

Komonditi Export Mining Sector Analysis of Southeast Sulawesi

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-----ABSTRACT-----

This study purposed to analyze the factors that affect the mining sector exports commodity. Data used in this study is data from 1995 to 2013. Sources of data obtained from the Department of Trade and Industry, Bureau of Statistics. Mining commodity exports data, prices, economic growth and the importing country exchange value. The method of data analysis used in this study is the multiple linear regression method. The results showed that simultaneous variables nickel prices, exchange rates, China's Gross Domestic Product (GDP) of importing countries affect the value of exports. In partial, price variables and GDP of the importing country has a positive influence on the value of exports. While the exchange rate variable does not affect the value of commodity exports of mining in the Southeast. The coefficient of determination (R square) equal to 0.850 means that the independent variable is pricing capability, GDP importers of commodities and exchange rate together in explaining the dependent variable is export values of ferronickel by 85 percent. While the 15 percent explained by other variables not included in the model.

Keywords - Price, GDP, Exchange Rate

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I. INTRODUCTION

The Indonesian economy is characterized by the transformation of the economic structure. This is evident from the increase in economic activity in each sector in which the activity of the national mining sector to the economic grows larger than other sectors. This transformation has implications for a variety of economic activities, especially the export activity. Increased mining activities are consistent with the changes in the export drive. In general, the export of economic activity has an important role in the national and local economy is the prime mover and the development also benefits from *the multiplier effect* are quite significant. Exports activity is a reflection of the trade International contributed not a little to the economic development of a country. Export Southeast Sulawesi is dominated by the mining sector in particular nickel commodity. However, increased activity in the mining sector does not correspond to an increase in the mining sector GDP accounted Sulawesi Tenggara. Padatahun2013 only 0.63% to the GDP formation under the trade sector which contributes 1.86% and the export use only accounted for 0.07%, and The highest government consumption of 5.64% to the GDP. If the mining sector in 2011 compared to 2012, then has contributed greatly to the formation of GDP respectively 35.12% and 43.03%. This suggests that the role of the mining sector in turn drives significant export activity to the economy of Southeast Sulawesi (BI, 2013). In addition, economic variables including price.

The exchange rate and economic growth can affect countries' exports mining commodities importer. This can be seen in the year 2013, China's GDP increased by 58.6673 billion influence on the exports value amounted to 747,366.91 thousand US \$ or 21,622,939.27 tons, which increased by 58.9%. While in 2009 the exchange rate rose to Rp. 10 394 / USD, the price of nickel fell to 6.67 USD/ pounds, quite an impact on the decline in exports of 12.96% by volume of 2,033,041.81 tons. But in 2010 the exchange rate fell to Rp. 9085/ USD, China's GDP rose to 40,281,650,000,000 and rising prices are also \$ 10.12 / pounds is also followed by the increase in the volume of exports to 3,066,325.3 tons, up 50.82% (Bloomberg, IMF, 2010).

Syamsul Huda's (2010) study results indicated that to detect the effect of the exchange rate, economic growth and investment in non-oil exports. In fact, research conducted by the Vera Puspita (2012) to detect the effect of commodity prices on export growth. Krugman and Obstfeld (2000) that the factors that affect the export can be seen from the demand side and the supply side. On the demand side, exports are affected by export prices, the real exchange rate, and world income and devaluation policy. While the supply side, exports are affected by export prices, domestic prices, the real exchange rate, which can be a proxy of production capacity through investment, imports of raw materials, and deregulation policies. This study, the factors to be analyzed is limited to the three independent variables, three independent variables are variables expected to

affect export commodities mining sector in terms of both demand and supply side. From the demand side the independent variables included in the form of the exchange rate, and economic growth in importing countries. Meanwhile the supply side is the price of export commodity.

This study focused on the study of commodity exports nickel mine consisting of nickel ore and *ferronickel*. While importing countries is limited to countries that China's largest export destination. Because the subject of this study whether a variable exchange rate, economic growth of importers and commodity prices affect the export commodity mining sector? Therefore the purpose of this study is to analyze and explain the exchange rate variable, economic growth importing countries, and commodity prices affect the export of commodities mining sector in the Southeast.

II. LITERATURE REVIEW

II.1 Relationship Exchange Rate and Export

Theoretically export trade is a transaction involving two or more countries, taking into account the macro-economic powers relevant. The strength of a country's economy can affect the country's export performance. According Sumual (2010), the factors that influence the development of exports can be classified into two factors derived from (outside *external factors*) and factors that originate from within (*internal factors*). External factors (*external factors*) that affect the export among others, can be caused by: (1) the development of exchange rates of major currencies of industrialized countries, (2) political conditions in destination countries, (3) trade policy. whereas factors (*internal factors*) due to: (1) price, (2) the volume of exports, (3) many commodity / variety, (4) government policies, (5) the state of local business, (6) security, (7) interest rates, (8) export tax.

Exports of commodities cannot be separated from the problem of exchange rate (*exchange rate*) or commonly called the exchange rate. Economists distinguish of the exchange rate into two: the nominal exchange rate and the real exchange rate. According to Mankiw (2003), the nominal exchange rate is the relative price of currencies of two countries, while the real exchange rate is the relative price of goods between the two countries. The real exchange rate is sometimes called *the terms of trade*. If the real exchange rate is increased the price of abroad goods are relatively cheaper than domestic goods. Conversely, if the real exchange rate is low, then the price of foreign goods relatively more expensive than domestic goods. Changes in the exchange rate against foreign currencies could affect the trading price in the world that can ultimately determine the amount of supply and demand for exports. In terms of exchange rate depreciation against foreign currencies, domestic goods are relatively cheaper to be assessed so that the competitiveness of domestic products will increase and this will increase export demand for domestic products.

The real exchange rate is closely related to the trade balance or net exports (exports minus imports). When Indonesia's real exchange rate is low (exchange rate depreciation), goods in Indonesia will be relatively cheaper than foreign goods. This will increase net exports of domestic goods to domestic society will reduce the consumption of other communities in the country and abroad will increase demand for domestic products in Indonesia. The opposite occurs if the exchange rate against the dollar (exchange rate appreciation), goods in Indonesia will be relatively more expensive than foreign goods. Communities in the country would reduce the demand for domestic goods and increases demand for foreign products, so that net exports will be reduced. In a small open economy, net exports must equal the net capital outflow, which equals saving minus investment.

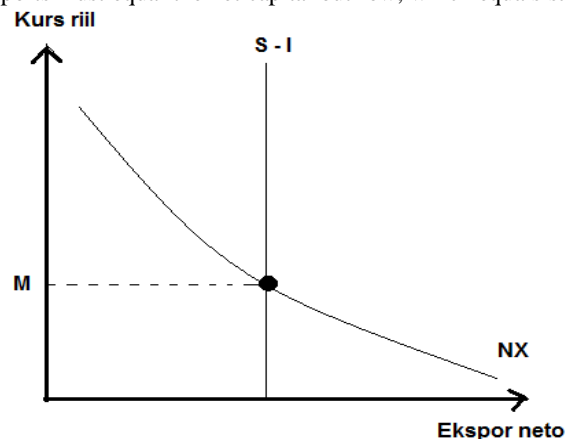


Figure 1: Determination of the Real Exchange Rate

The real exchange rate is determined by the intersection of the vertical line is the line of the net capital outflow with net exports line. At the point of intersection (M), the dollar amount offered for the net capital outflow is equal to the dollar amount requested for the net exports of goods and services (Mankiw, 2003).

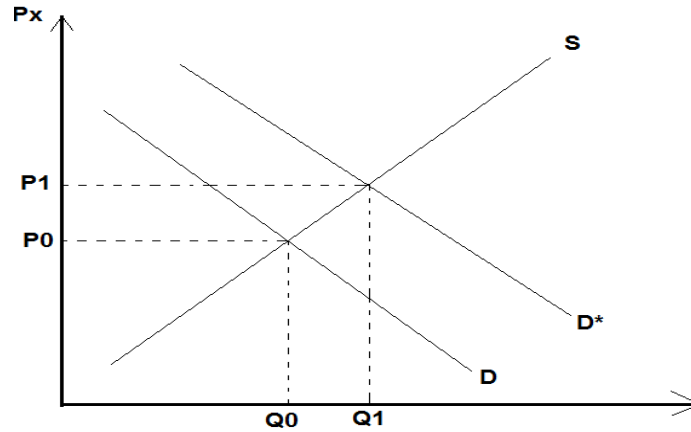


Figure 2: The impact of exchange rate depreciation on the price and quantity of export Demand for other countries

In an economy that only two countries, the appreciation of the exchange rate of the other countries trade on the exchange rate led to higher demand for export goods in the country. Increased demand for exports from other countries occurs because the export price of goods from other countries is relatively higher than the price of the same goods produced by the Indonesian state. Residents of other countries will switch to consume goods in the Indonesian state of lower prices, and will increase the demand for the country's exports.

When the exchange rate appreciation in the price of other states of the country is relatively more expensive compared to the price in Indonesia. This condition will spur other countries to meet domestic demand by importing into Indonesia, which has a relatively lower price. Thus, the demand for other countries' exports to Indonesia will be even greater. Increased export demand in other countries is illustrated by a shift of the demand curve from D to D*.

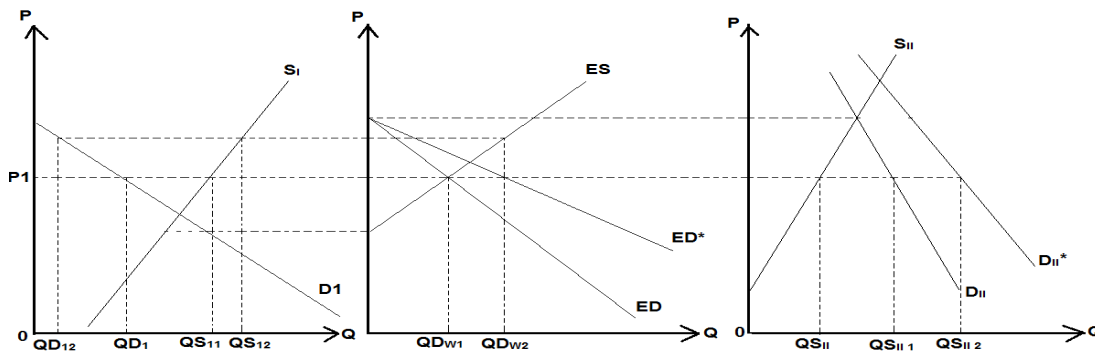


Figure 3: Impact of Exchange Rate Depreciation Other Countries against International Trade Balance

Suppose P_1 is the price applied by Indonesia's exports to other countries. Indonesian export demand curve is D and the supply curve is S_1 Indonesian exports. When the exchange rate of other countries has increased relative to the rate of Indonesia, export demand curve shifted in other countries, namely from D_{II} into D_{II}^* . Thus, at the same price the amount of demand for exports from other countries will be more than the previous export demand as a result of exchange rate appreciation occurs. That is, each of the exchange rates obtained from other countries in export demand will be valued higher than before the exchange rate appreciation. At a higher price level, other countries will increase the demand for exports from Indonesia. Therefore, other countries will experience a shift in the curve of demand.

II.2 Relation of Economic Growth and Exports

Economic growth means development activities in the economy that led to the production of goods and services in the community grow and improve the welfare of the community, or in other words the economic effects over time and lead to real national income growth. The economic growth rate showed an increase in the achievement of real national income in a given year compared to the real national income in the previous year. Theoretically and GDP growth is a reflection of the country's income. So to see the relationship of economic growth and GDP on exports later seen is a change in the income of a country's export performance.

Consumption of goods or services is affected by budgetary constraints or income. When income increases, assuming prices do not change the impact on the number of items that can be taken depending on the nature of the goods it consumes. If the item belongs to the category of normal goods, then the change in the quantity consumed will be the direction of the change in income (Nicholson, 2002). That is, if an increase in income, the consumption of these goods will also increase, and vice versa. If the well is lower, then the change in the amount of goods that will be consumed in the opposite direction to the change in income. It is assumed that the country's export goods are normal goods, *ceteris paribus*. Suppose a country consumes only two goods A and B which is a normal good. As income increases, the consumption of the country for goods A and B will also increase. It is as described in Figure 4.

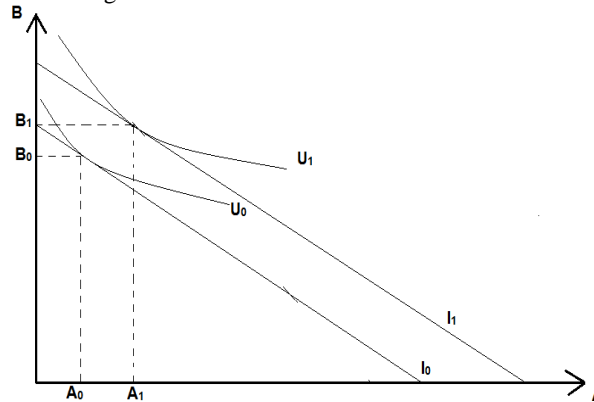


Figure 4: Impact of Revenue Increase Quantity Purchase of Goods A and B in the State II

The increase in income will shift the budget line to the outside ($I_0 I_1$) the optimal choice (maximum utility) of goods A and B are indicated by a higher point of intersection between the curve and the budget line utility. Budget line will shift parallel because *the slope* does not change its (Nicholson, 2002). Figure 4 is the curve assumed budget lines and curves of *indifference*, and A is commodity imports of the importing country. The increase in per capita income of the importing country, the consumption of goods A and B will also increase. An item's demand curve will shift up. If this condition is not accompanied by *the supply* of goods in the domestic market a, it will trigger the state to increase the demand for exports from other countries.

II.3 Price Relationships and Export

In general, the price of which was made through the force of attraction between producers and consumers meet in the market. In the market, the market for transactions of goods in question, and if there is a transaction, meaning there was an agreement between the buyer and seller on price and volume (quantity) of goods. The relationship between price and volume (quantity) of goods described by the law of supply and demand the law of demand states that the higher the selling price of the item, the quantity demanded in the market will decrease. While the law of supply states that the higher the selling price of the item, the more the number of items offered. (Boediono, 1982).

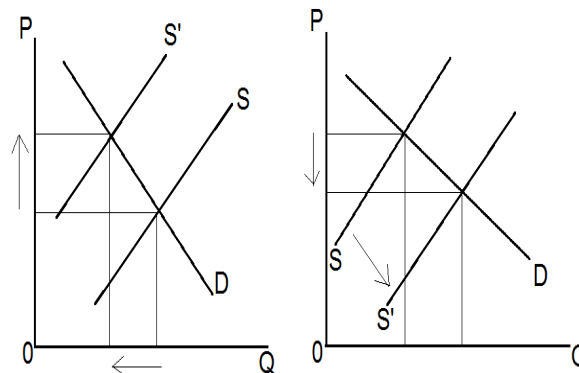


Figure 5: Relationship Commodity Price with offer

According to figure 5, the law of supply is the relationship between the objects and the amount of goods offered. In international trade, the volume of exports describes the volume of items offered, so that the higher price of goods, the amount of exports also increased, and otherwise if the price of goods exported to decrease the volume of exports also decreased.

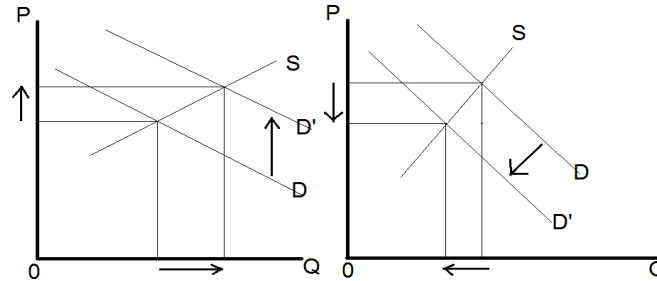


Figure 6: Relationship to Price Commodity Demand

On the other hand, according to Figure 6 above the price and quantity demanded of a commodity is negatively related. This means that the higher the price of a commodity, the demand for commodities will decline, *ceteris paribus*. For export prices, the basic economic hypothesis is that most commodities, the price offered is negatively related to the amount requested, or in other words a large commodity prices less quantity demanded of a commodity. Instead prices positively related with offers. The higher the price, the more quantity supplied.

III. RESEARCH METHODS

The object of research is the export of commodities mining sector in Southeast Sulawesi as the dependent variable, while the other object is a variable exchange rate, economic growth in importing countries, and commodity prices. The research sites in southeast Sulawesi. The data used are secondary data mining export commodities, exchange rates, economic growth in importing countries, and commodity prices. Time series data used year period ranging from 1995 to 2013. Sources of data obtained from government agencies, namely the Ministry of Industry and Commerce, and the Central Bureau of Statistics data is available online. The data of this study is secondary data that can be obtained through archival research (*archival research*) and surveys. Secondary data required in this study such as data mining commodities, exchange rate, economic growth in importing countries, and commodity prices. Finally, the method of data analysis using multiple linear regressions (Gujarati, 2003):

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + e$$

Where:

Y = Value of exports (thousands of US \$);

X1 = exchange rate (rupiah / US \$);

X2 = economic growth in importing countries (billion);

X3 = Nickel prices (US \$ / lb);

β_0 = β_n regression coefficient;

e = error factor.

In order contains estimates, the researchers first perform classical assumption test. In general, econometric approach to what needs to be done mentioned as classical assumptions. The goal is to get the best assessment recommendation Linear Estimator (BLUE), it is necessary to estimate the model by assuming classical the research consisting of:

1. Residual normality test, aiming to test whether the regression model or residual confounding variable has a normal distribution. T test and F test assumes the value of *the residuals* follow a normal distribution. In case of violation of this assumption, the test statistic becomes invalid for small sample sizes. There are two ways to detect whether the residuals have a normal distribution or not, the graph analysis and statistical tests. In this study, performed statistical tests Kolomogorof Smirnov. In the KS test, if the KS test value > 0.05 (not significant) then normally distributed.
2. Multicollinearity test, means there is a perfect linear relationship or certainly among some or all of the independent variables in the model. The consequences of multicollinearity, the regression variables are not certain, and mistakes into infinity. How to detect the presence or absence of multicollinearity in the model, namely (Gujarati, 2003): (a) if the value of the use of VIF (variables Inflating Factor) ≤ 10 m aka multicollinearity not occur; (2) if CI (condition) ≤ 30 then it does not happen multicollinearity.
3. Heteroskidastity test aims to test whether the regression model variants of the residual imbalance occurs one other observation to observation. If the variance of the residuals from observation to observation the other remains, then it is called and if different Homoskedastisitas called Heteroskedastiditas. Good regression model is Homoskedastisitas or Heteroskidastity not. There are two ways to detect the presence or absence of heteroscedasticity, the method of graphs and statistical methods. In this study, the method used is a statistical method to test Glejser, where Glejser test conducted by regressing the absolute value of the residuals (Abs ui) to the other independent variables. If β is significant, it indicates there is heteroscedasticity in the model.

Finally, the operational variables of this study can be explained as follows:

1. Export commodities mining sector, which is the product of abroad sales in nickel mining form commodities within one year are calculated in tones and then converted in units of thousands of US \$. Commodities mines overseas sales of commodity nickel ore exports data recorded in the recap at the Ministry of Industry and Trade of Southeast Sulawesi Province by the issuance of SKA / COO.
2. The exchange rate is the exchange rate against the dollar (dollars / US \$) on the basis of the middle exchange rate of the rupiah against the dollar which is calculated based on the nominal exchange rate set by Bank Indonesia. Mathematically, the relationship between the nominal exchange rate and the real exchange rate can be written in the form of the following equation: $K_{urs = real} = \text{exchange rate of the nominal} \times P_D / P_{LN}$. Where: P_D is the level of commodity prices in the state I (domestic prices) and P_{LN} is the level of commodity prices in country A II (the foreign price).
3. Economic growth in the importing country (X_2) is represented by GDP: China's largest nickel exports. China's GDP is the value of output of goods and services within the Chinese state is measured in billions.
4. The nickel price is the price of the commodity which is the result of industrialization of nickel ore into nickel or ferronickel plate formed from the accumulation of supply and demand in the market which released by the London Metal Exchange, formed from the auction at the unit (USD / Pounds).

IV. RESULTS AND DISCUSSION

The results of the regression model testing in this study indicate that residual confounding variable or have a normal distribution, residual normality test by looking at the value-Smirnov. According to *Kolmogorov* statistical test results, showing *Kolmogorov-Smirnov* test value is 0.876 with a significance level well above 0, 05 are 0.509. In other words, value-Smirnov *Kolmogorov* not significant, the average residuals are normally distributed. Later in the model to detect whether the independent variables have a perfect linear relationship, or certainly by looking at the value of Variance Inflation Factor (VIF) and Condition Index (CI).

Results calculated VIF indicates a variable exchange rate 1.394; GDP Importer 1.863; Nickel Price 1,480, there is no single variable which has a value of more than 10. So there is no multicollinearity between the independent variables in the regression model. Meanwhile, CI values generated for each independent variable is less than 30, it can be concluded that the independent variables are not *multicollinearity*. Finally, the assumptions in the classical regression model are homoskedastisitas or have the same variant. To test for the significance of symptoms *heterokedastisitas* with the independent variable, the dependent variable is the absolute variables. Statistical analysis showed that the exchange rate variable, Importer GDP, and the price of nickel has a significance value of 1.00 each; which are all above 0.01. Means no heteroscedasticity in this model, in other words all the independent variables included in this model has the same variant distribution / homogeneity.

Table 1. Results of Regression Analysis of Export Commodities Mining Sector

Variable	K coefficient	Standard Error	Sig t.
Constant	-72.152	78,516.9	0.373
Exchange rate	-4.933	10.007	0.629
Nickel prices	9.817	1.918	0.000
Economic growth (PDB Importers)	22,192.40	7,492.66	0.010
R Square = 0.850			
Sig. F = 0.000			

The test results in Table 1 known coefficient of determination (R Square) of 0.850 means that. The ability of the independent variables, namely exchange rate, importer's GDP, and commodity prices together in explaining the dependent variable is the value of exports of ferronickel by 85 percent. While the rest 15 percent is explained by other variables not included in the model. The results showed that simultaneous ferronickel prices variables, exchange rates, China's GDP of importing countries affect the value of exports. Partially prices and GDP importing country has a positive effect on the value of exports. Importer GDP variable coefficient 9.817 explains that each increase of one unit of GDP, export value increased by 9.817. This means that if China's GDP has increased 100 billion, Southeast Sulawesi nickel exports rose by 981 700 US \$, *ceteris paribus*. These results can be interpreted to mean that any increase in GDP importing countries tend to increase exports, favorable economic conditions of importing countries could increase demand for export commodities. The high value of GDP shows that the development of China's economy, the better the importing country.

There by increasing the demand for mining commodities, particularly nickel in the Southeast. Because China is the largest importer of nickel in Southeast Sulawesi province, the increase in GDP also have an impact on export activity. Nickel prices have a positive effect on the value of commodity exports of mining. Regression coefficient value of 22192.403 explained that every mark-up by one unit, then the value of exports increased

22192.403, *ceteris paribus*. In other words, if the world price of nickel increased by 100 US \$ / pound, the value of exports rose by 2,219. 240.30. The results of this study may prove the truth of the theory of supply where price increases tend to increase the value of exports for each price increase will increase revenue, be more passionate exporters to increase the number of sales in order to earn big profits. The increase in the export value of higher nickel prices indirectly affect through sales value received in the form of dollars. Besides supported by high demand, the value of sales in dollars earned by exporters will increase as the price of commodities sold higher. Theoretically, it is quite reasonable because price rises will trigger a high income. High-income every year making sales efforts to expand massively into destination countries to achieve large gains acceptance.

The increase in exports during the study period (1995-2013) was strongly influenced by the importer GDP variable and export commodity prices. However, the exchange rate variable tends to have no effect on an individual basis. This is due to the high demand by China and the country's exporters eager to make sales amid rising nickel prices. Demand for commodities from China that continue to grow as China's economy grows from year to year, forcing economic actors in the mining sector sends mining commodities to meet domestic demand, especially the demand for industrial products. Thus, in spite of the high exchange rate to appreciate, but the sale of mining commodities has increased. This indicates that the variable rate is not one of the factors inhibiting or drive for economic actors to export.

Factors exchange rate fluctuations tend to respond to the business of mining sector in the Southeast. This fact can be concluded that the strength of price and demand from Chinese importers over the impact of exchange rate fluctuations. During the study period, individual importers affect GDP shows that the economic development of the countries that import quite a significant impact on exports. This condition occurs on rising commodity prices. Due to the variable price will determine the value of exports of mining commodities. In the past 20 years, the development of the mining sector's export commodities grew rapidly in the Southeast. With so many companies operating today ranging from large companies such as PT. *Antam* to other small companies. Export development period 1995 2005 tidak so quickly, because in this period the mining company *PT Antam* operate only Pomalaa. In addition to that caused by the global economy is still overshadowed by the economic crisis that occurred in 1998, it is enough to influence world demand and other economic variables.

Along with global economic conditions are still overshadowed by the crisis and the number of operating companies is still very small, but export growth back up to 2006 even nickel demand peaked in 2007, where exports increased from a year earlier to US \$ 632,209.62 thousand. It is because of this massive nickel demand by importing countries of China to pass the infrastructure readiness to face the world that the Beijing Olympics will be held in 2008. Namun what happened in 2008, exports back down. Drastic reduction occurred in 2009 amounted to 196,796.85 thousand US \$. This condition as a result of the decline in import demand countries, especially China and instability in economic variables triggered by the global financial crisis in the US spread to industrialized countries such as China. Although the decline was not as great as in 1999, but it was enough to give an idea that global economic conditions also have an impact on export performance in the Southeast.

In 2013, the increase in the value of exports of nickel has increased the highest value in the year in which economic variables such as exchange rates, GDP of the importing country, and commodity prices look stable enough yet. This increase is seen as the effect of a large number of companies operating in the region of Southeast Sulawesi as many as 39 units of a company that sells nickel abroad. The increasing number of companies in 2013 as a result of the increasing number of potential mineral resources is detected; the high level of demand forcing investors to invest in this sector, as well as the high spirits of investors to earn huge profits in the nickel price has increased every year experienced.

In recent years, in the first quarter, export growth slowed in 2014, drawing 55.35%, this condition as a result of the implementation of government policy on the prohibition of the export of raw materials contained in the Minister of Energy and Mineral Resources No. 7 In 2012, the realization of the 2014. Thus, the phenomenon shows that the export growth in the last period are no longer influenced by economic variables but are influenced by government policy. The government's policy on the prohibition of the export of minerals in value added through processing and refining of minerals contained in the Minister of Energy and Mineral Resources No. 07 in 2012. Although this regulation was published in 2012, its realization will be implemented in 2014. As such, in this study the implementation of the policy applied in 2014.

Basically the control of mineral raw material exports, which means that nickel, has a goal to build the economy. Although this policy may reduce export activities, but the main purpose of export controls do not hamper trade but utilize the national mineral wealth for the greater welfare of the people. This effort cannot be delayed due to certain times of mineral wealth will be depleted and cannot be renewed. The first indicator of the development and movement of economic variables is the exchange rate. Exchange rate growth of the rupiah against the US dollar over the last 20 years can be seen in Figure 7 below.

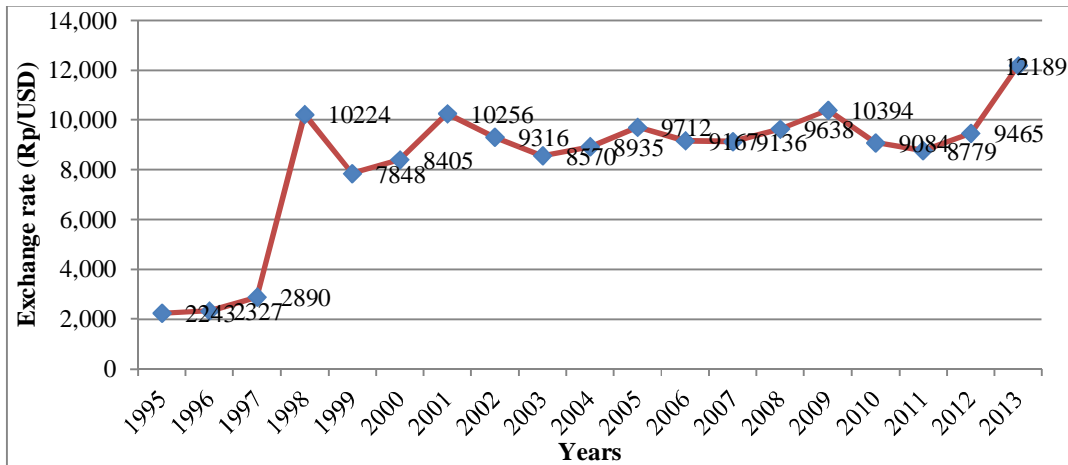


Figure 7: Development of Exchange Rate against Dollar

The exchange rate fluctuates sharply in the period of the economic crisis of 1997/1998 and 2008/2009, as well as in 2013. The crisis was enough to take the impact of changes in economic variables, in particular the exchange rate, which in turn lowers the value of exports during the period. In 2008 the exchange rate has increased to Rp. 10 224 / US \$, and in 2009 the exchange rate rose to Rp. 10 394 / US \$. Where previously, the exchange rate only have a value of Rp. 2,800 / US \$ in 1997 and Rp. 9,136 / US \$ in 2007. This fact is the impact of the global economy made a poor exchange rate movements against the international currency is not stable. In general, as one means of interaction of international trade payments, exchange rate movements are very important in determining a country's export activities. Reflecting the strong economic agents increase their export quotas in the middle exchange rates lower. In contrast, the increase in the exchange rate makes importers reduce the demand on the grounds they will pay a high enough value. For a time his request and wait for the exchange rate is reduced back down. But there are also economic actors tend not to pay attention to their condition continues to improve to meet the demand for domestic needs.

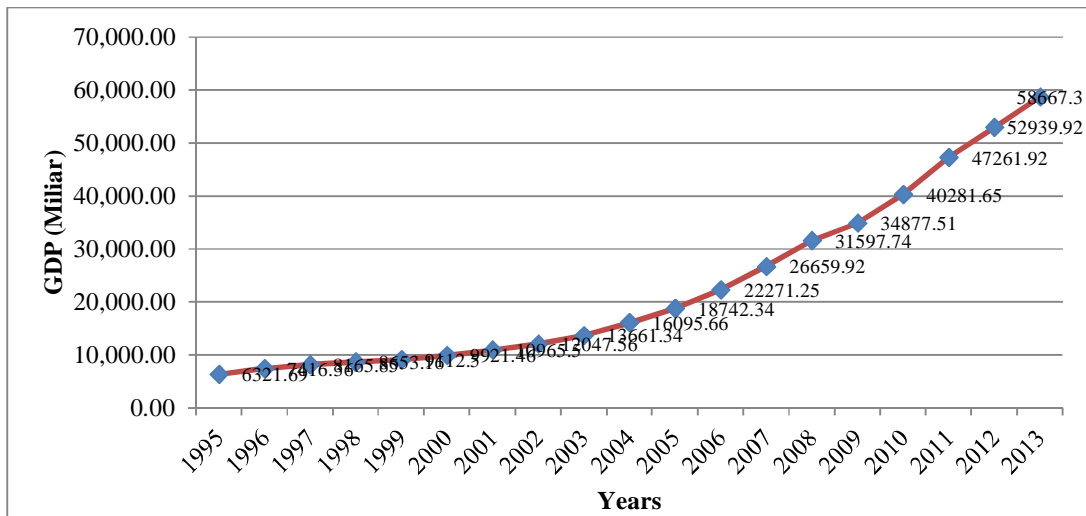


Figure 8: Development of China's GDP

China's GDP growth increase year by year. This is as a result of the high level of consumption of China's domestic consumption continues to increase. This is evidenced by the growth rate of retail sales growth the past year in which the retail sales in 2013 grew by 13.5%, better than the previous period. Similarly, in 2012, the average vehicle sales grew by 6.9% and consumer confidence is higher than 5.6%. Some of product sales increased high enough is communications equipment, building and decoration materials, furniture, traditional medicines, as well as gold, silver and jewelry. China it brings a good impact on export development in the Southeast. Good economic conditions of China, the largest importer of nickel, lead a good impact for the development of exports in Southeast Sulawesi. The high mobility of the Chinese economy tends to increase the demand for nickel as raw material for industrial products.

Increased demand from China, forcing the company to make deliveries of export commodities on a large scale. The peak can be seen from the increase in China's GDP in 2013, with a value of 58.667,3 billion. This has also resulted in increased demand for mining commodities in Southeast Sulawesi with an export value of US \$ 747,366.91 thousand. It is enough to give an idea that China's GDP is very influential in the development of exports in Southeast Sulawesi. Other economic indicator variable is the world nickel prices. Similarly, the developments of exchange rates, global nickel prices are also influenced by global economic developments. Therefore the world's nickel price is determined by the accumulated demand and supply in the international market. The decline in the demand for commodities will certainly bring down the price of nickel; otherwise high demand will increase the price.

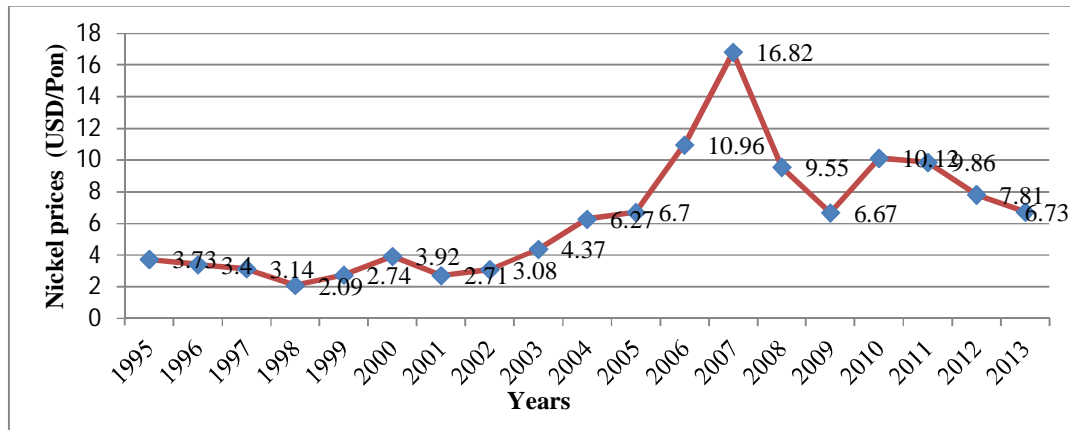


Figure 9: Development of World Nickel Price

Figure 9: during the crisis of 1998 and 2009, the price of nickel has fallen dramatically from the previous year. 1998 nickel price fell by 33.43% with a value of US \$ 2.09 / pound, and in 2009 the nickel price fell 30.15%, with a value of US \$ 6.67 / pound. This is as a result of the decline in global demand for nickel due to the unstable economic conditions. Nickel prices rose to the highest value of 16.82 US \$ / pound in 2007. The good economic condition and high global demand for nickel quite an impact on the price increase. In addition, during 2007 also marked the development of the fundamental factors in metal commodity prices. Disorder in a number of mining sites, including natural disasters and worker strikes, raising fears of supply disruption, raises prices (Bank Indonesia, 2007).

Effect of nickel prices could easily affect the demand for nickel, where the higher nickel prices, the higher bid on nickel because businesses tend to want to increase their production capacity amid higher prices to benefit greatly. On the other hand the development of the world nickel prices move similar to the export development. During the crisis period 1997/1998 and 2008/2009 brand slumped nickel prices down. Nickel prices fell to 2.09 US \$ / pound in 1998 and US \$ 6.67 Pound in 2009. This makes exporters lost most of their income due to the product being sold is paid to the value cheaper so exporters are likely to reduce sales. This decrease can be seen from the decline in the value of nickel exports in Southeast Sulawesi respectively dropped to 47 953000 US \$ in 1998 and thousands of US \$ 196,796.85 in 2009. Meskipun there is at least a certain period does not comply with the conditions. But in 2010 and 2013 experienced a decrease quite dramatically, but growth in exports during the period remained high and even thrive.

VII. CONCLUSION

The results of this research notes that exchange rates, commodity prices GDP importers and jointly affect the export commodity mining sector Partially importer GDP and price variables have a positive influence on the export of commodities mining sector. This indicates that the value of commodity exports in the mining sector in Southeast Sulawesi is largely determined by the price and the importer country's GDP. Further, that the GDP of China is very influential in the development of exports in the Southeast Sulawesi. Similarly, the variable of world nickel price indicator increasing influence on the value of exports. Nickel prices are determined through the accumulation of demand and supply in the international market, thereby reducing the demand for nickel will lower the price and vice versa increased demand will raise the price. The development of the exchange rate has no effect, which is caused by the exchange rate to rise as the global economy.

Finally, this research recommendation is intended to be more active in supporting local government cooperation agreements and agreements with nickel producing countries, particularly regarding the export quota and the price of nickel. In addition, employers in the mining sector especially welcome to attend the community's economic viability of nickel on nickel processing business. Finally, for other researchers who want to conduct research similar to this study in order to include the government policy variables.

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