Reviewing Local Revenue Capacity in Indonesia

EcceS:
Economics Social and Development Studies

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## Abstract: Reviewing Local Revenue Capacity in Indonesia

Fiscal capacity through Local Own-Source Revenuedescribes the region's ability to explore existing sources of income in the region. Data from BPS (2019) on the level of regional independence shows 11 provinces in the low category, 15 provinces in the low category, and eight provinces in the moderate category. Until now, no province in Indonesia has been included in the high category of regional independence. The novelty of this study, trying to revisit the issue of Local Own-Source Revenue in Indonesia. The purpose of the study was to analyze the influence of per capita GDP variables, the value of the trade sector, and the value of the agricultural sector on Local Own-Source Revenuecapacity. Local Own-Source Revenue capacity is measured using the concept of tax capacity, namely Local Own-Source Revenuedivided by PDRB. The object of the study was 34 provinces in Indonesia during the period 2010-2019 (10 years). The research method uses an unbalanced regression panel with a fixed-effect model approach. The study results were that the per capita GDP had a positive and significant effect on Local Own-Source Revenue capacity. The trade sector had a positive and insignificant effect, and the agricultural sector had a significant negative impact on Local Own-Source Revenuecapacity. Therefore, the Provincial Government needs to continue to increase GDP per capita, issue regulations, and maintain regional conditions to support trade activities and approach the public to pay taxes, especially provincial taxes. The provincial government also needs to increase the downstream and industrialization of agricultural products to increase the capacity of Local Own-Source Revenue.

Keywords: Local Own-Source Revenue; Tax Capacity

INTRODUCTION

Fiscal decentralization is a medium that can accelerate regional revenues so that it can contribute significantly to development within a certain period (Aldy et al., 2015; Piguillem and Riboni, 2015). The journey of regional autonomy has been running for approximately 21 years since Law No. 22 of 1999 on Local Government. Significant changes occur mainly related to fiscal decentralization. The Local Government is granted the authority of the central government to manage its local sources of income. Regional Revenue Management (Local Own-Source Revenue) at the Provincial level provides an expansion of tax and regional levy. National data shows the total realization of regional revenues from 34 provinces in Indonesia over the last nine years experienced a positive trend from 403.041 billion rupiahs in 2010 to 1,198.407 billion rupiahs in 2019 with average growth over the last ten years of 11.7%. It indicates that the local government has managed its budget where budget planning can be appropriately realized. Of course, this is the spirit of regional autonomy so that society will be more prosperous.

Figure 1. National Regional Revenue 2010-2019 (Billion Rupiah)
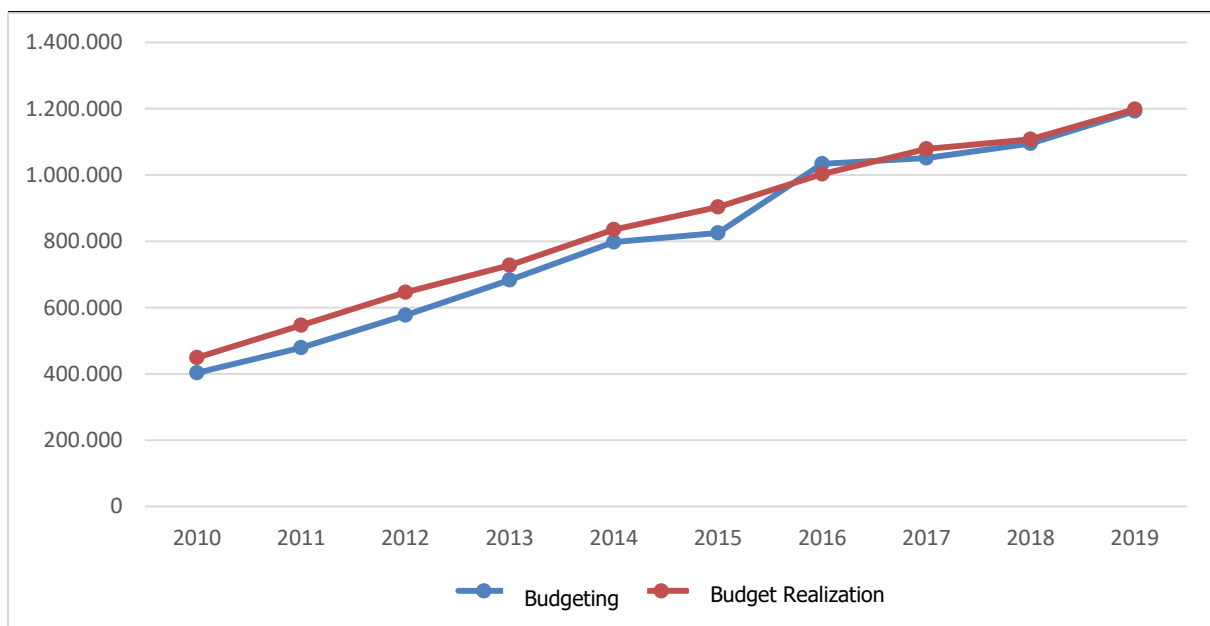
Source:http://www.djpk.kemenkeu.go.id/portal/data/apbd_(access 29 October 2020)

Unfortunately, regional independence has not been fully achieved. In the last four years (2016-2019), there has been no local government at the provincial level classified as high in the level of regional financial independence. Only eight provinces are classified as being in regional financial independence. It is even more unfortunate that the level of

financial independence of the region is relatively low, increasing from 8 provinces in 2016 to 11 provinces in 2019.

Table 1. Provincial Distribution in Indonesia by Level of Independence, 2016-2019

Self-Reliance Category	Number of Provinces			
	2016	2017	2018	2019*)
Very Low (0-25%)	8	10	10	11
Low (25-50%)	19	16	16	15
Moderate (50-75%)	7	8	8	8
Height (>75%)	0	0	0	0
Amount	34	34	34	34

*) APBD Data
Source: BPS, 2019.

The level of independence of this region looks at how the role of (Local Own-Source Revenue) in financing regional expenditures. The high level of regional independence indicates an independent region in carrying out its regional autonomy affairs. On the contrary, the low level of regional independence indicates that the region is not very independent because the role of the central government through transfer funds is very dominant in the implementation of regional autonomy affairs. It means that the role of Local Own-Source Revenue has not been optimal in regional production. It is, of course, an evaluation in the course of regional autonomy.

Local Own-Source Revenue's role in financing local government expenditures is always interesting to discuss. The increasing role of Local Own-Source Revenue is an expectation for each region. With it, the region can be independent and can do many programs for the community's welfare. Therefore, it is necessary to study/study/research how to improve Local Own-Source Revenue.

Local Own-Source Revenue capacity can be interpreted as the ability of the region to increase regional revenues based on the economic structure of the area. Some literature discusses it as *tax capacity.* The concept of tax capacity and tax effort can be expanded to measure revenue capacity (fiscal) and revenue effort (fiscal), where total fiscal income consists of tax collection and non-tax (Le et al., 2008).

Tax receipts between regions will be different, depending on *each region's tax capacity and tax effort*, and this depends on a variety of factors, both economic and non-

economic (Andriany and Qibthiyyah, 2018). According to Langford and Ohlenburg (2016), tax potential is inherently observable but empirically predictable. Some studies use economic factors to influence tax capacity, including Gross Regional Domestic Product (GDP) per capita (Andriany and Qibthiyyah, 2018; Bousselhami and Hamzaoui, 2018; Ramadhani and Nugroho, 2019), economic activity by looking at the role of economic sectors (agriculture, manufacturing, mining, finance, trade, and services) in the formation of GDP (Amoh, 2019; Bashayreh and Oran, 2016; Ramadhani and Nugroho, 2019), inflation (Amoh, 2019), monetary level (Bousselhami and Hamzaoui, 2018) and economic openness (Al-Freijat and Adeinat, 2020; Bashayreh and Oran, 2016). Some studies use non-economic factors such as tax administration (Andriany and Qibthiyyah, 2018), population growth rate (Amoh, 2019), the number of per-capita high school students (Alfirman, 2003), the quality of government (Atsan, 2017).

This study uses the concept of tax capacity to see how to Local Own-Source Revenuecapacity in the last ten years in 34 provinces in Indonesia. Discussion of Local Own-Source Revenue capacity becomes essential because the Provincial Government can calculate its ability to increase Local Own-Source Revenue and see the potential of Local Own-Source Revenue. It is base on regional macroeconomic conditions Own-Source Revenue which describes the level of regional solitude. The purpose of this study was to review Local Own-Source Revenuecapacity in Indonesia and analyze economic factors, namely GDP per capita, trade sector value, and agricultural sector value to Local Own-Source Revenue capacity.

THEORETICAL REVIEW

The higher the level of development in an area as measured by GDP per capita, will encourage increased tax capacity (Garg et al., 2017). Per capita income is a proxy for overall economic development. It is expected to be positively correlated with the tax section because it is a good indicator for the overall level of economic development and sophistication of the economic structure. According to Wagner's law, the demand for government services is elastic to income, so the share of goods and services provided by the government is expected to increase in line with the increase in income (Gupta, 2007). Fiscal capacity or tax capacity is a benchmark in income, wealth, or fiscal measures in assessing the economic productivity of regions, where tax capacity refers to the system's ability to derive revenue from the regional source itself (Koh et al., 2019). Fiscal capacity is one of the dimensions of the local government that is the benchmark for collecting income mainly from

taxes (Bellofatto and Besfamille, 2018). Musgrave in Amoh (2019) uses the concept of theoretical tax capacity whereby tax capacity in different regions can be estimated through the average behavior of the region in increasing income influenced by economic factors that cause differences in tax capacity.

Bashayreh & Oran (2016) states that actual tax revenue as part of Gross Domestic Product (GDP) is one of the most common tax efforts used for cross-border tax comparison. The most significant advantage of this measure is that it is easy to obtain and provides a brief overview of tax trends in different countries. This measure is better suited for studies focusing on countries close to each other regarding characteristics and economic structure. The results showed that more developed regions tended to have a higher tax effort than less developed regions. It indicates that high fiscal efforts are in a relatively better fiscal position (Jalil, 2011).

Pessino & Fenochietto (2010) presents a model for determining the tax efforts and tax capacities of the 96 countries and the main variables that affect them. This study corroborates the analysis of a positive and significant relationship between tax receipts as a percentage of GDP with the rate of development (GDP per capita), trade (imports and exports as a percent of GDP), and education (public spending on education as a percent of GDP). The study also showed a negative relationship between tax receipts and inflation (CPI), income distribution (GINI coefficient), ease of tax collection (value-added agricultural sector as a percent of GDP), and corruption.

Le et al. (2012) further stated that the predicted tax capacity with the tax value divided by Gross Domestic Product could be calculated using regression, taking into account macroeconomic, economic, demographic, and institutional values. The advantage of using this measurement is that the data is easy to obtain and can provide a brief overview of tax trends in different countries. So, calculating tax capacity and regressing fiscal revenue capacity using the concept of calculating tax capacity. The use of regression is widely used because it has its virtues and looks at the relevant tax base. This approach also considers the determining factors of tax receipts in estimating taxable capacity (Coast, 2017).

However, in contrast to the previous view, the concept of tax capacity and tax effort seems to be expanded to measure revenue capacity (fiscal) and revenue effort (fiscal), where total fiscal income consists of tax collection and non-tax (Le et al., 2008). As for some of the free variables it uses, namely GDP per capita, demographic aspects (population

growth, age dependency ratio), trade openness, agricultural added value, corruption index, and bureaucratic index. The results of his research GDP per capita and trade openness have a significant positive effect on the revenue capacity and value of the agricultural sector, population growth, corruption index, and bureaucratic index have a significant negative effect on revenue capacity

Other research also used per capita GDP and agricultural sector GDP to calculate tax capacity where per capita GDP has a significant positive effect on tax capacity. The agricultural sector GDP has a significant negative effect on tax capacity according to the type of central tax. In contrast, according to the type of provincial tax, the relationship is positively significant, and the district/city tax is positively related (Andriany and Qibthiyyah, 2018). Al-Freijat & Adeinat (2020) also calculates tax capacity by regressing Jordan data during 2000-2017. The free variables used are per capita income, export-to-GDP ratio, manufacturing-to-GDP ratio, and service-to-GDP ratio. As a result, manufacturing and services have a significant negative relationship to tax capacity, while per capita income and exports are significantly positive.

Gupta's research (2007) results are that several structural factors such as GDP per capita, agricultural share in GDP, and trade openness are statistically significant and are strong determinants of revenue performance. Gupta's research (2007) also concluded that countries that rely on goods and services tax as the primary source of tax revenue tend to have more unsatisfactory revenue performance. On the other hand, countries that emphasize income tax, profit, and *capital gains* will perform better.

Piancastelli (2000) concluded that per capita income, trade-to-GDP ratios, and agricultural sector contributions in GDP are variables that remain consistent as explanatory variables in the calculation of tax ratios. Piancastelli (2000) also stated that the growth of public spending resulted in a large budget deficit in many countries, requiring the government further to increase revenues from taxes in addition to government debt. It means that government spending plays an essential role in encouraging the government to increase its tax capacity.

DiJohn (2010) stated that taxation and tax reform are significant in developing the country for several reasons. First, the government must ensure sustainable funding for programs that encourage economic growth and development. Second, taxation is the primary node that connects state officials with interest groups and citizens. Third, taxation, especially in the form of land and property taxes, customs duties, and border collection, can

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help increase the territorial reach of the country. Fourth, it takes fiscal capacity to build a legitimate country.

METHODS

The research method uses a quantitative approach using secondary data. The data was obtained from BPS Indonesia, the Ministry of Finance of the Republic of Indonesia, and the State Personnel Agency of the Republic of Indonesia. The data collected is *time series* and *crosssection* data where the data for the time run tun used starts from 2010 to 2019, while the data for cross-place data is used in as many as 34 provinces in Indonesia. The use of *unbalanced panel* data because the data of North Kalimantan Province is only available in 2013, considering the Province was officially formed on October 25, 2012.

Variables tied to research are Local Own-Source Revenue capacity, whose value is calculates using the approach of tax capacity, i.e., tax divided by GDP (Al-Freijat and Adeinat, 2020; Andriany and Qibthiyyah, 2018; Bashayreh and Oran, 2016; Jalil, 2011; Karnik and Raju, 2015; Le et al., 2012; Piancastelli, 2000). So, that Local Own-Source Revenue capacity calculated as follows:

$$RC = \frac{PAD}{PDRB} \dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots (1)$$

Where

RC = *revenue capacity* (Local Own-Source Revenue)

Local Own-Source Revenue= Regional Original Income

GDP = Gross Regional Domestic Income.

Independent variables in this research are GDP per capita, the agricultural sector in GDP, and the trade sector in GDP. The use of variable per capita income to provide an overview of the region's development and welfare will encourage the increase of Local Own-Source Revenue capacity. The selection of agricultural and trade sectors in the GDP is due to both sectors being among the five sectors contributing to the economy. Therefore the equation is used as follows:

$$RC_{it} = \beta_0 + \beta_1 IPC_{it} + \beta_2 TRD_{it} + \beta_3 AGR_{it} + \varepsilon_{it} \dots\dots\dots\dots\dots\dots\dots\dots (2)$$

Where:

RC = Local Own-Source Revenue capacity

IPC   = GDP per capita

TRD   = value of trade sector in GDP

AGR   = value of the agricultural sector in GDP

ε   = *term error*

β_0 = constant

$\beta_0, \beta_1, \beta_2$ = regression parameter to be estimated

i   = province to be observed (34 Provinces)

t   = observation period (2010-2019)

RESULTS AND DISCUSSION

The first step in this research is to calculate Local Own-Source Revenue capacity. Based on equation 1, the Local Own-Source Revenuecapacity value is obtained from Local Own-Source Revenue divided by PDRB. The Local Own-Source Revenue capacity calculation results can be seen in table 2, and obtained the average Local Own-Source Revenue capacity from 34 provinces in Indonesia of 0.0258.

Table 2. Provincial Local Own-Source Revenue Capacity in Indonesia in 2019

Num	Province	Local Own-Source Revenue Capacity	Num	Province	Local Own-Source Revenue Capacity
1	Aceh	0,019	18	Central Kalimantan	0,017
2	North Sumatra	0,014	19	South Kalimantan	0,008
3	West Sumatra	0,014	20	East Kalimantan	0,004
4	Riau	0,007	21	North Kalimantan	0,026
5	Riau Islands	0,008	22	North Sulawesi	0,041
6	Jambi	0,022	23	Gorontalo	0,192
7	South Sumatra	0,004	24	Central Sulawesi	0,005
8	Bangka Belitung	0,063	25	South Sulawesi	0,004
9	Bengkulu	0,018	26	West Sulawesi	0,031
10	Lampung	0,005	27	South East Sulawesi	0,044
11	Jakarta	0,028	28	Bali	0,006
12	West Java	0,013	29	NTB	0,004
13	Banten	0,031	30	NTT	0,005
14	Central Java	0,002	31	Maluku	0,017
15	DIY	0,161	32	North Maluku	0,016
16	East Java	0,004	33	Papua	0,003
17	West Kalimantan	0,026	34	West Papua	0,015

Source: Primary data output after processing 2020; (Kartika, 2020).

Local Own-Source Revenue capacity classification refers to Alfirman's research (2003) by comparing the value of provincial Local Own-Source Revenue capacity with the average value of Local Own-Source Revenue capacity obtained annually. The Province is said to have a high Local Own-Source Revenue capacity if the value of the provincial Local Own-Source Revenue capacity is greater than the average value of Local Own-Source Revenuecapacity in the year concerned. On the contrary, the Province is said to have a low Local Own-Source Revenue capacity. Suppose the value of the provincial Local Own-Source Revenue capacity is smaller than the average value of Local Own-Source Revenue capacity in the year concerned. In that case, it is classified as low.

In 2019, it turns out that only 10 provinces are classified as having high Local Own-Source Revenue capacity, namely Gorontalo, Yogyakarta, Bangka Belitung, Southeast Sulawesi, North Sulawesi, Banten, West Sulawesi, DKI Jakarta, West Kalimantan, and North Kalimantan. For other provinces, Local Own-Source Revenue capacity is still low. Fiscal capacity or tax capacity is a benchmark in income, wealth, or fiscal measures in assessing the economic productivity of regions where tax capacity refers to the system's ability to derive revenue from the region's source (Koh, Katsinas, and Bray, 2019).

Provinces that are classified as having high Local Own-Source Revenue capacity means that they have increased their economic productivity and control them to increase Local Own-Source Revenue. Of course, for provinces classified as low Local Own-Source Revenue capacity, it is necessary to evaluate the extent to which economic productivity can contribute to the increase of Local Own-Source Revenue.

However, according to DiJohn (2010), a high tax ratio is not necessarily a good measure of a country's tax capacity. It does not necessarily mean that a country with a high tax capacity is better off with a low tax capacity. It is because states with high tax capacity may result from unexpected gains, favorable calculation of structural variables, or tax handling other than the government's efforts. The consequence that states with higher tax rates could be taxed less than the predetermined value of structural determinants. Thus, we can say that provinces with higher Local Own-Source Revenue capacity are not necessarily better than provinces with low Local Own-Source Revenue capacity. The increase or decrease in Local Own-Source Revenue capacity may occur due to several factors, such as calculating sector contributions in the economic structure or the provincial government's handling in creating a Local Own-Source Revenue improvement system.

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The second research objective is to analyze the influence of economic factors, namely GDP per capita, the value of the trade sector in GDP, and the value of the agricultural sector in the GDP on Local Own-Source Revenue capacity in Indonesia regressing the data. In the data panel regression, three models are required to select the best model to estimate the panel data. The model is a *common effect, fixed effect*, and *random effect.* To choose between the three models, then in this study conducted Chow Test and Hausman Test.

Table 3. Chow Test Results and Hausman Test

Test Equipment	Probability	Significant Level	Decision
Chow	0,0000	0,05	*Fixed Effect*
Hausman	0.0000	0,05	*Fixed Effect*

Source: Primary data output after processing 2020; (Kartika, 2020).

Based on the results of The Chow test and The Hausman test (table 3), the research model uses a *fixed effect* approach. The research model has also been conducted multicollinearity test (table 4). The result is no multicollinearity between free variables with correlation values below 0.8.

Table 4. Multicollinearity Test Results

	AGR	IPC	TRD
AGR	1.000000	0.081749	0.653303
IPC	0.081749	1.000000	0.374876
TRD	0.653303	0.374876	1.000000

Source: Primary data output after processing 2020; (Kartika, 2020).

Furthermore, a heteroskedasticity test uses the *Glejser* test by regressing between free variables with residual absolute values (RESABS). If the significance value between an independent variable and a residual absolute is more than 0.05 (5%), there is no heteroskedasticity problem. Based on table 5, the result of residual absolute value regression is still heteroskedasticity due to probability value for trading variables below 5%.

Table 5. Heteroskedasticity Test

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0,006505	0,046050	0,141254	0,8878
LOG(IPC)	0,001778	0,002603	0,682993	0,4955
LOG(TRD)	-0,003309	0,001414	-2,339616	0,0205
LOG(AGR)	0,001721	0,001570	1,095676	0,2748

Source: Primary data output after processing 2020; (Kartika, 2020).

Therefore, the research model has conducted weighting. According to Gujarati (2004), the estimation of panel data models containing heteroskedasticity problems can be solved by several techniques, and one of them is by using the *Generalized Least Square* (GLS) technique. Therefore, weighting and research models also use logarithm on free variables to solve data problems. The results of the regression model obtained in the study can be seen in table 6.

Table 6. Research Model Regression Results

		Coefficient	t-Stat	Prob.
C		-0,251		
Log IPC_{it}		0,025	5,6853	0,0000*
Log TRD_{it}		0,005	0,9398	0,3481
Log AGR_{it}		-0,014	-2,6327	0,0089*
R-squared	=	0,8124		
Adj R-squared	=	0,7899		

*significant on
Source: Primary data output after processing 2020; (Kartika, 2020).

Based on the regression of the Local Own-Source Revenue capacity model, GDP per capita has a positive and significant effect on Local Own-Source Revenue capacity of 0.025. It means that every 1% increase in per capita GDP will increase Local Own-Source Revenue capacity by 0.025 points. The trade sector had a positive and insignificant effect on Local Own-Source Revenuecapacity by 0.005, meaning a 1% increase in the value of the trade sector in the GDP will increase Local Own-Source Revenuecapacity by 0.005 points.

The agricultural sector negatively and significantly affects Local Own-Source Revenuecapacity by -0.014, meaning that every 1% increase in the agricultural sector's value will decrease Local Own-Source Revenue capacity by 0.014 points. The results showed that per capita GDP is more elastic and significant than the value of the trade sector in GDP in increasing Local Own-Source Revenue capacity in Indonesia.

Based on the results of the regression model also obtained intercept value for 34 provinces in Indonesia. In table 7, 13 provinces in Indonesia have negative intercept values, namely Riau, Riau Islands, South Sumatra, DKI Jakarta, Central Java, East Java, East Kalimantan, North Kalimantan, South Sulawesi, Bali, North Maluku, Papua, and West Papua. The negative intercept sign indicates that if the variables of GDP per capita, the value of the trade sector to GDP, and the value of the agricultural sector to GDP are considered constant, then the capacity value of the Provincial Local Own-Source Revenue will be smaller.

In table 7 can also be seen that some provinces have a positive intercept value. It menas, if the independent variables are considered constant, the Provincial Local Own-Source Revenue capacity will be greater. The 21 provinces that have positive intercept values are Aceh, North Sumatra, West Sumatra, Jambi, Bangka Belitung, Bengkulu, Lampung, West Java, Banten, Yogyakarta, West Kalimantan, South Kalimantan, Central Kalimantan, North Sulawesi, Gorontalo, Central Sulawesi, West Sulawesi, Southeast Sulawesi, NTB, NTT, and Maluku.

Table 7. Intercept Value 34 Provinces in Indonesia

Num	Province	Intercept Value	Num	Province	Intercept Value
1	Aceh	0,007648	18	Central Kalimantan	-0,002193
2	North Sumatra	0,013234	19	South Kalimantan	-0,003681
3	West Sumatra	0,002611	20	East Kalimantan	-0,043564
4	Riau	-0,013399	21	North Kalimantan	-0,022032
5	Riau Islands	-0,050172	22	North Sulawesi	0,012826
6	Jambi	0,001648	23	Gorontalo	0,020435
7	South Sumatra	-0,003655	24	Central Sulawesi	-0,001461
8	Bangka Belitung	0,012113	25	South Sulawesi	-0,000082
9	Bengkulu	0,005477	26	West Sulawesi	0,017453
10	Lampung	0,008780	27	South East Sulawesi	0,017936
11	Jakarta	-0,084155	28	Bali	-0,007791
12	West Java	0,009565	29	NTB	0,004015
13	Banten	0,001449	30	NTT	0,014891
14	Central Java	0,008283	31	Maluku	0,006248
15	DIY	0,105767	32	North Maluku	-0,005953
16	East Java	0,001918	33	Papua	-0,023903
17	West Kalimantan	0,014991	34	West Papua	-0,032022

Source: Primary data output after processing 2020; (Kartika, 2020).

The intercept value from 34 provinces in Indonesia was smaller than the coefficient of constants, so that the result of the coefficient of constants of each Province remained negative. It indicates that the capacity of provincial Local Own-Source Revenue in Indonesia cannot stand on its own. In other words, it needs to be influenced by other factors to optimize the Province's ability to increase regional revenues based on its regional economic structure. In the results of this study, Local Own-Source Revenue capacity is positive and significantly influenced by GDP per capita.

According to Alfirman (2003), in his research stated that the stage of development*(stage of development)* is a function of the tax base size (*tax base)* which means countries that are actively building will get a more significant tax than expected. Research of Amoh (2019) and Andriany & Qibthiyyah (2018) also concluded a positive

relationship between its tax capacity and GDP per capita. The results of this study also showed there is a positive relationship between the level of per capita income and Local Own-Source Revenue capacity. It means that if the GDP per capita increases, it will also impact the increase in Local Own-Source Revenue capacity projected by the ratio of Local Own-Source Revenue to PDRB. It can be said that the increase in per capita GDP can stimulate Local Own-Source Revenue capacity. The high GDP per capita describes the development of the economy resulting in a higher ability to increase Local Own-Source Revenue capacity.

In figure 2, it can be seen that the Province that has a high per capita GDP has a high Local Own-Source Revenue value compared to other regions. However, some provinces have a higher GDP value than other regions but Local Own-Source Revenueowned under the area. According to Le, Moreno-Dodson dan Rojchaichaninthorn (2008), wealthy or high-income areas tend to collect more income. However, the trend in tax collection for some low-income areas is stuck in structural dilemmas, where low taxable capacity and inefficient tax collection structures have enormous funding needs in development.

Figure 2. Comparison of Local Own-Source Revenue and PDRB Per capita
Province in Indonesia
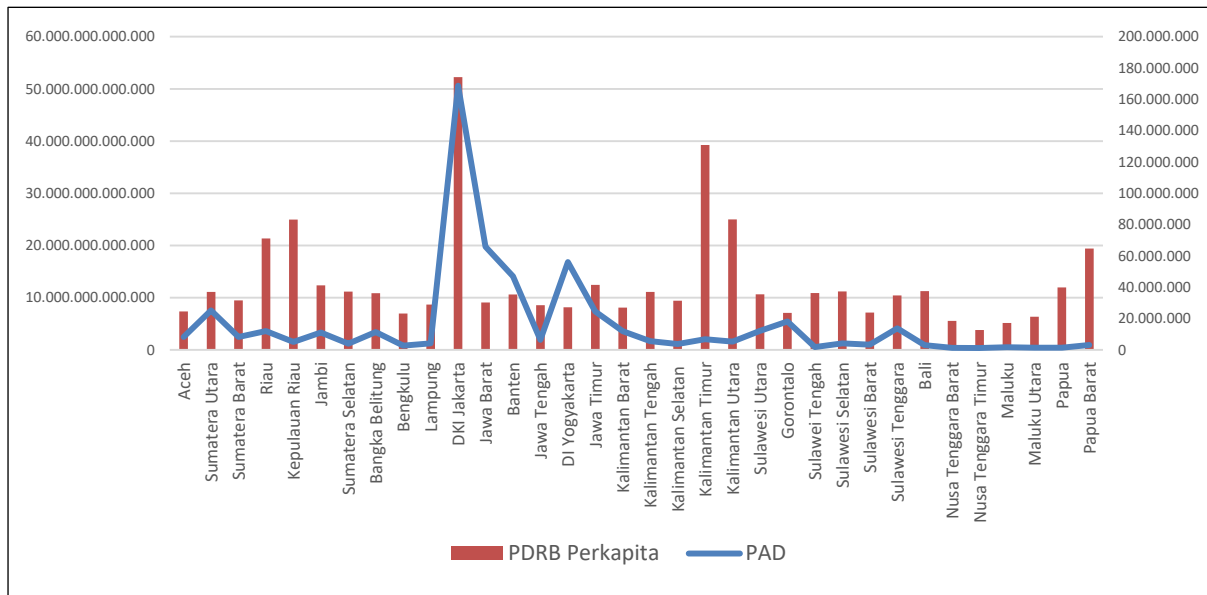
Source: BPS data, 2019.

In 2019, DKI Jakarta Province had the highest value for GDP per capita and Local Own-Source Revenue that it can collect compared to other provinces. The existence of DKI Jakarta as the capital of Indonesia and as a business and trade center in Indonesia has a

positive impact in improving GDP to improve the welfare of the citizens of DKI Jakarta. East Kalimantan is the second Province to have the highest GDP value in 2019. GDP per capita is high in East Kalimantan because the Province has abundant natural wealth and a small population.

Nevertheless, of concern is the number of Local Own-Source Revenue collected by the Province. Compared to the provinces on the island of Kalimantan, the number of Local Own-Source Revenue East Kalimantan in 2019 is below the number of Local Own-Source Revenue West Kalimantan, whose GDP value per capita is one-fifth of East Kalimantan. This low revenue capacity needs to be a concern because, in theory, a high per capita GDP should increase the regional revenue capacity.

In table 8, it appears that Local Own-Source Revenuereceipts for the provincial level in Indonesia are still dominated by Local Taxes that have contributed above 80% in the last three years (2017-2019). Based on Law No. 28 of 2009 concerning Local Tax and Regional Levy, including provincial taxes, namely Motor Vehicle Tax, Motor Vehicle Name Reverse Duty, Motor Vehicle Fuel Tax, Surface Water Tax, and Cigarette Tax. The current provincial tax goes to the Provincial Local Own-Source Revenue and goes to the District/City Local Own-Source Revenue in one Province or the term provincial tax revenue sharing fund.

Table 8. Realization of Provincial Government Revenue Throughout Indonesia

Num	Local Own-Source Revenue Type	2017		2018		2019	
		Trillions of Rp	Percentage	Trillions of Rp	Percentage	Trillions of Rp	Percentage
1	Local Tax	125,8	84,3	136,0	85,7	143,5	85,2
2	Regional Retribution	1,7	1,2	1,5	1,0	1,8	1,1
3	Management of regional wealth separated	3,4	2,3	3,6	2,3	4,5	2,7
4	Other Valid Local Own-Source Revenue	18,3	12,3	17,3	11,0	18,4	11,0
	Total Local Own-Source Revenue	149,3	100	158,7	100	168,4	100

Source: BPS, 2020.

The trade sector has a positive relationship to Local Own-Source Revenue capacity variables. The results of this study are following the research of Ramadhani & Nugroho (2019) and Victorova et al. (2020) and contrary to the research of Al-Freijat & Adeinat (2020). The trade sector is one of the widely done and influential sectors in other sectors, so

that the increasing value of the trade sector in the Provincial GDP will increase the Provincial Local Own-Source Revenue. However, from the study results, the influence of the trade sector is not significant to Local Own-Source Revenue capacity.

The trade sector consists of the trade-in automobiles, motorcycles, repairs, and large trade and retail instead of cars and motorcycles. The increase in the number of motor vehicles by 7,587,068units from 2017 to 2018 (table 9) was only able to increase the realization of Local Own-Source Revenue receipts by 1.4% (table 8). A large amount of motor vehicle and car trade was not followed by the awareness of paying high taxes so that the increase in this sector did not significantly influence the capacity of the provincial Local Own-Source Revenue.

Table 9. Number of Motor Vehicles By Type in Indonesia, 2015-2019

| Vehicle Type	Development of Number of Motor Vehicles by Type (Unit)				
	2015	2016	2017	2018	2019
Passenger Cars	12.304.221	13.142.958	13.968.202	14.830.698	15.592.419
Bus Cars	196.309	204.512	213.359	222.872	231.569
Car Goods	4.145.857	4.326.731	4.540.902	4.797.254	5.021.888
Motorcycle	88.656.931	94.531.510	100.200.245	106.657.952	112.771.136
Amount	105.303.318	112.205.711	118.922.708	126.509.776	133.617.012

Source:BPS, 2020.

In other trade subsectors, retail trade also contributes to providing tax deposits, especially from retail stores, selling necessities, or having delivery services. It is just that stores that sell their products online or through e-commerce can only be taxed as long as there is awareness from businesses or stores that The government has recorded. The trade sector remains a mainstay of the provincial government to improve Local Own-Source Revenue, especially for provinces whose economies have undergone a structural transformation. Therefore, a system and policy stimulation is needed so that the trade sector can significantly increase Local Own-Source Revenue capacity.

Another economic structure that also affects Local Own-Source Revenue capacity is the agricultural sector. Based on the regression results, the research model obtained that the agricultural sector has a negative and significant relationship to Local Own-Source Revenue capacity. This study is following Atsan (2017), Garg et al. (2017), Gupta (2007),

Bashayreh & Oran (2016), and Macha, Lado & Myansera (2018). However, Alfirman's research (2003) stated that the agricultural sector has a positive and insignificant effect on property taxes. Economies dominated by the agricultural sector tend to negatively affect tax receipts, especially VAT, with most exceptions granted to the sector's output(Andriany and Qibthiyyah, 2018).

In figure 3, the number of agricultural households in Indonesia is about 32% working in subsectors of food crops, 21% in subsectors of farms, and 19% in subsectors of plantations. It turns out that the number of households that manage agricultural businesses with the aim of part or all of the proceeds for sale sourced from their businesses or owned by others also does not have a positive impact on the increasing realization of Local Own-Source Revenue receipts. The contribution of the agricultural sector in Indonesia in 2018 amounted to 12.81% and by 12.72% in 2019 (Badan Pusat Statistik, 2020). This contribution decreased by 0.9%, while the realization of Local Own-Source Revenue receipts increased by 6.11%

Figure 3. Number of Agricultural Business Households in Indonesia According to Subsectors Employed in 2018
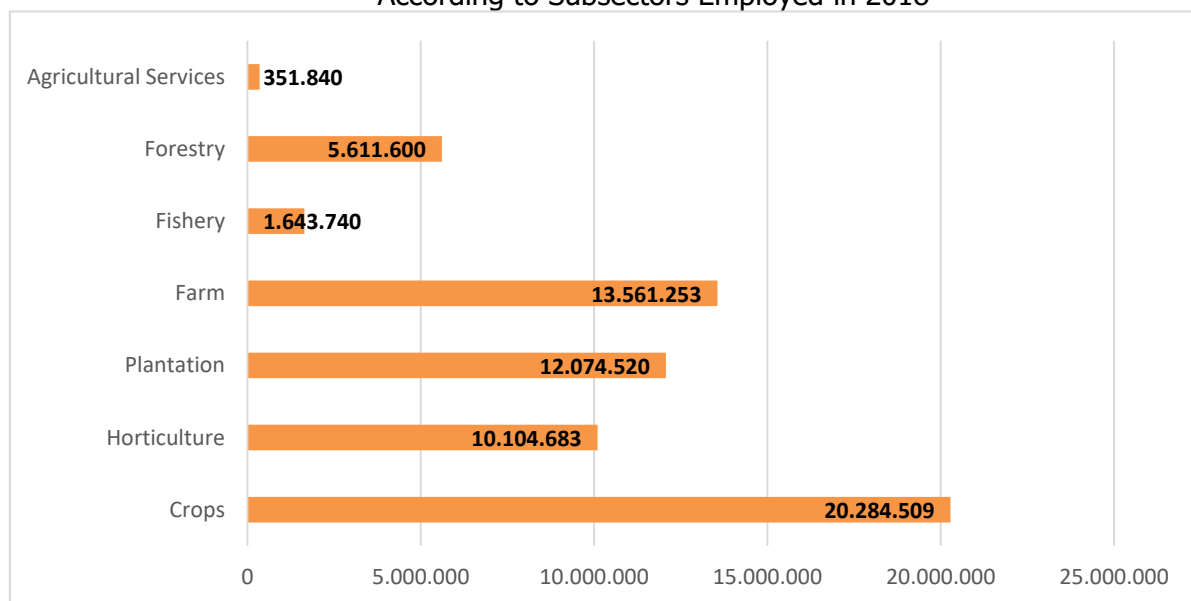
Source: Secondary data output after processing 2020; (Kartika, 2020).

The negative and significant relationship between the agricultural sector and Local Own-Source Revenue capacity can be caused most of the economic activity in the agricultural sector is still subsistence. It is challenging to be taxed and politically unfit to be taxed, and even the large-scale agricultural sector can reduce the need for spending on public goods and services, which tend to be based in urban areas (Gupta, 2007). The

negative influence between the agricultural sector and Local Own-Source Revenue capacity in Indonesia can also be due to all taxes classified as provincial taxes, only surface water taxes that intersect with the agricultural sector. The value of surface water tax contributions is still below motor vehicle tax and motor vehicle name refund. This small contribution is because the agricultural sector is still small micro-business scale. Therefore, the nature of the business is mostly still on the scale of small micro-enterprises even it has transitioned to commercial agriculture. Moreover, some agricultural production goods are included in the category of subsidized goods, so it has not increased the Local Own-Source Revenue capacity.

CONCLUSION

Reviewing the capacity of Local Own-Source Revenue in Indonesia that has made a long journey in fiscal decentralization is essential to do so that the nature of regional autonomy is maintained and carried out. The structure of the economy and regional macroeconomic conditions can explain how it affects Local Own-Source Revenue capacity. In this study, the results showed that the per capita GDP had a positive and significant effect on Local Own-Source Revenuecapacity. The trade sector had a positive and insignificant effect on Local Own-Source Revenuecapacity. These two free variables provide an idea that the welfare of the community and trade activities provide space in increasing the capacity of Local Own-Source Revenue. The provincial government must continue to strive to increase GDP per capita, issue regulations, maintain regional conditions to support trade activities, and approach the community to be aware to pay taxes, especially taxes within the provincial sphere.

On the contrary, the agricultural sector has a negative and significant impact on Local Own-Source Revenue capacity. The need for downstream and industrialization of agricultural products so that the space for Local Own-Source Revenue capacity increase can be increased. Further research can include the value of the industrial sector to GDP and other macroeconomic variables such as population, inflation, and the number of exports carried out to get a complete picture in increasing Local Own-Source Revenue capacity.

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REFERENCES

Al-Freijat, S.Y., Adeinat, M.K., 2020. Determinants of Tax Effort and Tax Capacity in Jordan During the Period (2000-2017). Int. J. Bus. Econ. Res. 9, 1.

Aldy, J., Austen-smith, D., Mutlu-eren, H., Soule, S., Sturm, D., Treisman, D., Weyl, G., Zhang, L., Barro, R., 2015. Experimentation In Federal Systems° rd Harstad Steven Callander and Ba. Q. J. Econ. 951–1002.

Alfirman, L., 2003. Estimating Stochastic Frontier Tax Potential: Can Indonesia Local Governments Increase Tax Revenues Under Decentralization? Work. Pap. Cent. Econ. Anal. Univ. Color. Boulder 1–35.

Amoh, J.K., 2019. an Estimation of the Taxable Capacity, Tax Effort and Tax Burden of an Emerging Economy: Evidence From Ghana. Int. J. Econ. Financ. Issues 9, 12–21.

Andriany, D., Qibthiyyah, R.M., 2018. Analisis Hubungan antara Infrastruktur Jalan dan Tax Capacity: Studi Kasus Indonesia. J. Ekon. dan Pembang. Indones. 33–50.

Atsan, E., 2017. The Determinants of Tax Capacity and Tax Effort in Turkey for the Period of 1984-2012. Ömer Halisdemir Üniversitesi İktisadi ve İdari Bilim. Fakültesi Derg. 10, 214–234.

Badan Pusat Statistik, 2020. Pendapatan Nasional Indonesia 2015-2019. Badan Pusat Statistik, Indonesia.

Bashayreh, A.G., Oran, A.F., 2016. Tax Capacity and Effort and Economic Implications : Evidence from Jordan. Jordan J. Econ. Sci. 3, 179–191.

Bellofatto, A.A., Besfamille, M., 2018. Regional state capacity and the optimal degree of fiscal decentralization. J. Public Econ. 159, 225–243.

Bousselhami, N., Hamzaoui, M., 2018. Moroccan tax potential: Econometric analysis through the tax effort. Turkish Econ. Rev. 5, 22–32.

Coast, C., 2017. Taxable capacity and effort of Ghana's value-added tax 9, 255–284.

DiJohn, J., 2010. Taxation, Resource Mobilisation and State Performance. London.

Garg, S., Goyal, A., Pal, R., 2017. Why Tax Effort Falls Short of Tax Capacity in Indian States: A Stochastic Frontier Approach. Public Finance. Rev. 45, 232–259.

Gujarati, D.N., 2004. Basic Econometrics Fourth Edition. McGraw-Hill, Singapore.

Gupta, A. Sen, 2007. Determinants of Tax Revenue Efforts in Developing Countries (No. 07/184).

Jalil, A.Z.A., 2011. Land-based Tax Capacity And Tax Effort of The State Governments in Peninsular Malaysia: A Representative Revenue System (RRS) Approach. J. e-Bangi 6, 206–219.

Karnik, A., Raju, S., 2015. State Fiscal Capacity and Tax Effort: Evidence for Indian States. South Asian J. Macroecon. Public Finance. 4, 141–177.

Koh, J., Katsinas, S.G., Bray, N.J., 2019. State financing for public community colleges: A comparative study of fiscal capacity and tax effort. J. Educ. Finance. 45, 198–216.

Langford, B., Ohlenburg, T., 2016. Tax Revenue Potential and Effort An Empirical Investigation, International Growth Centre Working Paper.

Le, T.M., Moreno-dodson, B., Bayraktar, N., 2012. Tax Capacity and Tax Effort : Extended Cross-Country Analysis from 1994 to 2009, World Bank.

Le, T.M., Moreno-Dodson, B., Rojchaichaninthorn, J., 2008. Expanding Taxable Capacity and Reaching Revenue Potential : Cross-Country Analysis. World Bank Policy Res. Pap. 4459.

Macha, R.R., Lado, E.P.Z., Myansera, O.C., 2018. An Empirical Analysis of Tax Ratios and Tax Efforts for Kenya and Malawi. African J. Econ. Rev. 6, 152–171.

Pessino, C., Fenochietto, R., 2010. Determining countries' tax effort. Hacienda Publica Esp. 195, 65–87.

Piancastelli, M., 2000. Measuring the Tax Effort of Developed and Developing Countries: Cross Country Panel Data Analysis - 1985/95 (No. 818), SSRN Electronic Journal. Rio de Janeiro.

Piguillem, F., Riboni, A., 2015. SPENDING-BIASED LEGISLATORS: DISCIPLINE THROUGH DISAGREEMENT* Facundo Piguillem and Alessandro Riboni. Q. J. Econ. 901–949.

Ramadhani, I., Nugroho, R., 2019. Faktor-Faktor Yang Mmpengaruhi Kapasitas PPh Pasal 21 dan PPh Pasal 25/29 Orang Pribadi. J. Pajak dan Keuang. Negara 1, 151–168.

Victorova, N., Rytova, E., Koroleva, L., Pokrovskaia, N., 2020. Determinants of Tax Capacity for a Territory (The Case of the Russian Federal Districts). Int. J. Technol. 11, 1255–1264.