PALM OIL EXPORTS BECOME THE MAIN CONTRIBUTOR OF EXPORT GROWTH IN HELPING INDONESIA'S ECONOMIC RECOVERY DUE TO THE COVID 19 PANDEMIC

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Abstract

The increase in the price of palm oil has an impact on exports of palm oil or CPO. Palm oil exports are the main contributor to export growth. The increase in Indonesia's exports was not only supported by CPO but also other commodities such as coal, steel and other mining goods. However, CPO is one of the biggest contributors. CPO growth is among the highest among others and this is the main contributor to the large export growth and the main contributor to the trade surplus. The rapid growth of CPO exports is considered to be a damper for economic contraction. Finally, it will have a positive impact on Indonesia's economic growth, which is still in the recovery phase after the COVID-19 pandemic. This study aims to analyze the effect of exports of palm oil on Indonesia's economic growth in 2013-2020. The research method used is simple regression with Eviews software. The results of the study show that palm oil exports have a positive and significant impact on Indonesia's economic growth.

Keywords: Exports, Palm Oil, Indonesia's Economic Recovery

INTRODUCTION

The 2020 and 2021 periods are full of challenges because the COVID-19 pandemic has gone through various efforts to accelerate the national economic recovery. In the first quarter of 2020, the national economic growth was still positive at 2.97%. However, in the second quarter, economic growth was minus 5.32% (Purba et all, 2021). According to trade balance data throughout 2020, there was a surplus of USD 21.74 billion. This surplus continued in January 2021 (USD 1.96 billion) and continued the trend of the surplus for 9 consecutive months. During 2020, exports from the agricultural and industrial sectors grew positively by 14% and 2.94%, respectively. Palm oil and mining in good contribution. Export destination countries are also countries that have always been a mainstay. Palm oil and its fractions experienced an increase in export value to USD 17.36 billion (10.63%) during 2020 and remained firmly at the top of the standings as a major contributor to Indonesia's exports. The development of the international benchmark palm oil price in the first quarter of 2020 still strengthened to USD725 per metric ton. This makes palm oil the main support for Indonesia's exports, driven by rising CPO prices in the second half of 2020

In the fourth quarter of 2019, North Kalimantan's growth was driven by the agricultural sector which entered the harvest cycle, namely the production of rice, vegetables, fruit and palm oil. The proportion of exports of the two categories of goods, namely mineral fuels and animal/vegetable fats and oils, reached 25.9 percent of non-oil and gas exports in the first quarter of 2020. Palm oil is projected to increase in 2020 to USD650 per metric ton and will increase again in 202.

Table 1. Projection of Global Commodity Prices

Commodity	Unit	2020	2021
Energy			
Coal	USD/mt	65,0	68,0
Crude Oil	USD/bbl	35,0	42,0
Natural Gas	USD/mmbtu	3,1	4,1
Non Energy			
Palm Oil	USD/mt	650	668
Rubber	USD/kg	1,55	1,61
Copper	USD/mt	5.200	5.500
Gold	USD/toz	1.600	1.590

Source: World Bank, 2020

The sped up export growth, with the support of CPO, is considered to be a damper for economic contraction. In the end, it will have a positive impact on Indonesia's economic growth, which is still in the recovery stage after the COVID-19 pandemic. With this phenomenon, researchers are interested in examining how much influence palm oil exports have in helping Indonesia's Economic Recovery Due to the Covid-19 Pandemic

RESEARCH METHOD

This research is quantitative research, with time series data. The research time is 2013-2020, Indonesian research object. Data source: Indonesian Central Bureau of Statistics.
The Eq. 1 of simple linear regression analysis in this study:
$PDB = \beta_0 + \beta_1 EKSPOR + u_t$

Information:
PDB : Economic Growth
$EKSPOR$: Palm Oil Export Value
β_0, β_1 : Parameter
u_t : Error term

Results and Discussion

The section headings are in boldface capital and lowercase letters. Second level headings are typed as part of the succeeding paragraph (like the subsection heading of this paragraph).
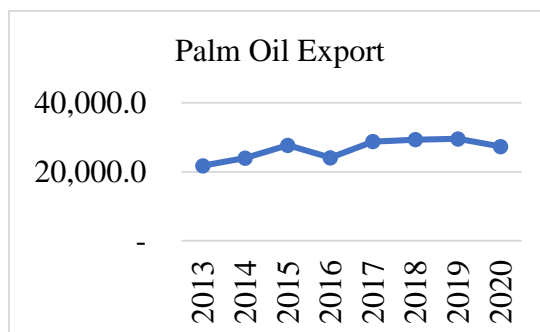

Figure 1. Palm Oil Export

In 2013-2015 the development of palm oil exports in Indonesia increased from 21,770.8 in thousands of tons (2013) to 27,670.8 in thousands of tons (2015). Meanwhile, in 2016 it decreased to 24,066.5 in thousands of tons. In 2017-2019 continues to experience an increasing trend again

The development of gross domestic product based on constant prices during the 2013-2020 study observation period experienced an increasing trend. In 2013-2016 it increased from 8,156,497.80 in billion rupiah (2013) to 9,434,613.40 in billion rupiah (2016)
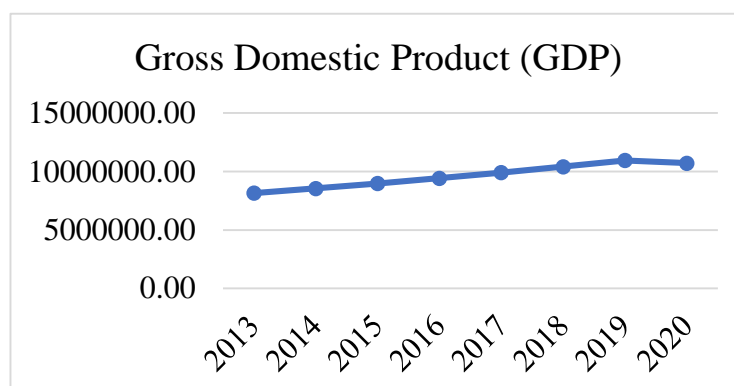

Figure 2. Gross Domestic Product (GDP)

Likewise, in 2017-2019, there was an increase from 9,912,928.10 in billion rupiahs (2017) to 10,949,037.80 in billion rupiahs (2019). While in 2020 it decreased to 10,722,442.70 in billion rupiah.

Model testing analysis:

Table 2. Regression Test Results

Dependent Variable: PDB
Method: Least Squares
Date: 11/12/21   Time: 21:11
Sample: 2013 2020
Included observations: 8

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	1918254.	2203254.	0.870646	0.4174
EKSPOR	290.9397	82.54480	3.524628	0.0124

R-squared	0.674320	Mean dependent var		9643594.
Adjusted R-squared	0.620040	S.D. dependent var		1028756.
S.E. of regression	634134.1	Akaike info criterion		29.77023
Sum squared resid	2.41E+12	Schwarz criterion		29.79009
Log likelihood	-117.0809	Hannan-Quinn criter.		29.63628
F-statistic	12.42300	Durbin-Watson stat		1.674951
Prob(F-statistic)	0.012448			

Source: Eviews 9, processed data (2021)

Discussion

$$PDB = 1918254 + 290.9397 EKSPOR + u_t$$

Based on the regression results in table 2, it can be concluded that:

1. The R-squared value of 0.674320 means that the palm oil export variable has an influence of 67.4% on economic growth in Indonesia. In this case the influence is quite strong
2. The Prob t-Stat of the Export variable is 0.0124, where the value is smaller than alpha 0.05. means that palm oil has a significant effect on economic growth (GDP)
3. The positive coefficient value on the export variable is 290.9397, indicating that exports have a positive relationship. This means that if palm oil exports increase, economic growth will also increase

This research is in line with Salvator's theory (1990) asserting that exports are one of the driving engines of economic growth. A study conducted by Salvator showed that exports are one of the main factors for developing countries to be able to increase economic growth. Increased exports and investments made by developing countries can boost output and economic growth.

This study is different from the results of research by Andriyani and Isfihani (2019) which states that the export variable of palm oil has a positive and no significant effect on Indonesia's economic growth from 1988 to 2016. On the other hand, this study is similar to the results of research from Arianti, et al (2017) which states that CPO exports have an influence on economic formation and have a significant relationship. The results of this study are also the same as those of Ridwanulloh and Sunaryati (2018), where the GDP variable has a positive and significant relationship to Indonesian CPO exports.

Indonesia became the country with the first ranking of the largest exporters of palm oil in the world in 2020. Where, Indonesia's total palm oil exports reached 37.3 million tons with a global market share of 55 percent. Palm Oil is included in Kode HS= 15: Lemak & minyak hewan/nabati. Export growth in Lemak & minyak hewan/nabati recorded a growth of 10.8 percent YoY. The growth of exports of this group is driven more by the factor of increasing world palm oil prices which reached 25.6 percent (YoY), and has a share of non-oil and gas of 12,1% (BPS, 2020).

According to Imam Ghozali (2011), the classical assumption test of the linear regression model used is carried out so that it can be seen whether the regression model is good or not.

CLASSIC ASSUMPTION TEST
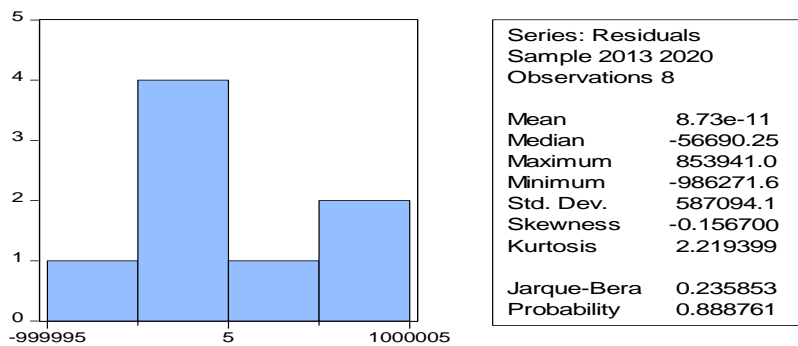
1. Linearity Test

Table 3. Linearity Test Results

Ramsey RESET Test
Equation: LINIERITAS
Specification: PDB C EKSPOR
Omitted Variables: Squares of fitted values

	Value	df	Probability
t-statistic	6.71E-05	5	0.9999
F-statistic	4.51E-09	(1, 5)	0.9999
Likelihood ratio	7.21E-09	1	0.9999

Source: Eviews 9, processed data (2021)

The results of the linearity test using the research ramsey test show that the probability F is greater than alpha 0.05. This means that the data analyzed is linear

2.   Normality Test

	Series: Residuals
	Sample 2013 2020
	Observations 8
	Mean 8.73e-11
	Median -56690.25
	Maximum 853941.0
	Minimum -986271.6
	Std. Dev. 587094.1
	Skewness -0.156700
	Kurtosis 2.219399
	Jarque-Bera 0.235853
	Probability 0.888761

Source: Eviews 9, processed data (2021)

Figure 3. Normality Test Results

In the normality test results shown in Figure 3, the probability value is 0.888761 which is greater than 5% alpha. This states that the research model is normally distributed

3.   Multicollinearity Test

Based on the results of the multicollinearity test in table 4 below, Indicates that the VIF value is not more than 10, so in this model there is no multicollinearity

Table 4. Multicollinearity Test Results

Variance Inflation Factors
Date: 11/12/21   Time: 20:39
Sample: 2013 2020
Included observations: 8

Variable	Coefficient Variance	Uncentered VIF	Centered VIF
C	4.85E+12	96.57328	NA
EKSPOR	6813.645	96.57328	1.000000

Source : Eviews 9, processed data (2021)

4.   Heteroscedasticity Test

Table 5. Heteroscedasticity Test Results

Heteroskedasticity Test: Breusch-Pagan-Godfrey

F-statistic	0.288847	Prob. F(1,6)	0.6103
Obs*R-squared	0.367441	Prob. Chi-Square(1)	0.5444
Scaled explained SS	0.126016	Prob. Chi-Square(1)	0.7226

Source : Eviews 9, processed data (2021)

Based on table 5, it can be seen if Probability value Obs*R-squared is 0.5444 greater than alpha 0.05 then in this case there is no heteroscedasticity

5.   Autocorrelation Test

Table 6. Autocorrelation Test Results

Breusch-Godfrey Serial Correlation LM Test:

F-statistic	0.010191	Prob. F(2,4)	0.9899
Obs*R-squared	0.040556	Prob. Chi-Square(2)	0.9799

Source: Eviews 9, processed data (2021)

Based on the results of the autocorrelation test with the serial correlation LM test, it shows that the probability value of Obs*R-squared is greater than alpha 0.05, it can be concluded that in this study there is no autocorrelation

CONCLUSION

Conclusion of this research:
1.   Oil palm export variables during the observation period have a positive and significant impact on economic growth or GDP. This means that palm oil exports need to be considered because they are a major contributor in improving the economy

Research suggestions:
1.   The government is expected to be able to maintain economic stability by continuing to increase exports so as to increase economic growths

REFERENCES

Andriyani, Devi and Isfihani. (2019). Kointegrasi Inflasi, Ekspor Minyak Kelapa Sawit dan Pertumbuhan Ekonomi di Indonesia. *Jurnal Ekonomika Indonesia*, 3(1), 8-18

Arianti et all. (2017). Pengaruh Ekspor Minyak Kelapa Sawit/Crude Palm Oil (CPO) Terhadap Pertumbuhan Ekonomi di Indonesia Pasca Reformasi (1998-2015). Proceedings SNAB "Profesonalisme Akuntan Menuju Sustainable Business Practice". Retrieved from https://www.researchgate.net/publication/343945154_Pengaruh_Ekspor_Minyak_Kelapa_Sa witCrude_Palm_Oil_CPO_terhadap_Pertumbuhan_Ekonomi_di_Indonesia_Pasca_Reformas i_1998-2015

Ghozali, I. (2011). *Aplikasi Analisis Multivariate Dengan Program SPSS*. Semarang: Badan Penerbit Universitas Diponegoro

Purba, H.J., et all. (2021). *Dampak Pandemi Covid-19 Terhadap Pertumbuhan Ekonomi dan Sektor Pertanian*. Retrieved from https://pse.litbang.pertanian.go.id/ind/pdffiles/02-BBRC-2020-II- 1-1-HJP.pdf

Ridwanulloh and Sunaryati. (2018). Determinants of Indonesian Crude Palm Oil Export: Gravity Model Approach. *Jurnal Ekonomi & Studi Pembangunan*, 19(2), 134-141

Salvator, D. (1990). *International Economics. 3th Edition*. New York: MacMillan Publishing Company

www.bappenas.go.id

www.bps.go.id

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