The Effect of Economic Growth and Inflation on Tax Revenue: Analysis on Areas with Dominant Economic Activities in Agriculture, Plantation, and Fisheries Sectors

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ABSTRACT
Tax revenue is the main focus of revenue in Indonesia's budget posture. Over the past decade, Indonesia's economic growth has stabilized at around 5 percent, and inflation has fluctuated but remained under control. The main objective of this research is to investigate the effects of economic growth and inflation in areas dominant with economic activity of agriculture, plantation, and fisheries sectors toward tax revenue. The data used is tax revenue data, inflation, and economic growth in Bengkulu Province from 2010-2016. The data analysis method used in this research is quantitative analysis method with a panel data regression method. From the results of the hypothesis test, it is known that the GDP/Economic Growth and Inflation variables significantly influence the income of Income-tax and VAT. This result is in line with previous studies that found Gross Regional Domestic Product has a positive effect on Tax Revenue. The results of this research also have academic implications, namely adding and enriching scientific studies in the field of tax revenue in areas with dominant economic activities of agriculture, plantation, and fisheries sectors.

Keywords: tax, inflation, economic growth, Bengkulu, VAT

1. INTRODUCTION
Since the 1990s until now, the source of state revenue has changed fundamentally. Indonesia no longer needs state revenues to spend money from oil and gas revenues and foreign debt, but funds from other sources are needed. One of the important and dominant sources of state revenue is taxes. Taxes are vital source of state revenue for the implementation and improvement of national development to achieve prosperity and community revenues. State revenue from taxes is one of the important components in the framework of the independence of development funds (Halim, 2012). The tax itself is one form of people's contributions to the state treasury (Soemitro, 2000). The realization of tax revenue in 2016 reached 83.47 percent of 2016 target. Indonesia's gross domestic product (GDP) growth in 2018 is expected to increase to 5.3 percent from 5.1 percent in 2017. GDP growth is expected to accelerate tax revenues in 2018. If GDP increases, people ability to spend money for consumption and/or investment will increase and it will affect revenue. Many factors can affect tax revenue other than GDP, one of which is inflation. Fuad Rahmany (2014) said that the decrease of inflation affects tax revenue. It can be seen from the growth of state revenue along with the increasing consumption that occurs in the community. This statement is reinforced by Vito Tanzi (1977), where the inflation rate is interconnected to influence real tax revenue. Meanwhile, David G and Bernard J (1977) said that the inflation rate will affect both government spending and income. Management of national tax revenue is the accumulation of all tax revenues from regions where the growth of tax revenue varies between regions based on their tax potential. The potential for taxes in each region depends on the sector of economic activity. Area with dominant economic activity in the manufacturing and trade industry sectors will have greater tax potential compared to areas with more dominant economic activities in the agriculture, forestry, plantation, and fisheries sectors. Based on the description above, the increase and decrease of tax revenue growth is influenced by the growth of Gross Regional Domestic Product (GRDP) and inflation rate, where in general the GRDP growth and low inflation rate can increase the purchasing power of public consumption which will ultimately increase revenue tax. The researchers aim to raise this issue to examine the effect of economic growth and inflation on tax revenue. There is still a lack of study on this matter, especially in areas where economic activity is dominant in the agriculture, forestry, plantation, and fisheries sectors. Therefore, the aim of this research is to focus on areas where economic activity is dominant in the agriculture, forestry, plantation, and fisheries sectors, in this case, Bengkulu Province, Sumatera, Indonesia.
2. BACKGROUND

In a system of economic activities, 3 (three) sectors consisting of households, companies, and the government, in essence, need to maintain the role of government and its influence on economic activity. The role of the government in these economic activities causes two important changes in the process of determining the balance of income, namely tax collection by the government that will reduce aggregate expenditure through reduction of household consumption and tax by the government that is used as a source of funds for government that will increase aggregate spending. The main factors affecting domestic tax revenue are economic growth, inflation, and the exchange rate of rupiah against United States dollar (Ministry of Finance, 2017).

In Indonesia, there are two important types of tax revenue, namely income tax and value-added tax. Income tax is classified as a subjective tax that considers the personal condition of the taxpayer as a major factor in taxation. The personal condition of the taxpayer, which is reflected in his ability to pay taxes or his carrying capacity, is taken into account and is used as the main basis for determining how much tax can be charged (Rusdi, 2004). Income Tax Receipts (Income tax) are tax receipts that are imposed on income received by individuals, business entities, and Permanent Establishments. The legal basis for the income tax imposition is regulated by Law Number 36 of 2008 concerning Income Tax. Furthermore, Value-Added Tax or often referred to as VAT is tax collection on consumption that is paid for itself in connection with the supply of Taxable Goods and/or Taxable Services. VAT is an indirect tax, the definition of which can be formulated based on two points of view, firstly an economic point of view which means that the tax burden is transferred to other parties, i.e. parties that will consume goods and/or services that are subjected to VAT tax. Secondly, a juridical point of view, where the responsibility of paying taxes to the state treasury is not in the hands of those who carry the tax burden. This viewpoint carries philosophy that in indirect taxes if the buyer or recipient of the service has paid the tax owed to the seller, it is essentially the same as having paid the tax to the State treasury (Ministry of Finance, 2017). The legal basis for the imposition of Value Added Tax is based on Law Number 42 of 2009.

Economic growth is the development of economic activity which increase the aggregate amount of goods and services produced by society (Sadono Sukirno, 2011: 9). Gross Regional Domestic Product (GRDP) is the accumulation of the gross value added from all goods and services produced in the domestic territory of a country arising from various economic activities in a given period regardless of whether the production factor is owned by residents or non-residents. Regional economic growth is generally illustrated by the growth of GRDP. It has become a model approach that is often used by many countries as a measure of welfare level, the economy of the population, so there is a tendency for population income to increase. If the income of the population increases, it will change its consumption patterns which in turn will affect tax revenue. According to Hanif (2005), if a region's GDP increases, then the region's ability to pay taxes (ability to pay) will also increase. It has an impact on increasing tax revenue. Boediono (1992) states that economic growth is a process of increasing output in the long run. The use of economic growth indicators will be seen over a long period, for example, ten, twenty, fifty years, or even more. Economic growth will occur if there is a tendency from the internal processes of the economy, meaning that it must come from the forces within the economy itself. To find out whether an economy is experiencing growth, one-year real GRDP (GRDP) must be compared to the previous year's (GRDP-1) real GRDP. Thus, in operationalizing the variable of economic growth, researchers use the growth rate of GDP as a proxy for Regional Economic Growth on the grounds that the magnitude of economic growth is formulated with the percentage increase or decrease in GDP based on constant prices or Real GDP which will affect tax revenue.

Inflation is a general and continuous trend of price increases, meaning that an increase in one or several goods at a certain time and only temporarily does not necessarily lead to inflation (Soelistyo et al., 2001; Viorica D et al., 2014; Asab et al., 2018). Inflation erodes the purchasing power of money (Jonsson, 1999), this means that with the same amount of money, fewer items can be purchased. It naturally causes uncertainty about future prices (Omidi et al., 2018). The activity of spending or consuming an item will cause demand for the item. Demand is the desire of consumers to buy an item at various price levels over a certain period (Rahardja and Manurung, 2008). The higher the expenditure or consumption over an item continuously will have an impact on the availability of the goods, and that can cause an increase in the inflation rate. Household consumption in the formation of GDP expenditure has a vital role where not only as final consumer of goods and services, but the household also acts as a producer and provider of factors of production for production activities carried out by other economic actors. Household consumption expenditure (PKRT) is expenditure on goods and services by households for consumption purposes. Households consist of individuals or groups of individuals who live together in a residential building, which generates income and has assets and liabilities/debts, and consumes goods and services together both in food and non-food groups. PKRT covers all expenditures on goods and services by residents of an area which are carried out inside and outside the domestic area. The types of goods and services consumed are classified according to COICOP (Classifications of Individual Consumption by Purpose). Household consumption expenditure consists of food and non-food expenditure illustrates how residents allocate household needs. Although prices vary between regional areas, the value of household expenditure can still...
indicate differences in the level of welfare of the population between districts/cities, especially in terms of the economy. The level of community welfare can be described as how the community distributes expenditure for food and non-food consumption which is affected by the rising and falling prices. In the end, it can illustrate the extent to which level people have purchasing power for goods and services to be consumed. According to Sukirno (200; 337), consumption can be interpreted as a spending by households on final goods and services with the aim of meeting the needs of the person making the expenditure. James S Duesenberry (1949) put forward a consumption theory called Relative Income Hypothesis which states that consumption expenditure from individuals or households does not depend on current income but rather depends on the highest level of income a person has ever achieved before. Because household expenditure on the number of goods and services to be consumed is greatly influenced by the amount of income. The greater the income is, the greater the number of goods and services requested. The increasing income condition that affects the number of goods and services requested is one of the factors affecting the consumer price index.

Thus, in operationalizing the variable of economic growth, researchers use the growth rate of GDP as a proxy for Regional Economic Growth on the grounds that the magnitude of economic growth is formulated with the percentage increase or decrease in GDP based on constant prices or Real GDP which will affect tax revenue. According to Frenstein (1997), inflation, however, works like taxation. Effective real capital income tax rates rise with increasing inflation. The effect on capital income tax is the main mechanism by which the tax system becomes non-neutral towards inflation (Helmut, 2005). Yi and Suyono (2014) concluded that tax revenue and gross domestic product are positively correlated. The researchers, therefore, proposed the following hypothesis: H1= GDP and Per capita Household Consumption Expenditure Affect Tax Revenue. H2= GDP and Per capita Household Consumption Expenditure Affect Income Tax Revenue. H3= GDP and Per capita Household Consumption Expenditures Affect VAT Tax Revenue. Next, the researchers present a picture of a research framework;

### 2.1 Research framework

![Research framework diagram](image)

Source: data processing 2018

### 3. METHOD

To answer the research objectives, the researchers use data of tax revenue, inflation, and economic growth in Bengkulu Province, Indonesia. It is consistent with the research objectives for Bengkulu province is an area in which the economic activities are more dominant in the agriculture, forestry, plantation, and fisheries sectors. Bengkulu GRDP over the past seven years is more than 30% contributed by agriculture, plantation, and fisheries sectors (BPS, 2018). Bengkulu Province is a region that has a stable economy but is still far behind other regions in Indonesia, especially from Java island. From the results of preliminary observations, the growth in income of Income Tax (Income tax) and Value Added Tax (VAT) in the last 5 (five) years in Bengkulu Province experienced an increase except for VAT revenue in 2013 which grew negatively, and this is beyond the projection that revenue taxes will increase compared to the previous year, so it is necessary to examine the factors that influence it.

The dependent variable in this research is tax revenue. Tax revenue data examined is data from the realization of tax revenue obtained from the Primary Tax Office of regencies/cities in Bengkulu province taken from 2010-2016. Moreover, there are two independent variables in this research, namely economic growth using proxy GRDP data based on the constants price inflation rate by using a proxy for Household Consumption Expenditure (PKRT) from regencies/cities in Bengkulu province in 2010-2016. Scale Measurement Variables used in this research is the Ratio Scale which is an interval scale and has a base value that cannot be changed. Data generated from the ratio scale is ratio data, and there are no restrictions on the appropriate statistical test equipment. The variable measured by the ratio scale is a metric variable, so the measurement scale of the variable used in this research is the ratio of Rupiah (Rp) and percentage (%). The data used are secondary data obtained from internal and external sources. In this case, secondary external data is obtained through the website of the Central Statistics Agency of regencies/cities in Bengkulu Province, namely total GDP value data based on constant prices and Household Consumption Expenditures, while secondary data is obtained from internal sources, namely the realization of obtained from the district/city Primary Tax Office in Bengkulu Province. All data is compiled from 2010-2016.

Data analysis method used in this research is quantitative analysis method with panel data regression method, which is a combination of time series and cross-section using the help of a data processing tool, the Eviews program. Linear regression analysis involved 2 (two) independent variables (X1.2), namely GDP and Inflation Rate, and the dependent variable (Y1.2), namely Income Tax Revenue and Value Added Tax.
4. RESULT

From the output Eviews table, we can investigate the hypothesis using the F test to test the effect of the independent variables on the dependent variable of a regression equation using a statistical hypothesis. Decision is drawn based on the probability value obtained from data processing through the Eviews program, with the following criteria: 1) If the probability is <0.05 then H0 is rejected, and 2) If the probability is> 0.05 then H0 is accepted. From the table, it can be seen that the probability value 0.000 <0.05, then H0 is rejected, meaning that the independent variable (x1, x2) GRDP and Per capita Household Consumption Expenditures influence the Tax Revenue both VAT and Income tax in Bengkulu province. Thus, Hypothesis 1: GRDP Variables and Per capita Household Consumption Expenditure Affect Tax Revenue in Bengkulu Province is accepted.

Table 1. Eviews H1

<table>
<thead>
<tr>
<th>Variable</th>
<th>Coefficient</th>
<th>Std. Error</th>
<th>t-Statistic</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>PDRB</td>
<td>0.291710</td>
<td>0.044384</td>
<td>6.572467</td>
<td>0.000000</td>
</tr>
<tr>
<td>PKRT</td>
<td>-0.330762</td>
<td>0.076634</td>
<td>-4.400063</td>
<td>0.000000</td>
</tr>
<tr>
<td>C</td>
<td>-1.67E+11</td>
<td>2.06E+10</td>
<td>-8.043177</td>
<td>0.000000</td>
</tr>
</tbody>
</table>

Source: data processing 2018

From the table, it can be seen that the probability value is 0.000 <0.05, then H0 is rejected, meaning that the independent variable (x1, x2) GRDP and Per capita Household Consumption Expenditures influence the Income Tax Income in Bengkulu province. Thus, Hypothesis 2: GRDP Variables and Per capita Household Consumption Expenditure Affect Income-tax Revenue in Bengkulu Province is accepted.

Table 1. Eviews H2

<table>
<thead>
<tr>
<th>Variable</th>
<th>Coefficient</th>
<th>Std. Error</th>
<th>t-Statistic</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>PDRB</td>
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<td>10.94229</td>
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</tr>
<tr>
<td>PKRT</td>
<td>-0.220193</td>
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<td>-8.276650</td>
<td>0.000000</td>
</tr>
<tr>
<td>C</td>
<td>-4.57E+10</td>
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<td>-6.346296</td>
<td>0.000000</td>
</tr>
</tbody>
</table>

Source: data processing 2018

From the table, it can be seen that the probability value is 0.000 <0.05, then H0 is rejected, meaning that the independent variable (x1, x2) GRDP and Per capita Household Consumption Expenditures influence the VAT Tax Revenue in Bengkulu province. Thus, Hypothesis 3: GRDP Variables and Per capita Household Consumption Expenditure Affect VAT Tax Revenue in Bengkulu Province is accepted.

Table 1. Eviews H3

<table>
<thead>
<tr>
<th>Variable</th>
<th>Coefficient</th>
<th>Std. Error</th>
<th>t-Statistic</th>
<th>P</th>
</tr>
</thead>
<tbody>
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<td>0.041016</td>
<td>3.012247</td>
<td>0.0038</td>
</tr>
<tr>
<td>PKRT</td>
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</tr>
<tr>
<td>C</td>
<td>-1.21E+11</td>
<td>1.62E+10</td>
<td>-6.325753</td>
<td>0.0000</td>
</tr>
</tbody>
</table>

Source: Data Processing 2018
5. DISCUSSION

Regional economic growth is generally illustrated by the growth of Gross Regional Domestic Product (GRDP). GRDP has become a model approach as a measure of the level of welfare, the economy of the population, so there is a tendency for increased population income. If the income of the population increases, it will change its consumption patterns which in turn will affect tax revenue. From the results of data analysis, it can be seen that the GDP of Bengkulu province, both regencies and cities, continues to experience a significant upward trend in the 2010-2016 period. Thus, it can also be said that there is a tendency for the income of the people of Bengkulu Province to increase over the past seven years. From the results of the hypothesis test, it is found that the GDP and Inflation variables significantly influence the income of Income-tax and VAT. This result is in accordance with previous studies that found Gross Regional Domestic Product has a positive effect on Tax Revenue. It is consistent with the findings of previous research which states that the ability of the region to pay taxes (ability to pay) will also increase along with an increase in GRDP. It has an impact on increasing tax revenue. The results of this research also found that the level of inflation has a significant effect on tax revenue. Household consumption in the formation of GDP expenditure has a vital role not only as final consumer of goods and services, but also acts as a producer and provider of factors of production for production activities carried out by other economic actors. Increased household consumption expenditure \( (PKRT) \) Bengkulu province means an increase in spending on goods and services by households for consumption purposes. Households consist of individuals or groups of individuals who live together in a residential building, which generates income and has assets and liabilities/debts, as well as consuming goods and services together both food and non-food groups. Household consumption expenditure \( PKRT \) covers all expenditures on goods and services by residents of an area carried out within Bengkulu province and outside the domestic area. Household consumption expenditure consisting of food and non-food expenditure illustrates how Bengkulu province residents allocate household needs. Although prices vary between regional areas, the value of household expenditure can still indicate differences in the level of welfare of the population between districts/cities, especially in terms of the economy. With the increase in the \( PORT \) of Bengkulu Province, it also increases the level of people's welfare, which is illustrated by the increase in the purchasing power of Bengkulu people in distributing food and non-food consumption that is affected by rising and falling prices.

Implication

The results of this research can be an input for the Government regarding the influence in determining the tax revenue in Bengkulu Province include GRDP and \( PKRT \) Bengkulu Province. GRDP and \( PKRT \) growth rates can be used as a benchmark for the increase in tax revenue in Bengkulu province. Through the data presented in this research, the Ministry of Finance through the Directorate General of Taxes can set tax revenue targets fairly, realistically, and can be realized according to the potential tax that should be. The results of this research also have academic implications, namely adding and enriching scientific studies in the field of tax revenue in Bengkulu Province. This research suggests further researchers to examine other variables that affect tax revenue in Bengkulu province, for example, currency rates and taxpayer compliance.

REFERENCES


Advances in Economics, Business and Management Research, volume 135


[33] Undang-undang Nomor 16 Tahun 2009 tentang Ketentuan Umum dan Tata Cara Perpajakan,

[34] Sekretariat Negara RI, Jakarta. “Undang-undang Nomor 42 Tahun 2009 tentang Pajak Pertambahan Nilai", Jakarta 2020

