VAT receipts in the European Union can be different from other continents such as the Asian Continent. This can be an interesting new insight, especially regarding its application in each country.

This research was conducted on countries in Asia that applied VAT in the period 2015 to 2019. The object of the research is the Asian continent because it is one of the largest economic powers in the world according to its population by owning 60% of the world's population (UN, 2019). Economic growth in two-thirds of Asia has picked up, supported by higher external demand, improvement in global commodity prices and domestic reforms. This makes the Asian region the largest growth contributor to global growth at 60%, according to the Asian Development Bank (ADB) report (Asian Development Bank, 2017).

Based on the explanation of the background above, the problems, and the literature study carried out, the authors are interested in conducting further research with the research title "Analysis of Determinants of Value Added Tax Revenue in Asia".

The formulation of the problem discussed in this study is whether standard VAT rates, implicit VAT rates, imports, the service sector, fiscal deficit, c-efficiency, government effectiveness, corruption control, and the rule of law affect VAT revenues. This study aims to analyze the effect of these independent variables on VAT receipts.

This research is expected to provide benefits in the academic field as additional information, knowledge in the academic world in the field of economics, especially those related to factors that affect VAT receipts in Asia and can also be used as references, discussion materials, literature and studies. material for further research. While the practical benefits for the Directorate General of Taxes (DGT), this research is expected to be an input in the strategy for achieving the realization of VAT receipts and can also be used as input in policy making and implementation related to VAT. For the government, this research is expected to be input in making policies and running the government related to macroeconomics such as import policies related to VAT receipts.

Method

Overview of Research Objects

The selection of the object of this research is based on several reasons, namely the continent of Asia is the continent with the largest nominal GDP and *Purchasing Power Parity* (PPP). The International Monetary Fund (IMF) stated that the Asian continent is also a region with the fastest economic growth compared to other regions (IMF, 2021) . In addition, according to United Nations (UN) data, the Asian continent has about 60% of the world's population (UN, 2019) , which makes the Asian continent a large consumer base. From these data, it is hoped that research on countries in the Asian continent can be a good picture in determining the factors that influence VAT receipts.

The sample selection in this study used a sampling technique using certain criteria as a consideration. The considerations set out in the selection of samples in this study are as follows: 1) Countries in the geopolitical region of the Asian continent based on the understanding of the United Nations. This is intended so that there are clear boundaries because there are countries located in the border area between the Asian continent and the European continent; 2) The state imposes VAT in the period 2015 to 2019. This is so that the authors get the latest and relevant data to calculate research variables; 3) Complete data on VAT receipts, VAT rates, imports, GRDP, APBN, and total consumption .

Study Type

This study is a quantitative study to examine the effect of standard VAT rates, implicit tariffs, imports, the service sector, fiscal deficit, *c-efficiency* , government effectiveness, corruption control, and *the rule of law* on VAT revenues.

Types of Data and How to Obtain Data

The type of data used in this research is secondary data. The secondary data used in this study is data on the amount of VAT receipts, tariffs, imports, GRDP, APBN, total consumption, and the *Worldwide Governance Indicator* (WGI) index for the period 2015 to 2019. Data were obtained from various sources such as the Worldwide website. Banks, OECD, United Nations, IMF, and official websites of each country are considered according to the research carried out.

Research Variables, Variable Operational Definitions, and Measurement Methods

Dependent variable

The dependent variable in this study is VAT Revenue. Research with objects from several countries is usually used as a proxy for the ratio of VAT revenue to GDP (Bogetic & Hassan, 1993), *the c-efficiency ratio* (Ebrill et al., 2001; Tagkalakis, 2014), and also the logarithm of VAT receipts in currencies. (Bikas & Andruskaite, 2013; Keen & Lockwood, 2010; Sarmento, 2016). The VAT revenue variable in this study uses a logarithmic proxy of VAT receipts which is converted into United States Dollar currency according to the exchange rate prevailing for each country in the period 2015 to 2019.

Independent variable

This study uses nine independent variables, namely standard tariffs, implicit tariffs, imports, the service sector, fiscal deficit, *c-efficiency* , government effectiveness, corruption control, and *the rule of law* . The standard rate is the VAT rate that is generally used unless there is a VAT exemption policy or a higher or lower rate is imposed. The implicit rate is the percentage resulting from VAT receipts that are actually collected divided by the total tax base of VAT receipts (Soukopová & inky í kov á , 2014). The tax base used in this case is the total consumption of a country, both from government spending and household consumption.

Import is the activity of entering goods and services from abroad into the country. The total import value accumulated in one year becomes the total import data. Then the total value of imports is divided by GDP to determine the share of imports in GDP. Import and GDP data are obtained from the World Bank's Open Data (World Bank, 2019a) . Productive activities that make up GDP are divided into 3 sectors according to ISIC, which consist of industry, agriculture, and services. The measurement of this variable uses the total number of activities involving services, including trade, transportation, government and private services. This study uses the same proxy as Sarmento (2016) but uses a different data source. Sarmento uses EU data provided by AMECO (Annual Macroeconomic Database). The fiscal deficit is the negative balance of the government budget due to budgeted expenditures that are greater than the state budget in one fiscal year. This study measures the fiscal deficit using the percentage of the deficit to GDP.

C-efficiency is a ratio that measures the effectiveness of VAT that compares actual VAT revenue with total consumption then divided by the prevailing standard rate (Ebrill et al., 2001). C - efficiency has become a common indicator used to determine the determinants of VAT compliance and also to compare VAT performance across countries. In accordance with previous studies (Keen, 2013; Sarmento, 2016; Ueda, 2017), this study uses the same method to measure C-efficiency .

Government effectiveness measures the quality of output and measures how well public policies can achieve the desired goals. The measurement of this variable uses the government effectiveness index according to Kaufmann et al. (2007) in his project, namely the Worldwide Governance Indicator Project . The corruption variable tested in this study is corruption control which describes the perception of the extent to which public power is used for personal gain, including minor and major corruption cases. The measurement of this variable uses the Control of Corruption (CC) index from the Worldwide Governance Indicator. This law enforcement variable describes the perception of the extent to which people have confidence in complying with applicable rules and also trust in the quality of contract enforcement, property rights, police, courts and the possibility of crime and violence (Kaufmann et al., 2010).). This research uses the rule of law index proxy.

Research Model

The model used to analyze the hypothesis is as follows:

$$PPN_{i,t} = +STD_{i,t} + IMPLICIT_{i,t} + \beta\, IMPOR_{i,t} + LAYANAN_{i,t} + \beta\, 5\, DEF_{i,t} + CEFFIC_{i,t} + GOVEFF_{i,t} + CCi_t + HUKUM_{i,t} + i_t$$

Information:

VAT $_{i,\,t}$ = i state revenue year t
STD $_{i,t}$ = i country standard rate year t
IMPLICIT $_{i,t}$ = implicit rate of country i year t
IMPORT $_{i,\,t}$ = import/GDP of country i year t
SERVICES $_{i,\,t}$ = service sector/country GDP i year t
DEF $_{i,\,t}$ = fiscal deficit/GDP of country i year t
CEFFIC $_{i,\,t}$ = c- *efficiency ratio of country i year t*
GOVEFF $_{i,\,t}$ = government effectiveness of country i year t
CC $_{i,\,t}$ = country of eradication of corruption i year t
LAW $_{i,\,t}$ = country of law enforcement i year t
i $_{,\,t}$ = *error*

= constant

Data analysis method
The analysis technique was carried out through the stages of descriptive statistical analysis, selection of regression models, classical assumption tests, and panel data regression tests.

Results and Discussion

Sample Selection Results
There are 19 selected country samples and a 5-year testing period, from 2015 to 2019 so that the total observed data is 95. A description of the sample selection with certain considerations can be seen in Table D.1 below.

Table 1. Sample Selection

Not	Criteria	Total
1	Countries in the Asian geopolitical region based on the United Nations (Population)	48
2	Countries that did not charge VAT in 2015 to 2019	(15)
3	Countries that do not provide data on the variables used	(14)
Number of Samples		19
Observation Period (Years)		5
Total Observations		95

Source: Processed by the Author (2021)

Descriptive Statistics l Analysis
The following are descriptive statistics of research variables.

Table 2. Research Descriptive Statistics

Variable	*Means*	*median*	*Maximum*	Minimum	Std. Dev.	Obs.
VAT	9.984907	9.735568	11.96849	8.863209	0.757468	95
Standard Rate	13.76842	12,000,000	20,00000	7,000,000	4.278727	95
Implicit Level	10,60337	10.30087	16.98241	3.901073	3.453565	95
Import	46.80022	38.61608	151.0868	14.87111	28.68375	95
Service sector	55.37785	55.45473	78.84770	31.84741	11.48622	95
Fiscal Deficit	2.643768	2.1	11.3	-1.9	2.618565	95
C-efficiency	82.22832	79.37940	182.9459	32.50894	33,43639	95
Government Effectiveness	55.27328	53,84615	100,0000	12.98077	22.88512	95
Corruption Control	43.19332	41.34615	99,51923	8.653846	25.80196	95
The rule of law	47.01417	42.78846	97.11539	11.05769	24,51711	95

Source: Retrieved from EViews 11

Data Processing Results
Panel Data Regression Test
The following are the estimation results obtained from panel data regression.

Table 3. Data Regression Test Results

Independent variable	*Fixed Effect*	Independent variable	*Fixed Effect*
Tax rate	0.009558 (0.012987)	Corruption Control	0.001705 (0.001286)
Implicit Level	0.044726*** (0.015047)	*The rule of law*	-0.002756 (0.002072)
Import	-0.003783*** (0.001292)	C	8.017606 (0.353866)
Serve	0.024031*** (0.004120)	*R-squared*	0.997958
Fiscal Data	-7.07E-05 (0.003696)	*Adjust R-Square*	0.997136
C-Efficiency	0.001097 (0.001882)	*F-Stats*	1213.002
Government Effectiveness	0.003143**	*Prob(F-Stats)*	0.000000

	(0.001678)

*, **, and *** are significant measures at 10%, 5%, and 1%, respectively.
Standard errors are listed in parentheses
Source: Retrieved from EViews 11

Hypothesis Discussion

Effect of VAT Standard Rate on VAT Revenue

This result is different from several previous studies which state that the standard VAT rate has a significant positive effect on VAT receipts (Bikas & Raškauskas, 2011; Bogetic & Hassan, 1993; Matthews, 2003; Sarmento, 2016). Based on descriptive statistics, standard VAT rates tend to be consistent and change very rarely. Based on the annual analysis during the study period, only a few countries made changes to standard tariffs, including China, Israel, Lebanon, and Sri Lanka.

Previous studies that discussed the effect of standard rates on VAT receipts were mostly carried out in developed countries on the European continent. There are rules regarding VAT rates regulated through *Council Directives 2006/112/EC* applicable in the European Union. This is different from countries in Asia which do not have tax provisions that apply across countries within a region. Differences in results may occur because this study was conducted on different objects, namely countries located in Asia.

In line with the results of this study, research by Antwi et al. (2012) found that increasing the VAT rate alone will have no effect on VAT receipts in Ghana. Soukopová & inky í kov á (2014) also support the results of this study, in that it is said that it is not possible to confirm a strong causal relationship between standard VAT rates and VAT receipts. Changes in the standard VAT rate, both increasing and decreasing, must be accompanied by an increase in macroeconomic factors, increased tax law enforcement and more attention to the tax administration system.

The Effect of VAT Implicit Rates on VAT Revenue

These results are consistent with several previous studies (Sarmento, 2016; Simon & Harding, 2020; Soukopová & inky í kov á , 2014). Based on descriptive statistics, the implicit tariff values owned by the sample countries tend to be high. The average value, median value, minimum value, and maximum value of implicit tariffs are also almost stable every year, which means that changes in consumption levels and changes in the VAT base are also stable. In line with the research of Soukopová & inky í kov á (2014), the relationship between implicit rates and VAT receipts can be clearly confirmed.

The results of this study are supported by previous studies discussing implicit VAT rates and their relationship to VAT receipts (Sarmento, 2016; Simon & Harding, 2020; Soukopová & inky í kov á , 2014). He also sees the fact that implicit tariffs are not set by the government but are formed from several elements.

Effect of Import VAT on VAT Revenue

These results are in accordance with the research of Sarmento (2016). Judging from the descriptive statistics, the average import rate is 46% of total GDP. This average value is close to the middle value and far from the maximum value. The value of these imports is strongly influenced by the characteristics of the country. Several previous studies stated that these results contradicted the results of this study, namely the existence of a positive relationship between the level of imports and VAT receipts (Bikas & Andruskaite, 2013; Wawire, 2017).

Hybka (2009) stated in his journal that a high increase in imports also resulted in a decrease in domestic demand for goods and services. In addition, the VAT imposed on import activities can be re-credited if the person carrying out the import activity is a Taxable Entrepreneur. So that the import VAT imposed on the Taxable Entrepreneur does not provide additional underpaid VAT.

The negative effect of changes in the level of imports can be caused by the higher level of imports of certain goods or services, which can reduce domestic economic activities related to these goods or services. This decline in other economic activities may exceed the VAT receipts received from the imposition of import activities, thereby potentially losing VAT revenues.

The Influence of the VAT Service Sector on VAT Revenue

Based on descriptive statistics, the proportion of the service sector to GDP does not change much from year to year. The proportion of the service sector in GDP tends to be stable with almost uniform values between countries. Research conducted by Keen & Lockwood (2010) states that the service sector as a productive sector forming GDP has no effect on changes in VAT revenues. Different results were obtained by Sarmento (2016), his research found that the service sector had a significant positive effect on VAT receipts which was in line with the results of this study.

The service sector is a productive sector with the largest proportion of GDP contributors compared to other sectors such as agriculture and industry. This significant influence can be caused by the greater added value in the service sector compared to the other two sectors (Sarmento, 2016). In addition, the agricultural sector is a strategic sector whose products include VAT exemptions in most countries.

Effect of Fiscal Deficit on VAT Revenue

This result is in accordance with the research of Keen & Lockwood (2010) which states that the fiscal deficit has no significant effect on VAT revenues. Based on descriptive statistics, the value of the experienced fiscal deficit tends to be low. This low and stable deficit value can be interpreted as the government's effort to keep the economy in good condition in accordance with Keynesian theory in Brown-Collier & Collier (1995).

The results of this study are different from Sarmento (2016) who found that the fiscal deficit had a significant negative effect on VAT receipts. Based on Keynesian theory, a fiscal deficit is categorized as good if the deficit can be managed to boost the economy and increase consumer demand (Brown-Collier & Collier, 1995). However, the deficit caused by declining state revenues can also be financed by foreign debt. This unproductive debt will ultimately have a negative impact on the economy.

This insignificant test result could be because the deficit is a government policy to maintain positive economic growth in the country and not experience a decline. The deficit that occurs is not a deficit that needs to be financed by increasing state revenues including VAT receipts in it. So the size of the level of fiscal deficit set by the government is an effort to improve the economy according to Keynesian theory in Brown-Collier & Collier (1995).

The Effect of C-Efficiency Ratio on VAT Revenue

This result is different from several previous studies which state that *the c-efficiency* ratio has a significant positive effect on VAT revenues (Keen, 2013; Sarmento, 2016). Based on descriptive statistics, the value of the *c-efficiency* variable varies quite high in each country. However, annual analysis shows that this value tends to be stable. Keen (2013) concludes that changes in *c-efficiency* are the main factors affecting VAT revenues. However, the *c-efficiency ratio* that is close to 100% or even exceeding it cannot be used as a strong basis for measuring VAT performance. The test results of this study indicate a positive direction of c-efficiency on VAT receipts. This is in line with the research of Sarmento (2016) and Keen (2013). This insignificant test result can be caused by the relationship with standard tariff testing which produces an insignificant effect on VAT receipts as in previous studies (Antwi et al., 2012; Soukopová & inky í kov á , 2014).

The Effect of Government Effectiveness on VAT Revenue

These results are in accordance with the research of Sarmento (2016) and Godin & Hindriks (2015). Based on descriptive statistics, the value of government effectiveness is at the middle level. The level of government effectiveness in the sample countries is quite good because it is close to a value of 100 which is the maximum level of government effectiveness. This value is considered to be quite influential on VAT receipts. Godin & Hindriks (2015) research states that there is a positive and significant relationship between government effectiveness and total tax revenue and individual taxes. However, there is no significant effect between government effectiveness and VAT revenue. It can be explained that indirect taxes are relatively easier to administer so that the quality of good and bad governance does not affect VAT revenues.

In contrast to the research of Godin & Hindriks (2015), this research is in line with Sarmento (2016) which states that government effectiveness has a positive effect on VAT receipts. This is in accordance with the theory put forward by Tanzi & Zee (2000) and Cnossen (2015) that an increasingly complex tax administration system will reduce the efficiency of tax revenues. Therefore, effective governance will have a positive effect on VAT revenues.

Effect of Corruption Control on VAT Revenue

This result is different from several previous studies which state that corruption control has a significant positive effect on VAT receipts (Sarmento, 2016; Sokolovska & Sokolovskyi, 2015). Based on descriptive statistics, the level of corruption control in the sample countries still tends to be low so it still cannot affect VAT receipts.

Research conducted by Sokolovska & Sokolovskyi (2015) states that there is a negative relationship between the VAT efficiency ratio and the level of corruption. That is, the higher the level of corruption in a country, the lower the efficiency of its VAT receipts. Another study by Mustapha et al. (2017) stated that countries with high levels of corruption will experience a loss in VAT revenues if the level of income inequality is low.

Based on previous research, this insignificant result can be caused because the tax administration system itself has been built effectively and has closed many loopholes for corruption. Corruption in the form of collusion can be prevented by collecting indirect taxes and using technology to build secure invoicing systems . Therefore, the level of corruption control has no significant effect on VAT receipts.

The Influence of Legal Rules on VAT Receipts

This result is different from the research of Sarmento (2016) which states that *the rule of law* has a significant positive effect on VAT receipts. Based on descriptive statistics, it shows that the value of the *rule of law* in the sample countries still tends to be low so that it still cannot affect VAT receipts. Based on Godin & Hindriks (2015), the main obstacle in implementing tax law enforcement is minimizing the burden of compliance (*compliance costs*) and the burden of tax administration *(* administration *costs*). Law enforcement with *high compliance costs and administrative costs* will have an impact on public confidence in the government through the tax itself. How taxes are collected will affect the level of public confidence in the government (Bird, 1992).

Based on previous research, this insignificant test result can be caused by tax law enforcement which in fact still causes high compliance costs for taxpayers, in addition to high law enforcement administrative costs , will also not provide benefits related to VAT receipts. Judging from the administrative system, VAT is an indirect tax that adheres to the principle of withholding taxes and is not like a self-assessment income tax . The system can automatically reduce the role of law enforcement because fees and deposits are integrated.

Conclusions

Based on the results of the analysis and discussion of the results of the regression test, the conclusion of this study is that the standard VAT rate has no significant effect on VAT receipts but shows a positive direction. Changes in rates, both increases and decreases, are not strong enough to affect the increase in VAT revenues and must be carried out in conjunction with increases in other factors such as economic factors and VAT administration. Implicit tariffs have a significant positive effect on VAT receipts. This implicit rate can explain what the standard VAT rate alone cannot capture in terms of measuring VAT revenue performance. Implicit tariffs can reflect the impact of changes in the level of total consumption, changes in the tax base, and also reflect the impact of compliance and the informal sector on VAT receipts. Imports have a significant effect on VAT receipts in a negative direction. This decrease in VAT receipts can be explained by the decline in domestic demand for goods and services and the impact on reduced economic activity related to goods or services that are mostly imported. The service sector has a significant effect on VAT receipts in a positive direction. This can be due to the added value generated from the service sector is greater than the added value generated from other sectors such as the agricultural sector and the manufacturing industry sector. The fiscal deficit has no significant effect on VAT receipts in a negative direction. This can happen because the deficit is intended to maintain economic conditions and not a deficit that needs to be financed by VAT receipts. The C-efficiency ratio has no significant effect on VAT receipts in a positive direction. This could be due to the fact that one of the constituents of this ratio is the standard rate. It is known in this study that standard rates have no significant effect on VAT receipts, so the effect of c-efficiency is also not sufficient to explain changes in VAT revenues. Government effectiveness has a positive effect on VAT receipts. This can be caused by an increasingly complex tax administration system that can reduce the efficiency of tax revenue. Control of corruption has no significant effect on VAT receipts in a positive direction. This could be because the VAT taxation system that uses indirect taxes and the use of invoices has closed many loopholes for corruption that could occur. Legal certainty has no significant effect on VAT receipts in a negative direction. This could be due to the fact that law enforcement still results in high *compliance costs* for taxpayers, besides the high *administrative costs of law* enforcement will also not provide benefits related to VAT receipts.

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