DETERMINANTS OF EXPORT VALUE OF WEST JAVA PROVINCE: AN ERROR CORRECTION MODEL (ECM) APPROACH

Ratih Pratiwi[1]
Vahri Firmansyah[2]

[1,2] Directorate General of Customs and Excise, the Republic of Indonesia

Email: ratpratiwi@gmail.com
Email: vfirmansyah90@gmail.com

ARTICLE INFORMATION

Received date
[07-21-2022]

Revision
[12-02-2022]

Accepted date
[12-15-2022]

ABSTRACT:
West Java is a province with the largest contribution to national export value. In 2018, the export contribution in West Java reached 16.89% of the total national export value. However, in recent years, West Java's trade balance shows that the rate of increase in imports is relatively high, especially for industrial needs. It indicates that West Java has a high dependence on imports, and if it is not controlled, it can cause a deficit in the trade balance. Therefore, the government's role is needed to increase export value to offset the import value increase. This study aims to determine the effect of KITE facilities, exchange rate, interest rate, and Human Development Index (HDI) on the export value of West Java. This research uses the quantitative method based on secondary data from monthly time series for 2016-2019. Analysis of research data using the Error Correction Model (ECM). Research result indicates that only the interest rate negatively and significantly affects West Java's export value. Meanwhile, the KITE facility, exchange rate, and the HDI partially do not affect the export value of West Java. However, the KITE facility, exchange rate, interest rate, and HDI simultaneously affect the export value of West Java.

Keywords: *exchange rate, export, the KITE facility, West Java.*

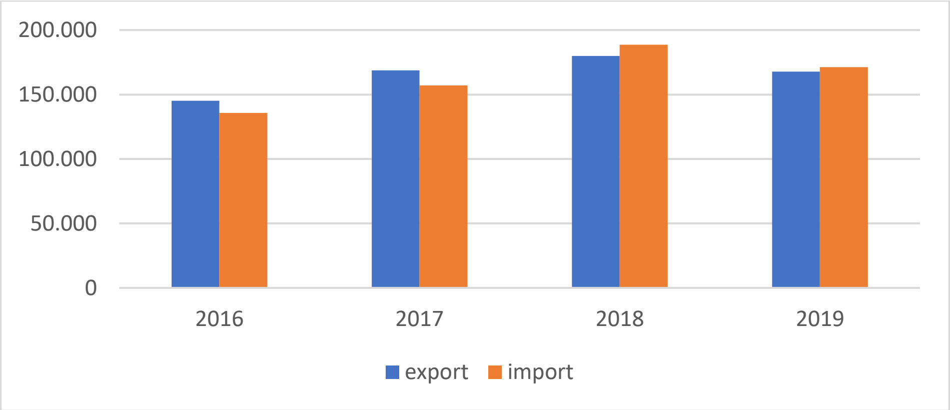
1. INTRODUCTION

International trade continues to grow as one of the impacts of globalization on the economy. Globalization practically erased the limitations of international trade so that countries are integrated and a country can meet the needs of goods or services they can not produce themselves, available in another country. Each country specializes in producing its commodity. This is in line with the international trade theory proposed by David Ricardo, the theory of comparative advantage. A country with absolute advantage in its commodities tends to export item with thehighest comparative advantage while importitem with the lowest comparative advantage. A country is said to have a comparative advantage when it produces a lot of goods and services while using a lower production cost than other countries.

According to the Indonesian Ministry of Trade (Kementerian Perdagangan, 2019), the aggregate value of exports and imports in 2016-2019 shows an overall increase, but the value in 2019 decreased on a year-on-year basis. Exports in 2019 decreased by 7% from USD 180 billion to USD 167 billion. Meanwhile, imports in 2019 decreased by 9%, or USD 17 billion, to USD 171 billion. The government budgetary report Laporan Keuangan Pemerintah Pusat (LKPP) 2019 (audited) noted that the global recession probably causes the decrease in exports and imports due to the lower demand from Indonesia's trade partners, such as the US, China, and Japan. The tariff war between the US and China also worsened the economic climate, leading to a lower demand for imported goods from those countries (LKPP, 2019).

The decrease in value and the balance of trade in 2019 also showed a deficit. A balance of trade is said to be a deficit if the country imports more than it exports. Conversely, a surplus trade balance happens if the country exports more than it imports. According to Statistics Indonesia (BPS), the deficit in 2019 was better than in 2018. The deficit in 2018 was caused by increased demand for imported capital goods and raw materials, thus increasing imports (LKPP, 2018). Meanwhile, the deficit in 2019 was caused by the exports not being expansive enough (Pink, 2019). Therefore, the government has to play a bigger role in supporting imports so that the deficit becomes more manageable (Yulianto & Seno, 2020). Figure 1 shows the balance of trade in Indonesia from 2016-2019.

Figure 1. Balance of Trade of Indonesia 2016-2019 (in millions USD)



Source: Statistics Indonesia (2019)

The government can affect exports through fiscal policy. The aforementioned fiscal policy is trade facilitation in the form of Export-Oriented Import Facilitation (Kemudahan Impor Tujuan Ekspor (KITE)). KITE is a policy developed by the Ministry of Finance and executed by the Directorate General of Customs and Excise. KITE facilitates trade by exempting and/or restituting import duty and/or excise and Value Added Tax (VAT) and Sales Tax on Luxury Goods (STLG) for imported goods and materials processed or assembled to be exported again. This policy is supported by the Ministry of Finance regulation Peraturan Menteri Keuangan Nomor 160/PMK.04/2018 for KITE exemption and Peraturan Menteri Keuangan Nomor 161/PMK.04/2018 for KITE restitution. KITE facilitation can be used by international trade-oriented manufacturing industries which already possess Nomor Induk Perusahaan (National Company ID, NIPER). The purpose of this facilitation is to support local producers in producing goods that can be traded internationally, while using imported goods as the material, to support the economy of the nation, in particular in exports (Gumilar, et al., 2015). It is hoped that by KITE facilitation, local companies can suppress the imported raw material cost, lowering the production cost and increasing the product's marketability in the international market.

In a recent study, Nabila and Sriyanto (2018) studied 45 companies that used the KITE facilitation. The results show that facilitation affects exports due to the product price. Goods produced using the facilitation have a lower production cost. With lower production cost, producers tend to lower the selling price, which eventually increasing demand. Generally, previous studies show that KITE facilitation has a positive effect on exports. However, according to the BPS data in Figure 1, exports were still on the low side and trade balance was still in a deficit, i.e. imports were bigger than exports. As such, further studies on the efficacy of this fiscal incentive on exports are needed.

Another factor affecting exports is the Rupiah-USD exchange rate. Fluctuating exchange rate causes depreciation and appreciation of The Indonesian currency (Risma et al., 2018). When the rupiah weakens, exports will increase, and imports will decrease (Pratiwi et al., 2015). The next factor affecting exports is the interest rate. Mankiw (2007) suggests that a high-interest rate decreases the net capital outflow, causing a decrease in the availability of USD in the foreign exchange market. This leads to the appreciation of the USD and a decrease in the US net exports. A high interest rate makes the imported goods become generally cheaper, while making the Indonesian-produced goods to be marketed globally become generally more expensive, therefore reducing the marketability. The Human Development Index (HDI) is the last factor to be studied. Human Development Index is the standard to measure human development, established by the UNDP (United Nations Development Programme). Several aspects of human development include long life expectancy and health, education, and standards of living (Lumbantoruan & Hidayat, 2015). Contractor and Mudambi (2008) state that human development has a significant effect on exports of goods and services. The availability of educated and skilled workforce affects the volume of exports of a country.

Table 1. Exports and Imports of West Java Province 2016-2019

	Year (in thousands USD)			
	2016	**2017**	**2018**	**2019**
Exports	25.726.659	29.205.198	30.362.912	29.927.416
Imports	11.933.350	11.816.641	12.671.664	11.044.960
Balance of trade	13.793.308	17.388.557	17.691.247	18.882.455

Source: BPS West Java Province (2019)

Table 1 shows the exports and imports of West Java Province from 2016-2019. The trade statistics portal of the Ministry of Trade ranks West Java as the biggest exporter province in Indonesia. West Java topped other provinces such as East Java and Jakarta. Additionally, according to the Directorate of Facilitation Customs and Excise, West Java is one of the five provinces with the highest amount of companies using the KITE facilitation. However, it should be studied whether it is only the KITE facilitation that affects export in West Java, or other factors such as exchange rate, interest rate, or Human Development Index which might have affected exports. Based on the background, the author wanted to study the effect of KITE facilitation, the Rupiah exchange rate, interest rate, and the Human Development Index (HDI) on exports of West Java province.

2. LITERATURE REVIEW AND HYPOTHESIS DEVELOPMENT

2.1 Literature Review

International Trade

According to Diphayana (2018), trade is the exchange of goods and services, or money, based on the voluntary action of making a profit by all parties involved. Meanwhile, international trade is a business transaction involving parties in more than one country. The aforementioned party can be an individual, a company, or a government. International trade is carried out to meet the country's needs, as different countries have different natural and human resources. International trade not only concerns meeting domestic needs through international cooperation but also how a country market its best product to meet the needs of other countries. Therefore, exports and imports are the most important part of international trade (Risma et al., 2018). By exporting, the country makes a profit, gains additional national income, and increases output and economic growth.

Export

Based on Law number 17 of 2006, export is the outflow of goods out of the customs area. The customs area is the territory of the Republic of Indonesia consisting of land, water, and airspace, and certain places in The Exclusive Economy Zone and continental shelf in which the law applies. The in and outflow of goods from and to Indonesia have to be monitored. The body responsible for monitoring export and import flow in Indonesia is the Directorate General of Customs and Excise (DGCE) under the Ministry of Finance. DGCE has several functions, one of which is as a trade facilitator by making policies to lower the production cost and create a more conducive trading environment.

KITE Facilitation

The Ministry of Finance through DGCE offers several fiscal facilitation for export-oriented domestic industries to support national export. One of those facilitations is the Export-Oriented Import Facilitation (KITE). KITE policy is based on Law number 17 of 2006. The regulation states that KITE facilitation is divided into KITE restitution and KITE exemption. KITE restitution is fiscal facilitation in the form of returning (restitution) the customs duty for imported raw materials processed or assembled in Indonesia and whose product is then exported. KITE restitution is regulated by PMK Nomor 160/PMK.04/2018, and the procedure is outlined in Peraturan Direktur Jenderal Bea dan Cukai Nomor PER-3/BC/2019. Meanwhile, KITE exemption is fiscal facilitation in the form of exemption of the customs duty and VAT for imported raw materials processed or assembled in Indonesia and whose product is then exported, KITE exemption is regulated by PMK Nomor 161/PMK.04/2018, and the procedure is outlined in Peraturan Direktur Jenderal Bea dan Cukai Nomor PER-4/BC/2019. Pratiwi et al. (2015) studied the effect of KITE facilitation on exports in Central Java. The multiple linear regression analysis results in her study show that KITE facilitation has a positive and significant effect on export value.

Rupiah Exchange Rate

Countries dealing in international trade have to agree on the monetary or payment system used in the transaction because there are differences in the exchange rate of the currencies of the countries. The exchange rate of two currencies is determined by the supply and demand of either currency. Mankiw (2007) defines the exchange rate as the value of money agreed upon by the citizens of both countries to trade. Sukimo (2004) states that the exchange rate is the price of a currency in another currency. The exchange rate is the most important in an open economy as it affects the current account and other macroeconomy variables. The exchange rate of the Rupiah might also affect export, as shown in Ginting (2013). The results show that the exchange rate has a negative and significant effect on exports both in the short and long-term.

Interest Rate

Boediono (2014) defines interest rate as the price set for the use of loanable funds. The interest rate is one of the indicators determining whether someone should invest or save. Setting the interest rate properly attracts a business actor to apply for a loan to produce goods. Risma et al. (2018) explain that when the interest rate increases, less capital is available, leading to lower production and therefore exports. Conversely, when the interest rate decrease, more people apply for loans to get more capital and increase the production of goods. The increase in production leads to an increase in exports. The interest rates in Indonesia, known as BI Rate, are set by the central bank Bank Indonesia as per the Law number 23 of 1999. A recent study by Kurniasari and Monica (2019) concludes that a higher interest rate increases the volume of exports.

Human Development Index

Human Development Index (HDI) was introduced by United Nations Development Programme (UNDP) in 1999 and published regularly in the yearly Human Development Report (HDR). According to the BPS website, HDI shows how Indonesian citizens can access development results by getting income, health services, education, etc. HDI is an important indicator to measure how successful the effort is to build up the population's quality of life. Additionally, HDI can be used to measure a country's development level compared to other countries. For Indonesia, HDI is strategic because it measures how the government performs and is also used as one of the allocators of The General Allocation Fund (DAU). Bhavan (2017) carried out a study with HDI as the independent variable and exports as the dependent variable. The results explain how developing human resources, represented by HDI, is one of the factors affecting export performance.

2.2 Hypothesis

Based on the literature and previous studies review, the hypotheses in this study are formulated as follows:

H1 : KITE facilitation has a positive effect on exports of West Java Province.

H2 : Rupiah exchange rate has a negative effect on exports of West Java Province.

H3 : Interest rate has a negative effect on exports of West Java Province.

H4 : Human Development Index has a positive effect on exports of West Java Province.

3. RESEARCH METHODS

This study uses quantitative methods. Sekaran and Bougie (2016) define quantitative research as research with data in the form of numbers, which are processed and tested using statistical formulas. The data used in this study are secondary data in the form of time series. The data collected are:

1. Exports and HDI data of West Java Province were obtained from the BPS West Java website.
2. KITE facilitation, exemption, and restitution, given to companies in the area of Regional Office DGCE West Java, obtained from the database of Regional Office DGCE West Java.
3. Rupiah-USD exchange rate and interest rate, obtained from the website of Bank Indonesia.

The sample was taken using the non-probability sampling technique, specifically the purposive sampling method. Sampling was determined using data availability in Regional Office DGCE West Java. The data relating to the value of KITE exemption and restitution are only available starting from 2016. Taking this into consideration, the sample studied are monthly data of the variables with the population from January 2016 to December 2019. Therefore, 48 data points or samples are available.

The Ordinary Least Square (OLS) method was used to determine the formula for analyzing the relationship of variables in the long term. The formula is as follows

$$\mathbf{lnEKSP = \beta 0 + \beta 1\ lnKITE + \beta 2\ lnKURS + \beta 3\ RATE + \beta 4\ IPM + \varepsilon} \qquad \text{(eq1)}$$

Whereas Error Correction Model (ECM) was used to analyze the relationship of variables in the short term. The formula is as follows:

$$\mathbf{D(lnEKSP) = \beta 0 + \beta 1\ D(lnKITE) + \beta 2\ D(lnKURS) + \beta 3\ DRATE + \beta 4\ DIPM + ECT} \qquad \text{(eq2)}$$

where

EKSP	: Exports value of West Java
KITE	: Valuation of KITE facilitation (exemption and restitution) given to companies in West Java
KURS	: Rupiah – USD exchange rate
RATE	: Bank Indonesia interest rate
IPM	: Human Development Index of West Java
ECT	: Error Correction Term
Ln	: Natural logarithm
$\beta 0$	: Constant
$\beta 1 \ldots \beta 4$	: Coefficient
ε	: Error

A natural logarithm (ln) was used to decrease the variance in data. By transforming the data into a logarithmic scale, the data become simpler to process without changing the original proportion. The data were processed using Microsoft Excel and Eviews 9.

4. ANALYSIS AND DISCUSSION

4.1 Stationarity and cointegration tests

Testing stationarity is important in analyzing time series. Stationary data are time series data that have constant mean, variance, and covariance over time. The testing was done by giving a unit root test on the variables using the Augmented Dickey-Fuller (ADF) test. The hypotheses in the stationarity test using the ADF test are formulated as follows:

H_0 : Data contains a unit root

H_1 : Data don't contain a unit root

Table 2 Stationarity Test Results (Level)

Variabel	**Prob**	**Keterangan**
LnEKSP	0,0000	H_1
LnKITE	0,1945	H_0
LnKURS	0,4689	H_0
RATE	0,0727	H_0
IPM	0,8376	H_0

Source: processed by the author

Table 3 Stationarity Test Results (order 1)

Variabel	Prob	Keterangan
LnEKSP	0,0000	H_1
LnKITE	0,0000	H_1
LnKURS	0,0000	H_1
RATE	0,0003	H_1
IPM	0,0000	H_1

Source: processed by the author

As can be seen in Table 2, only LnEKSP is stationary at level, so further stationarity tests with higher order were needed to determine at which order do all the variables not contain a unit root, or are stationary. Table 3 shows that all variables do not contain unit root at the first difference so no further tests were needed. As all variables were stationary in the same order, a cointegration test could be performed.

A cointegration test is performed to detect the relationship in the long term. One of the tests to detect cointegration between variables is the Johansen Cointegration Test. If the trace statistic value is bigger than the critical value, the data are cointegrated.

Table 4 Johansen Cointegration Test Results

Hypothesized No. of CE(s)	Trace Statistic	0,05 Critical Value	Prob
None*	95,80688	69,81889	0,0001
At most 1*	49,20810	47,85613	0,0371
At most 2	24,03536	29,79707	0,1989
At most 3	7,23916	15,49471	0,5500
At most 4	2,80104	3,84147	0,0942

Source: processed by the author

From the results of the Johansen Cointegration Test seen in Table 4, it can be concluded that two variables cointegrated at the significance of 5%. This means that there is cointegration between variables.

4.2 Classical Assumption Tests

The classical assumption tests are performed to detect whether the classical assumptions are met in the regression formula. In this study, the classical assumption tests performed were heteroskedasticity, multicollinearity, autocorrelation, and normality tests. The heteroskedasticity test was performed using the Breusch-Pagan-Godfrey test. The test is performed by comparing Prob. F with the significance level. If Prob. F is bigger than the significance level, H0 is accepted which means that the data is homoscedastic. It can be seen in Table 5 that the value of Prob. F (0.01145) is bigger than the significance level, meaning that the ECM model has no heteroskedasticity problems. A multicollinearity test is performed to check whether linear relationships between the independent variables exist. This was performed using the Centered Variance Inflation Factor (VIF) value. The test criteria are if the value of Centered VIF is bigger than 10, then there is multicollinearity in the regression model. Table 6 shows the result of the multicollinearity test with the Centered VIF value of less than 10 in all variables. This means that there is no multicollinearity.

An autocorrelation test was performed using Breusch-Godfrey Serial Correlation LM. The test criteria are to compare Prob F. value with the significance level. If Prob. F is bigger than the significance level, then the data is said to have no autocorrelation. The test results seen in Table 7 show that the Prob. F value of 0.8867 is bigger than the significance level, meaning that ECM model is free from autocorrelation problems. The normality test is performed using Jarque-Berra test. The test criteria is to compare Jarque Bera probability value with the significance level. If the Jarque Bera probability value is bigger than 5%, the data has a normal distribution. The value found in this study is 0.053539, bigger than the significance level, so the data are normally distributed.

Table 5 Heteroskedasticity Test Results

Heteroskedasticity Test: Breusch-Pagan-Godfrey			
F-statistic	1,907844	**Prob. F(5,40)**	0,1145
Obs*R-squared	8,857712	**Prob. Chi-Square(5)**	0,1149

Source: processed by the author

Table 6 Multicollinearity Test Results

Variance Inflation Factors	
Variable	**Centered VIF**
D(LN_KITE)	1,014253
D(LN_KURS)	1,123102
D(RATE)	1,055921
D(IPM)	1,091512
ECT(-1)	1,013774
C	NA

Source: processed by the author

Tabel 7 Autocorrelation Test Results

Breusch-Godfrey Serial Correlation LM Test			
F-statistic	0,120635	**Prob. F(2,38)**	0,8867
Obs*R-squared	0,290221	**Prob. Chi-Square(2)**	0,8649

Source: processed by the author

4.3 Hypothesis test

Table 8 Long-term regression result with OLS

Variabel Dependen: LnEKSP			
Variable	**Coefficient**	**t-Statistic**	**Prob.**
LN_KITE	0,012605	0,380883	0,7052
LN_KURS	1,320786	1,860498	0,0698
RATE	-0,063371	-2,370730	0,0224
IPM	0,031614	0,894340	0,3762
C	6,789617	1,267935	0,2118
Prob (F-statistic) 0.004539			

Source: processed by the author

Before modeling using ECM, long-term regression formula was obtained using Ordinary Least Square (OLS) to get a long-term estimation as can be seen in Table 8, to determine the error or residual in the long-term formula. Based on Table 8, the long-term regression formula is as follows:

$$\mathbf{lnEKSP = 6{,}789617 + 0{,}012605lnKITE + 1{,}320786lnKURS - 0{,}063371RATE + 0{,}031614IPM + \varepsilon} \quad \textbf{(eq 3)}$$

Following this, the ECM model is formed using the residue or error value from the long-term regression formula, resulting in the short-term formula estimate. This is to test whether Error Correction Term (ECT) is negative and significant.

Table 9 Error Correction Model Test Result

Variabel Dependen: D(LnEKSP)			
Variabel	**Koefisien**	**t-statistic**	**Prob**
D(LN_KITE)	0,019699	0,986172	0,3300
D(LN_KURS)	0,552882	0,598689	0,5528
D(RATE)	-0,145093	-2,348947	0,0239
D(IPM)	0,051172	0,541069	0,5915
ECT(-1)	-1,380773	-9,565183	0,0000
C	-0,003312	-0,209956	0,8348
R-squared	0,708266	**F-statistic**	1,942228
Adjusted R-squared	0,671800	**Prob(F-statistic)**	0,000000

Source: processed by the author

Based on Table 9, the ECM model formula is as follows:

$$\mathbf{D(lnEKSP) = -0{,}003312 + 0{,}019699\ D(lnKITE) + 0{,}552882\ D(lnKURS) - 0{,}145093\ D(RATE) + 0{,}051172\ D(IPM) - 1{,}380773\ ECT} \quad \textbf{(eq 4)}$$

where

lnEKSP : natural logarithm of exports of West Java

lnKITE : natural logarithm of KITE facilitation (exemption or restitution) given to companies in West Java

lnKURS : natural logarithm of Rupiah – USD

RATE : interest rate of Bank Indonesia

IMP : Human Development Index of West Java

ECT : Error Correction Term

In ECM testing shown in Table 9, ECT has a value of 0.000000 which is smaller than the significance level. ECT coefficient is also negative and significant. The probability value exceeds the significance level and has a negative coefficient. Therefore, the ECM model is valid and shows a significant short-term and long-term relationship. The Adjusted R-squared value in Table 9 (0.671800) can be interpreted as the independent variables in the model that explain 67.18% of exports of West Java, and the rest (32.82%) is affected by other untested variables. The t-test result can be seen in Table 9, with the interpretation below:

1. The statistical t-test probability value of lnKITE is 0.3300, bigger than the significance level, hence H_0 is accepted and the independent variable has no effect on the dependent variable. In other words, KITE facilitation has no significant effect on the exports of West Java Province. Therefore, the first research hypothesis (H_1) "KITE facilitation has a positive effect on exports of West Java" was rejected.
2. The statistical t-test probability value of lnKURS is 0.5528, bigger than the significance level, hence H_0 is accepted and the independent variable has no effect on the dependent variable. In other words, Rupiah exchange rate has no significant effect on the exports of West Java Province. Therefore, the second research hypothesis (H_2) "Rupiah exchange rate has a negative effect on exports of West Java Province" was rejected.
3. Statistical t-test probability value of RATE is 0.0239, smaller than the significance level, hence H_0 is rejected and the independent variable has an effect on the dependent variable. The variable has a coefficient of -0.14 which means the effect is negative. In other words, a partial change of interest rate of 1%, ceteris paribus, decreases the exports of West Java by 0.14%. Therefore, the third research hypothesis (H_3) "Rupiah exchange rate has a negative effect on exports of West Java Province" was accepted.
4. the statistical t-test probability value of IPM is 0.5915, bigger than the significance level, hence H_0 is accepted and the independent variable has no effect on the dependent variable. In other words, Human Development Index has no significant effect on the exports of West

Java Province. Therefore, the second research hypothesis (H_4) “Human Development Index has a positive effect on exports of West Java Province” was rejected.

The conclusion of t-test is that only H_3 is accepted, while the other hypotheses H_1, H_2, and H_4 are rejected. It can be concluded that interest rate has a significant and negative effect on exports of West Java, while KITE facilitation, Rupiah exchange rate, and Human Development Index has no partial effect on the exports of West Java Province

4.4 Discussion

The Effect of KITE Facilitation on Exports of West Java Province

Based on the hypothesis testing and the ECM model regression analysis explained above, KITE facilitation does not significantly affect West Java exports, and H1 was rejected. This result is different from previous studies by Pratiwi et al. (2015), Gumilar et al. (2015), Nabila and Sriyanto (2018), and Firmansyah and Pratiwi (2022), which show that KITE facilitation has a positive effect on exports. This discrepancy occurs because of the difference in methods used, object of research, and time of research. It is probable that the reason KITE facilitation given to companies in the area of Regional Office DGCE West Java does not affect exports is because the number of companies using the DGCE facilitation is relatively small, hence, the facilitation does not significantly boost the exports of West Java Province. According to the data from Regional Office DGCE West Java, the number of companies using KITE facilitation in 2009 was 59. There was no increase from the previous year (2008). Multiple factors are taken into consideration for companies whether to use the KITE facilitation, one of which is the quality of bureaucracy. A study by DGCE, LPEI, and University Network for Indonesia Export Development (UNIED) related to the economic impact of Bonded Zones and KITE reveals that 27.59% out of 1,606 companies desire improvement in bureaucracy (DDTCNews, 2019). Another thing to consider is IT inventory implementation being a requirement for the companies to use KITE facilitation, while IT inventory management is somewhat expensive, making the companies reluctant to implement it.

KITE facilitation from the government provides benefits to companies in decreasing production cost by exemption and/or restitution of customs duty and/or excise, as well as VAT and Sales Tax on Luxury Goods, without affecting the production of exports goods because usually companies use KITE facilitation only produces on demand. As reported by DDTCNews (2020), the Head of Public Relations Subdirectorate DGCE explains that companies using KITE facilitation are not companies who produce in bulk, and instead only produce the goods when there is demand from consumers or retailers. Therefore, despite that the facilitation can decrease production costs, it would not always affecting the number of exported goods, i.e. not affecting the value of exports.

The Effect of Rupiah Exchange Rate on Exports of West Java Province

The second hypothesis examines the relationship between the rupiah exchange rate and exports of West Java. Based on the hypothesis testing and the ECM model regression analysis explained above, the results show that the Rupiah exchange rate has no significant effect on exports of West Java. This is different from Ginting (2013) and Risma et al. (2018) who found that the exchange rate has a negative and significant effect on export value. The result of this study supports the findings of Ulfa and Andriyani (2019) who explain that the exchange rate has no significant effect on the exports of non-oil and gas products. In addition, Sulaiman et al. (2014) conclude that the exchange rate has a positive, but not significant, effect on the exports of non-oil and gas products in Riau Province from 2001-2013. The Rupiah exchange rate does not affect the exports of West Java because the industries are still highly dependent on imports such that the change in exchange rate affects imports instead. Theoretically, when the domestic currency depreciates, exports increase and imports decrease (Sukirno, 2004). However, several research findings are often not in line with the theory.

The Effect of Interest Rate on Exports of West Java Province

Based on the hypothesis testing and the ECM model regression analysis explained previously, the interest rate has a negative and significant effect on the export value of West Java, so H3 was accepted. The variable RATE (X3) has a negative coefficient which means it has a negative relation with the export value of West Java. This means that an increase in interest rate causes a decrease in exports of West Java. This finding is in line with Sulaiman et al. (2014) who concludes that interest rate has a negative effect on non-oil and gas exports of Riau Province from 2001-2013. This means that a decrease in interest rate increases non-oil and gas exports, and vice versa. The fluctuation of Bank Indonesia’s rate obviously affects the banks’ savings interest and loan interest. If the BI rate increases, loan or credit interest also increases. Higher credit interest causes exporters to have less capital because more fund is used to pay the interest. This result in a lower bank loan application by the exporters, leading to lower produced goods and negatively affecting the export value. Conversely, when BI rate decreases, more exporters are interested in getting capital loans, increasing production and exports.

In the January 2016-December 2019 period, interest rate fluctuated. However, in 2018 the interest rate increased five times in a year in a pretty aggressive manner. The Governor of Bank Indonesia stated that it was a preventive measure to stabilize the economy, in particular the stability of the rupiah exchange rate, against the US Fed Fund Rate increasing four times in a year and increasing risk in the global market (Fauzia, 2018).

The Effect of the Human Development Index on Exports of West Java Province

The final hypothesis examined the effect of the Human Development Index (HDI) on exports of West Java. Based on the hypothesis testing and ECM model regression analysis explained previously, the results show that HDI has no significant effect on exports of West Java. This indicates that any HDI change does not affect West Java exports. This finding contrasts with Contractor and Mudambi (2008) and Bhavan (2017) who found that HDI has a positive and significant effect on exports. According to BPS 2018 data, Vehicles and Spare Parts (HS 87) has the highest contribution (15.04%) on exports with a value reaching USD 4.57 billion. This is reasonable as West Java is the province with the main base of the national automotive industry (BPS, 2018). Automotive industry is generally capital-heavy and requires relatively high quality human resources, and also needs to have guaranteed support of raw materials, energy, and a certain level of technology. This is in line with the HDI of West Java which is categorized as high. However, further analysis shows that the high HDI does not affect exports directly. This is because the automotive industry in West Java only focuses on domestic demand instead of international demand. This is supported by the statement of the Head of Gaikindo in detikoto.com (2018) which said Indonesia is relatively far behind Thailand in terms of vehicle exports.

5. CONCLUSION

This study concludes that the KITE facility does not affect the export value of West Java Province. KITE facilities can still reach many manufacturing companies in West Java. As the executor of trade facilitation, the Directorate General of Customs and Excise needs to increase companies interest in utilizing KITE facilities and optimizing the use of KITE facilities. One is through socialization about KITE facilities on a massive and continuous basis, especially regarding the requirements and benefits obtained for export-oriented manufacturing companies. Social media currently widely known by the public, such as Instagram and YouTube, can be used as a medium for socializing KITE facilities which are carried out digitally. The socialization was carried out broadly but still focused on regions that are export-oriented industrial centers. In DGCE's vertical units, they can be more proactive in socializing KITE facilities to export companies that have not utilized the facilities. Especially companies that produce superior export products in West Java Province, such as the automotive industry, so the use of KITE facilities is expected to boost West Java Province's export performance significantly.

The results of this study also show that interest rates have a negative effect on export values. Rising and falling Bank Indonesia interest rates will affect the increase or decrease in working capital used by exporters to carry out production. If the benchmark interest rate falls, interest rates fall, it will attract exporters to increase working capital. This will impact increasing the amount of production to increase the value of exports. Because of this, Bank Indonesia is expected to consider the impact that may occur when raising or lowering the benchmark interest rate because when the benchmark interest rate rises, the credit interest rate follows the increase so that it will affect exporters in using existing working capital to produce products that are will be exported. As an institution tasked with maintaining stability in the value of the rupiah, Bank Indonesia is also expected to be able to create and maintain stability in the rupiah exchange rate so that when the US dollar increases or decreases, the value of the rupiah will not be significantly affected. Another suggestion is for the government of West Java Province. Hopefully, it can maintain the West Java Provincial Human Development Index in the "high" category or even push it towards the "very high" category through relevant training. Thus, a high HDI shows that the population of West Java Province has quality so that it can meet the needs of industries that use high technology, especially the automotive industry, which is the mainstay of West Java Province.

6. LIMITATIONS AND SUGGESTIONS.

The data in this research, including the export value of West Java, the value of KITE facilitation, the Rupiah exchange rate, and the Human Development Index, are limited to the 2016-2019 period. The study would have been more effective if the data from a longer periods were used to make the study more accurate. The model for exports of West Java only considered the effect of KITE facilitation, exchange rate, interest rate, and HDI. This study did not consider other important variables which might affect exports such as GDP, inflation, workforce, and other factors.

Suggestions for further research, the scope of the place, and time/period are expanded again to obtain complete and clear data, both quantitative data and data from interviews with Customs and Excise employees.

REFERENCES

Asmara, C. G. (9 Agustus 2018). Level rupiah terburuk, BI: kondisi saat ini sudah lebih baik. CNBC Indonesia. https://www.cnbcindonesia.com/market/20180809095605-17-27696/level-rupiah-terburuk-bi-kondisi-saat-ini-sudah-lebih-baik

Badan Pusat Statistik Provinsi Jawa Barat. (n.d.). Indeks Pembangunan Manusia Periode 2016-2019. Diakses tanggal 15 November 2020, dari https://jabar.bps.go.id/subject/26/indeks-pembangunan-manusia.html

Badan Pusat Statistik Provinsi Jawa Barat. (n.d.). Nilai Ekspor dan Impor Periode 2016-2019. Diakses tanggal 15 November 2020, dari https://jabar.bps.go.id/subject/8/ekspor-impor.html

Bank Indonesia. (n.d.). Kurs Transaksi Bank Indonesia. Diakses tanggal 17 November 2020, dari https://www.bi.go.id/id/statistik/informasi-kurs/transaksi-bi/Default.aspx

Bank Indonesia. (n.d.). Statistik Sistem Keuangan Indonesia. Diakses tanggal 20 November 2020, dari https://www.bi.go.id/id/statistik/ekonomi-keuangan/sski/default.aspx

Basuki, A. T., & Prawoto, N. (2015). Analisis regresi dalam penelitian ekonomi dan bisnis. Rajawali Pers.

Bea Cukai Republik Indonesia. (n.d.). FAQ terkait Fasilitas KITE. Diakses tanggal 6 Oktober 2020, dari https://www.beacukai.go.id/arsip/fas/kite.html

Bhavan, T. (2017). Human capital as a pushing factor of export: the case of four south asian economies. Asian Development Policy Review, 5(4), 299-306.

Boediono. (1992). Teori pertumbuhan ekonomi. BPFE UGM.

Boediono. (2014). Ekonomi Moneter Edisi Ketiga. BPFE UGM.

Contractor, F. J., & Mudambi, S. M. (2008). The influence of human capital investment on the exports of services and goods: an analysis of the top 25 services outsourcing countries. Management International Review, 48(4), 433-445.

Diphayana, W. (2018). Perdagangan internasional. Deepublish.

Fauzia, M. (16 Agustus 2018). BI menaikkan suku bunga 125 bps dalam 4 bulan apa saja alasannya. Kompas.com. https://ekonomi.kompas.com/read/2018/08/16/075200826/bi-menaikkan-suku-bunga-125-bps-dalam-4-bulan-apa-saja-alasannya-?page=all

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

Ghozali, I., & Ratmono, D. (2013). Analisis Multivariat dan Ekonometrika: Teori, Konsep dan Aplikasi dengan Eviews 8. Undip.

Ginting, A. M. (2013). Pengaruh nilai tukar terhadap ekspor Indonesia. Buletin Ilmiah Litbang Perdagangan, 7(2), 1-18.

Gujarati, D. N. (2004). Basic econometrics, fourth edition. The McGraw-Hill Companies.

Gumilar, G., Suyadi, I., & Agusti, R. R. (2015). Pemanfaatan fasilitas kemudahan impor tujuan ekspor (KITE) untuk meningkatkan ekspor dalam negeri (studi pada Kantor Wilayah Direktorat Jenderal Bea Cukai Jatim I, Sidoarjo). Jurnal Perpajakan, 6(2), 1-7.

Hidayat, N. F., Musadieq, M. Al., & Darmawan, A. (2017). Pengaruh foreign direct investment, nilai tukar dan pertumbuhan ekonomi terhadap ekspor (studi pada nilai ekspor non migas Indonesia periode tahun 2005-2015). Jurnal Administrasi Bisnis, 43(1), 172-179.

Huda, S. (2006). Analisis beberapa faktor yang mempengaruhi ekspor non migas Indonesia ke Jepang. Jurnal Ilmu-Ilmu Ekonomi, 6(2), 117-124.

Idris, M. (17 Januari 2018). Urusan ekspor mobil kenapa RI kalah telak dari thailand. Detikoto.com. https://oto.detik.com/mobil/d-3819578/urusan-ekspor-mobil-kenapa-ri-kalah-telak-dari-thailand

Insukindro. (1991). Regresi linier lancung dalam analisis ekonomi: suatu tinjauan dengan satu studi kasus di Indonesia. Jurnal Ekonomi dan Bisnis Indonesia, 6, 75-88.

Kurniasari, F., & Monica, L. (2019). Pengaruh nilai tukar, suku bunga Indonesia dan produk domestik bruto terhadap volume ekspor impor di Indonesia. Journal of Business & Applied Management, 12(1).
Lubis, A. D. (2010). Analisis faktor yang mempengaruhi kinerja ekspor Indonesia. Buletin Ilmiah Litbang Perdagangan, 4(1), 1-13.
Lumbantoruan, E. P., & Hidayat, P. (2015). Analisis pertumbuhan ekonomi dan indeks pembangunan manusia (IPM) provinsi-provinsi di Indonesia (Metode Kointegrasi). Jurnal Ekonomi dan Keuangan, 2(2), 14-27.
Mahendra, I. G. Y., & Kesumajaya, I.W. W. (2015). Analisis pengaruh investasi, inflasi, kurs dollar Amerika Serikat dan suku bunga kredit terhadap ekspor Indonesia tahun 1992-2012. E-Jurnal Ekonomi Pembangunan Universitas Udayana, 4(5), 525-545.
Mankiw, N. G. (2007). Macroeconomics (edisi ke-6). Worth Publishers.
Muqorrobin, M., & Soejoto, A. (2017). Pengaruh indeks pembangunan manusia (IPM) terhadap pertumbuhan ekonomi provinsi Jawa Timur. Jurnal Pendidikan Ekonomi, 5(3).
Nabila, A., & Sriyanto, A. (2018). Analisis pengaruh fasilitas KITE terhadap nilai ekspor (studi kasus perusahaan penerima fasilitas KITE). Jurnal Perspektif Bea dan Cukai, 2(1), 41-60.
Pink, B. (15 Oktober 2019). BPS: Defisit neraca perdagangan disebabkan kinerja ekspor yang kurang ekspansif. Kontan.co.id. https://nasional.kontan.co.id/news/bps-defisit-neraca-perdagangan-disebabkan-kinerja-ekspor-yang-kurang-ekspansif
Portal Statistik Perdagangan. (n.d.). Neraca Perdagangan Indonesia Total. Diakses tanggal 15 November 2020, dari https://statistik.kemendag.go.id/indonesia-trade-balance
Pratiwi, I., Sugiyanta, & Suratno, A. (2015). Analisis pengaruh pemberian fasilitas KITE (kemudahan impor tujuan ekspor) dan nilai tukar rupiah terhadap nilai ekspor di Jawa Tengah. Jurnal Admisi dan Bisnis, 16(2), 79-86.
Purnomo, H., & Setiaji, H. (8 Agustus 2018). Rata-rata kurs rupiah 2018: terlemah sepanjang sejarah. CNBC Indonesia. https://www.cnbcindonesia.com/market/20180808164513-17-27610/rata-rata-kurs-rupiah-2018-terlemah-sepanjang-sejarah
Putera, A. D. (14 Desember 2017). BI Pertahankan Suku Bunga Acuan di 4,25 Persen. Kompas.com. https://ekonomi.kompas.com/read/2017/12/14/193632926/bi-pertahankan-suku-bunga-acuan-di-425-persen.
Putra, T. (3 Juni 2020). Rupiah terus menguat, Emiten mana saja yang diuntungkan. CNBC Indonesia. https://www.cnbcindonesia.com/market/20200603135454-17-162777/rupiah-terus-menguat-emiten-mana-saja-yang-diuntungkan
Risma, O. R., Zulham, T., & Dawood, T. C. (2018). Pengaruh suku bunga, produk domestik bruto dan nilai tukar terhadap ekspor di Indonesia. Jurnal Perspektif Ekonomi Darussalam, 4(2), 300-317.
Sekaran, U., & Bougie, R. (2016). Research methods for business. Wiley.
Simorangkir, I., & Suseno. (2004). Sistem dan kebijakan nilai tukar. Pusat Pendidikan dan Studi Kebanksentralan (PPSK) Bank Indonesia.
Siyoto, S., & Sodik, M. A. (2015). Dasar metodologi penelitian. Literasi Media Publishing.
Sudjana, N., & Ibrahim. (2001). Penelitian dan Penilaian Pendidikan. Sinar Baru Algesindo.
Sudjana. (1996). Metode Statistika. Tarsito.
Sukirno, S. (2004). Makroekonomi teori pengantar. PT Raja Grafindo Persada.
Sulaiman, Richard, R., & Darmayuda. (2014). Analisis pengaruh suku bunga kredit dan kurs terhadap ekspor nonmigas Provinsi Riau. Jom FEKON, 1(2), 1-17.
Tenreyro, S. (2007). On the trade impact of nominal exchange rate volatility. Journal of Development Economics, 82, 485-508.

Ulfa, R., & Andriyani, D. (2019). Analisis faktor-faktor yang mempengaruhi ekspor komoditi non migas di Indonesia tahun 1985-2017. Jurnal Ekonomi Regional Unimal, 2(3), 128-140.

Wildan, M. (20 Juni 2020). Industri KITE boleh jualan di dalam negeri, DJBC: baru dipaka donasi. DDTCNews Online. https://news.ddtc.co.id/industri-kite-boleh-jualan-di-dalam-negeri-djbc-baru-dipakai-donasi-21668