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Oil and Gas Export Value Analysis and the Economy Indonesia Period 2010-2021

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Abstract

The purpose of the first research is on the development of the value of oil and gas exports in Indonesia during the 2010-2021 period for the last 12 years where the average value of Indonesia's oil and gas exports is 22,171 (000 US$) or a decline of up to an average of 2.18% per year. The highest oil and gas export occurred in 2011 which was 41,477 (000 US$) or grew by 47.92%, while the lowest oil and gas export condition occurred in 2015 which was 18,574 (000 US$) or decreased by 38.12%. The second research objective uses a regression model of the effect of the value of oil and gas exports on economic growth in Indonesia during the period 2010-2021 with a partial constant value of the X1 variable (oil and gas exports) having a significant effect of 0.005 with a constant value of 116.87 meaning that if oil and gas exports increase by 1% then Economic growth also increases and vice versa. Furthermore, the influence of these variables is also shown from the R Square determination test, which is 77.50%, meaning that in general this study found that during this research period, it was actually not recommended for Indonesia to export oil and gas abroad because it involved the sufficiency of domestic oil and gas needs.

Keywords
GDP; value of oil; gas exports

I. Introduction

Indonesia is one of the developing countries that actively undertake development efforts in all fields, especially in the economic field to improve the standard of living of its people. The development can run smoothly, if a country has sufficient funding to accelerate the implementation of national development. The potential for the diversity of abundant natural resources that Indonesia has will provide benefits and can be used for economic transactions with other countries or what is commonly called international trade according to research (Mahendra, 2015). International trade is an activity to trade various outputs in the form of goods and services produced by a country to be sold abroad and to bring in goods and services from abroad to then be imported to the country with the aim of meeting domestic needs. Activities to sell goods abroad are called export activities, while activities to bring in goods and services from abroad are called import activities (Tumengko, 2015). Organization must have a goal to be achieved by the organizational members (Niati et al., 2021). The success of leadership is partly determined by the ability of leaders to develop their organizational culture. (Arif, 2019).

In the period of import substitution industrialization, exports, especially oil and gas and natural gas, were only seen as one of the dominant sources of development financing and not as a motor of economic growth, so that exports were never used as a paradigm of industrialization in Indonesia. Almost all sectors of the Indonesian economy are oriented

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towards the domestic market. When Indonesia switched to an industrialization strategy, export promotion was seen as a sector that was expected to become the engine of economic growth. Exports are then used as a paradigm in the development of the industrial sector in Indonesia every effort is made by the government so that the Indonesian manufacturing sector will eventually become the prima donna of Indonesian exports to replace the dominant role of the oil and gas and natural gas sectors (Utomo, 2000). Economic actors, basically have very important functions. Because it has two functions at once, namely as a supplier of all the needs of the community, both primary, secondary and tertiary. At the same time, they also function as absorbers of community labor, which can economically increase purchasing power. (Ansari, T. 2019).

The increase in exports is due to the state of the economy, so the government needs to supervise national income in determining macroeconomic policies. In Neoclassical international trade theory, an economy that engages in international trade will gain status benefits (Linneman, 2007). If the export value is higher than the import value, it indicates the progress of a country's economy in terms of international trade activities, and vice versa if the export value is smaller, it indicates the country's economy is low from international trade activities. Exports are believed to be the driving force behind Indonesia's economic growth, including those that adhere to an open economic system in its economy, so that export activities receive top priority from the government (Suprianto, 2017).

Fluctuations in domestic exports are also inseparable from the interest rate as the price of investment and the exchange rate. The BI rate is the policy interest rate that reflects the monetary policy stance or stance set by Bank Indonesia. Changes in the BI rate affect deposit rates and bank lending rates. Interest rates affect export activities from the production side, namely the higher credit interest rates because entrepreneurs or exporters to reduce the amount of their loans, thus having an impact on the number of offers that exporter are able to create (Darmayuda, 2014). Based on the background explanation above, the purpose of this study is to analyze the value of oil and gas exports and the Indonesian economy for the period 2010-2021 where the orientation of the researchers examines the analysis of the development of oil and gas export values and the influence of the value of oil and gas exports on the economy in Indonesia during the study period.

II. Review of Literature

According to (Christianto, 2013) the definition of international trade in simple terms according to the economic dictionary is trade that occurs between two or more countries. Foreign trade is an important aspect for the economy of a country. International trade is becoming increasingly important not only in the development of outward-oriented countries but also in finding markets in other countries for domestic production and procurement of capital goods to support the development of domestic industries. International trade can be interpreted as a trade transaction between the economic subjects of one country and the economic subjects of another country, both regarding goods and services. The economic subject in question is the population consisting of ordinary citizens, export companies, import companies, industrial companies, state companies or the government which can be seen from the trade balance (Sobri, 2001).

Mankiw, 2012 states that trade between countries in the world is based on comparative advantage. This means that the trade is profitable because it makes every country speculate. International trade is also defined as an exchange process based on the voluntary will of each party who must have the freedom to determine whether he wants to trade or not. Trading will only occur if no one party gains and no other party is harmed. The benefits obtained from international trade are called trade benefits or gains from trade.

Basically, international trade is an activity involving supply (export) and demand (import) between countries. When exporting, the country receives foreign exchange for payment. This foreign exchange will be used to finance imports. A country's exports are imports to other countries, and vice versa (Budiono, 1999). The concepts of international trade have emerged since the seventeenth and eighteenth centuries regarding international trade which gave rise to an economic philosophy called mercantilism. Mercantilists argued that the only way for a country to become rich and powerful was to export as much as possible and import as little as possible (Salvatore, 1997).

Exports of one of the economic sectors that play an important role in the expansion of the industrial sector market will encourage other industrial sectors and the economy (Meier, 1996). In conclusion, exports are very influential on the rupiah exchange rate which causes the rupiah exchange rate to weaken or strengthen. The role of the export sector, among others: 1) Expanding the market across the sea for certain goods, as emphasized by classical economists, an industry can grow rapidly if the industry can sell its products across the sea rather than only in a narrow domestic market. 2) Exports create a new effective demand. As a result, goods in the domestic market are looking for innovations aimed at increasing productivity. 3) Expansion of export activities facilitates development, because certain industries grow without requiring as much investment in social capital as would be required if these goods were to be sold domestically, for example due to the narrowness of the domestic market due to low real income levels or adequate transportation links.

III. Research Method

The research method is a scientific way to obtain data with the aim of being able to describe, prove, develop and find knowledge, theories, to understand, solve, and anticipate problems in human life (Sugiyono, 2012). Types and Sources of Data are data on the value of oil and gas exports and GDP data sourced from BPS using an analysis tool for the development of oil and gas export values in Indonesia for the period 2010-2021, using the growth model, namely: $r\ (t-1) =$ x100%. Then the analysis tool for the effect of the value of oil $y(t{-}1)$ and gas exports on Indonesia's economic growth for the period 2010-2021, uses a simple linear regression formula, namely Y=β0+β1X1+e where Y= Economic Growth, 0= Constant, 1= Coefficient, X1 = Oil and Gas Exports, and e = standard error

IV. Result and Discussion

4.1 Population Policy During Turki Utsmani 1512-1566 M

The purpose of research on the development of the value of oil and gas exports in Indonesia for the period 2010-2021 can be explained below:

Table 1. Development of Oil and Gas Export Value in Indonesia for the Period 2010-2021

Years	Oil and Gas Export	%
2010	28.040	~
2011	41.477	47,92
2012	36.977	(10,85)
2013	32.633	(11,75)

2014	30.019	(8,01)
2015	18.574	(38,12)
2016	13.106	(29,44)
2017	15.744	20,14
2018	17.172	9,07
2019	11.789	(31,34)
2020	8.251	(30,01)
2021	12.276	48,78
Average	22.171	(2,80)

Source: BPS data processed 2022

The research findings based on the table above describe the development of the value of oil and gas exports in Indonesia for the period 2010-2021 during the last 12 years where the average value of oil and gas exports was 22,171 (000 US$) or decreased by 2.18% and the highest oil and gas exports occurred in 2011 which amounted to 41,477 (000 US$) or grew by 47.92%, while for the lowest condition of oil and gas exports occurred in 2015 which was 18,574 (000 US$) or decreased by 38.12%. The low oil and gas export in Indonesia is very dependent on the amount of oil and gas production obtained from oil and gas drilled wells where there are still many Dutch colonial heritages, so new investments are needed in the context of rejuvenating technology and expolating oil and gas reserves in Indonesia and to see export fluctuations. Indonesia's oil and gas and non-oil and gas are shown in the picture below:

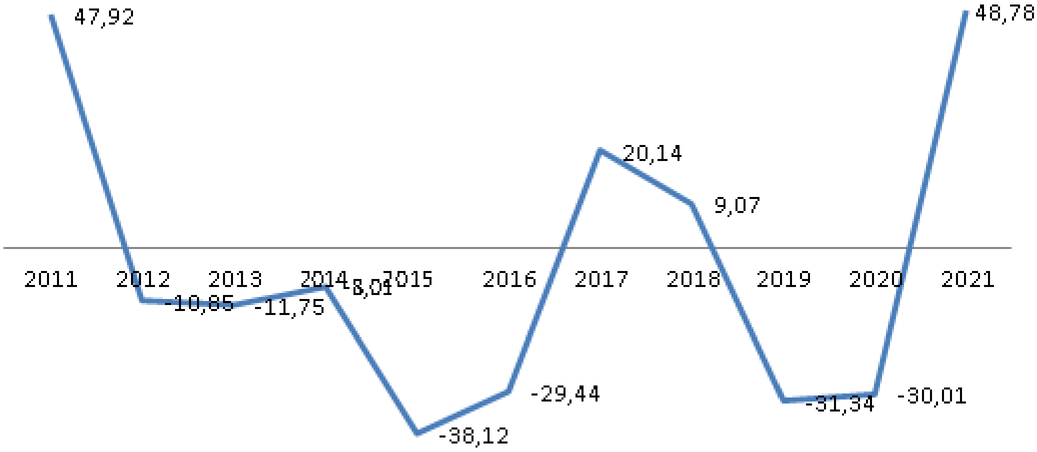

Figure 1. *Development of Oil and Gas Export Value in Indonesia Period 2010-2021*

Then the research findings on the effect of the value of oil and gas exports on the Indonesian economy for the period 2010-2021 using a simple linear regression model where based on the regression findings in the table above about the effect of the value of oil and gas exports on the Indonesian economy for the period 2010-2021 with a constant value of 116.87, it means that if the x variable increases by 1%, the economy grows by 116.87. While partially X1 variable (exports of oil and gas) has a significant effect of 0.005, meaning that if oil and gas exports increase, economic conditions also increase. However, what is the concern of this research is that the government must measure oil and gas exports by paying attention to national oil and gas needs because on the other hand, oil and gas exports benefit the nation, but what is very crucial is that the profits obtained are compared to the financing that will be needed, especially oil and gas needs. Furthermore, the effect of the variable is partially indicated by the R Square determination test which is 77.50% and the rest is influenced by factors other than this research factor

V. Conclusion

The conclusion of this study is the result of the development of Indonesia's Oil and Gas Export Value for the period 2010-2021 during the last 12 years where the average value of oil and gas exports was 22,171 (000 US$) or decreased by 2.18% and the highest oil and gas exports occurred in 2011 namely amounted to 41,477 (000 US$) or grew by 47.92%, while the lowest condition of oil and gas exports occurred in 2015 at 18,574 (000 US$) or decreased by 38.12%. Then the results of the regression of the effect of the value of oil and gas exports on the Indonesian economy for the period 2010-2021 with a constant value of 116.87, meaning that if the x variable increases by 1%, the economic condition is 116.87. Partially, the variable X1 (exports of oil and gas) has a significant effect of 0.005 on the Indonesian economy, meaning that if oil and gas exports increase, the Indonesian economy will also increase. Then the influence of the variable x on the variable y is also shown by the determination test R Square that is equal to 77.50%. Furthermore, the suggestions that need to be put forward in this research are that the government first maintains the stability of the value of oil and gas exports so that the nation's economic conditions can be controlled and the government increases Indonesia's economic growth through increasing oil and gas production.

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