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THE EFFECT OF TEXTILE PRODUCTION, INFLATION, AND DOLLAR EXCHANGE RATE ON VALUE OF INDONESIA TEXTILE EXPORTS TO SOUTH KOREA IN 2016-2018

Ningrat I Gusti Agung Istri Taradintya Putra*, Setiawina Nyoman Djinar
Faculty of Economics and Business, Udayana University, Denpasar, Bali, Indonesia
*E-mail: gungtara1606@gmail.com

ABSTRACT

Textiles are one of Indonesia's leading export commodities. Exports of textile product to South Korea occurred because of the collaboration between Indonesian Ministry of Industry (KemenPerin) and the Korea International Cooperation Agency (KOICA) to improve the quality standards of Indonesian textile products and ensure the quality of national textile product. So it is necessary to know what factors affect Indonesia textile exports to South Korea. This study aims to analyze the effect of textile production, inflation, and dollar exchange rate on the value of Indonesia textile exports to South Korea either partially or simultaneously. The result showed that the variables of textile production, inflation, and dollar exchange rate simultaneously had a significant effect on the value of Indonesia textile exports to South Korea. Partially, textile production has a positive and significant impact on the value of Indonesia textile exports to South Korea. Inflation has a negative and insignificant effect on the value of Indonesia textile exports to South Korean. The dollar exchange rate has a negative and significant effect on the value of Indonesia textile exports to South Korea.

KEY WORDS

Textile production, inflation, dollar exchanged rate, Indonesia, textile exports, South Korea.

In Indonesia, international trade, especially exports, gets priority from the government because it can increase the country's foreign exchange in large quantities. Export is the activity of removing goods from the customs area. Economic activities in which sellers come from within the country and buyers come from abroad can be said to be exports (Pompiye, 2017). Exports receive priority from the government because export are foreign exchange earners originating from within the country. It is said that non – oil and gas exports have a significant role in total exports in Indonesia, so that Indonesia does not depend on exports of the oil and gas sector (Bank Indonesia, 2005). According to Wiwin Setyari (2017) the commodities that recorded the largest export value were 1. Products for processing and preserving meat, fish, fruit and vegetables, 2. Textiles and apparel textile products, 3. Wood products, 4. Non – ferrous base metals, 5. Paper, articles of paper. Textile is indonesia's leading non – oil and gas export commodity which has an important role in exports. The large contribution of the textile sector to the value of Indonesia's non – oil and gas exports shows the importance of the textile sector to the Indonesian economy (Faiq Fuadi, 2018). According to Indonesian Ministry of Industry, the Indonesian textile industry is a manufacturing sector that has recorded a fairly high growth.

Indonesia conducts international trade cooperation with many countries in the world, one of which is South Korea. Cooperation between Indonesia and South Korea is quite good. The collaboration between Indonesia and South Korea also focuses on increasing the export value of several industrial sectors. The Indonesian Ministry of Industry (KemenPerin) and the Korea International Cooperation Agency (KOICA) collaborate to improve the quality standards of Indonesian textile products and ensure the quality of national textile products. This agreement was marked by the signing of ROD or Record of Discussion Technical Cooperation in International Textile Quality Standard and Textile Quality Assurance (KemenPerin, 2012).

Beside the agreement between Indonesia and South Korea, there are several things that affect the value of Indonesia textile exports. The first factors is the amount of production

which is one of the factors that affect the value of exports a product. When the amount of production of a textile product increases, the supply of textile products to domestic and abroad also increases, causing exports of textile products to increase as well. Then the excess production in the country will lead to increased exports of textile products (Komalasari, 2009). Inflation is also affect the value of Indonesia textile exports. Inflation can be interpreted as a general and continuous increase in prices. Generally, inflation will cause imports to grow faster and exports will slow down (Sukirno, 2002). Value of Indonesia textile exports can also be influenced by the dollar exchange rate. The dollar exchange rate is one of the main factors in exports (Dollati, 2012). The Mundell – Flemming model states when the foreign currency against the domestic currency appreciates, the price of goods abroad becomes cheaper than the price of goods at home, and this will cause exports to decrease and imports to increase.

HYPOTHESIS DEVELOPMENT

Syarif (2018) said that the amount of production had a positive and significant effect, where it was said that based on the t statistical test, cocoa production had a positive and significant effect on the value of Indonesian cocoa exports in 1996 – 2015. In addition, research by Kurniawati, Yulianto, and Abdillah (2016) stated that production has a significant influence on the value of Indonesian tobacco exports, this is seen through the t test with a significance value of $0.009 < 0.05$ ($\alpha = 5$ percent). So it can be concluded that production has a positive and significant influence on the value of Indonesia's tobacco exports. Larasati (2018) says that inflation does not have a significant effect on Indonesian footwear exports to China in 1997 – 2016. Where the statistical test results from this study explain the probability value of $0.5732 > 0.05$ ($\alpha = 5$ percent), H_0 is accepted and H_1 is rejected, it is said that the inflation variable partially does not have a significant effect on the value of Indonesian footwear exports to China in 1997 - 2016. In addition, research by Juliantari and Setiawina (2015) also explains that partially inflation does not have a significant effect on exports of food and beverages in Indonesia. Paramartha and Setyari (2020) stated that the dollar exchange rate had a negative and significant effect on Indonesian palm oil exports, where the dollar exchange rate coefficient was -2,033 with a significance level of 0.000. This is also in line with research conducted by Widhi and Meydianawathi (2014) which stated that the exchange rate of the United States had a negative and significant influence on exports of Indonesian wood carving crafts to the United States. In accordance with Mankiw's theory, which states that the stronger the exchange rate or the appreciation in the value of the domestic currency, the lower Indonesia's exports will be. Based on the statements, the hypothesis in this study are as follow variables of production, inflation, and the dollar exchange rate simultaneously have a significant effect on the value of Indonesian textile exports to South Korea in 2016-2018, Production partially has a positive effect on the value of Indonesian textile exports to South Korea in 2016 – 2018, and the Dollar Exchange Rate and Inflation partially have a negative effect on the value of Indonesian textile exports to South Korea in 2016 – 2018.

METHODS OF RESEARCH

This research was conducted on the value of Indonesian textile exports to South Korea in 2016 – 2018 by taking data through the official website of the Central Bureau of Statistics (BPS). The sample in this study is the amount of textile production, inflation, and the dollar exchange rate obtained from the Central Bureau of Statistics (BPS) and Data Industry for the period 2016 – 2018 with total sample of 36 research data. In this study, the data analysis technique used is multiple linear regression analysis, classical assumption test with 4 stages: normality test, multicollinearity test, heteroscedasticity test, and autocorrelation test. Simultaneous testing using F-test analysis, partial testing using t-test and dominant variable test.

RESULTS AND DISCUSSION

Multiple linear regression analysis is used to analyze the effect of independent variables on the dependent variable. In this study, the independent variables used were textile production, inflation, and the dollar exchange rate. While the dependent variable is the value of Indonesian textile exports to South Korea.

Table 1 – Multiple Linear Regression Analysis

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-57.22531	7.627411	-7.502587	0.0000
X1	3.055935	0.285938	10.68742	0.0000
X2	-0.004666	0.019400	-0.240522	0.8115
X3	-0.000107	2.94E-05	-3.635438	0.0010

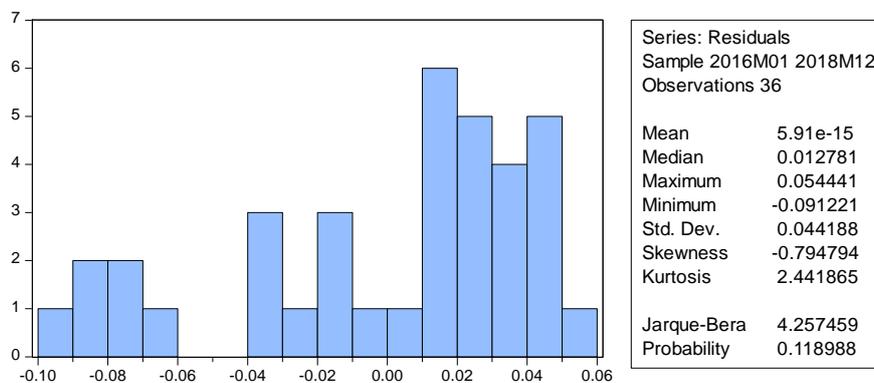
Source: Secondary Data (2022).

The results obtained in Table 1 when entered into the multiple regression equation it will obtain a multiple linear equation, that is: $\text{LnY} = -57.22531 + 3.055935\text{LnX1} - 0.004666\text{X2} - 0.000107\text{X3}$.

The classical assumption test with 4 stages, The classical assumption test is used so that the calculation results can be interpreted accurately and meet the BLUE requirements or Best Linear Unbiased Estimator which is often called the classical assumption test which includes:

Normality test, was used to see whether the residual value is normally distributed or not. In this study, the normality test used was the Jarque-Bera test. The Jarque-Bera test looks at the value of the probability statistic or P-Value. If the statistical probability (P-value) > (5 percent) it can be concluded that the distribution is normal.

Table 2 – Normality Test (Source: Secondary Data, 2022)



In the table it can be seen that the regression model used is normally distributed. This can be seen through the Jarque-Bera value of 4.257459 with a probability of 0.118988. The value is greater than 0.05. Therefore, it is said that the residual data is normally distributed

Table 3 – Multicollinearity Test

Variable	Coefficient Variance	Uncentered VIF	Centered VIF
C	58.17739	980691.6	NA
X1	0.081760	1064920.	4.202213
X2	0.000376	79.65076	1.250139
X3	8.66E-10	2725.135	4.091954

Sources: Secondary Data (2022).

Multicollinearity test, was used to test whether the regression model found a correlation between independent variables. Multicollinearity test is done by looking at the value of the Variance Inflation Factor or VIF. If the VIF value is lower than 10, it is said that there is no symptom of multicollinearity between independent variables and the regression model.

In the table it can be seen that all the independent variables in this study have a VIF value lower than 10. Therefore, it can be concluded that there is no symptom of multicollinearity between the independent variables and regression model.

Heteroscedasticity test, aims to test whether there is an inequality of variance from the residuals of one observation to another in the regression model. Heteroscedasticity test in this study used the Breusch–Pagan–Godfrey method by looking at the value of Probability Chi-Square. If the value of Prob. Chi-Square more than 0.05, it means that there is no heteroscedasticity problem.

Table 4 – Heteroskedasticity Test: Breusch-Pagan-Godfrey

F-statistic	1.998701	Prob. F(3,32)	0.1340
Obs*R-squared	5.681100	Prob. Chi-Square(3)	0.1282
Scaled explained SS	3.236100	Prob. Chi-Square(3)	0.3566

Source: Secondary Data (2022).

In the table it can be seen that the value of Prob. Chi-Square(3) is 0.1282 which shows that the value is more than 0.05, so it can be concluded that the regression model used does not occur heteroscedasticity symptoms.

Autocorrelation test, aims to test whether in the linear regression model there is a correlation between the error in period t and the error in period $t-1$ or the previous period. Autocorrelation test was carried out by looking at the value of Durbin-Watson.

Table 5 – Autocorrelation Test

R-squared	0.071496	Mean dependent var	0.012571
Adjusted R-squared	-0.018359	S.D. dependent var	0.005606
S.E. of regression	0.005657	Akaike info criterion	-7.404513
Sum squared resid	0.000992	Schwarz criterion	-7.226759
Log likelihood	133.5790	Hannan-Quinn criter.	-7.343152
F-statistic	0.795681	Durbin-Watson stat	1.871786
Prob(F-statistic)	0.505665		

Source: Secondary Data (2022).

The DU value is 1.65 and the DL is 1.29 (Appendix 5: Durbin-Watson table) and the DW value is 1.87, which is greater than the DU value of 1.65 and smaller than 4 – DU is 2.35 ($1.65 < 1.871786 < 2.35$). So it can be assumed that there is no autocorrelation symptom in the regression used.

Table 6. F-test analysis

R-squared	0.889596	Mean dependent var	26.24333
Adjusted R-squared	0.879246	S.D. dependent var	0.132988
S.E. of regression	0.046213	Akaike info criterion	-3.206681
Sum squared resid	0.068340	Schwarz criterion	-3.030735
Log likelihood	61.72026	Hannan-Quinn criter.	-3.145271
F-statistic	85.94845	Durbin-Watson stat	0.514025
Prob(F-statistic)	0.000000		

Source: Secondary Data (2022).

The f-test results shows the R-squared value is 0.889596 which shows that the independent variables: textile production, inflation, and dollar exchange rate have a big effect on the value of Indonesia textile export to South Korea in 2016-2018 by 88.9 percent and the other 11.1 percent os affected by other variables that isn't included in the study. The f test result shows that the sig 0.00 is less that 5 percent, which means simultaneously variables textile production, inflation, and dollar exchange rate are significantly affected the value of Indonesia textile export to South Korea in 2016-2018.

Table 7 – T-test analysis

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-57.22531	7.627411	-7.502587	0.0000
X1	3.055935	0.285938	10.68742	0.0000
X2	-0.004666	0.019400	-0.240522	0.8115
X3	-0.000107	2.94E-05	-3.635438	0.0010

Source: Secondary Data (2022).

The result of regression test using t test show that partially textile production had a significant and positive effect on the value of Indonesia textile export to South Korea in 2016-2018, The inflation had negative and insignificant effect on the value of Indonesia textile export to South Korea in 2016-2018. While dollar exchange rate had a significant and negative effect on the value of Indonesian textile export to South Korea in 2016-2018. In the table also shows the dominant variable the dominant variables in this study. It can be seen that the t-statistic value of the textile production variable has the highest value. So it can be concluded that the textile production has a dominant effect on value of Indonesia textile export to South Korea in 2016-2018 compared to inflation and dollar exchange rate.

The result of data analysis of the variable production textile against value of Indonesia textile export to South Korea have a significant and positive effect. That means the higher number of production textile, the value of textile exports will also increase. This is in line with research by Kurniawati, Yulianto, and Abdillah (2016) stated that production has a significant influence on the value of Indonesian tobacco exports

The result of data analysis of the variable inflation against value of Indonesia textile export to South Korea have a negative and insignificant effect. That means there is no influence between the inflation rate and the value of textile exports. This is in line with research by Juliantari and Setiawina (2015) also explains that partially inflation does not have a significant effect on exports of food and beverages in Indonesia.

The result of data analysis of the variable dollar exchange rate against value of Indonesia textile export to South Korea have a significant and negative effect. That means if the dollar exchange rate increases, the value of exports will decrease. This is in line with The Mundell – Flemming model states when the foreign currency against the domestic currency appreciates, the price of goods abroad becomes cheaper than the price of goods at home, and this will cause exports to decrease and imports to increase

CONCLUSION

The textile production, inflation, and dollar exchange rate simultaneously have a significant effect on value of Indonesia textile export to South Korea in 2016-2018. Partially the textile production have a significant and positive effect on value of Indonesia textile export to South Korea in 2016-2018. The inflation have a negative and insignificant effect value of Indonesia textile export to South Korea in 2016-2018. The dollar exchange rate have a negative and significant effect on value of Indonesia textile export to South Korea in 2016-2018.

REFERENCES

1. Ari, Ni Nyoman Widhi dan Luh Gede Meydianawathi. 2014. Analisis Beberapa Faktor yang Mempengaruhi Ekspor Kerajinan Ukiran Kayu Indonesia ke Amerika Serikat tahun 1996 – 2012. E-Jurnal EP Unud Vol.3 No.6: 272 – 281.
2. Bank Indonesia. 2005. Strategi Peningkatan Ekspor Indonesia Dalam Mendorong Pertumbuhan Ekonomi dan Memelihara Kestabilan Ekonomi Makro. Jakarta
3. Dolatti, Mahnaz et al. 2011. The Effect of Real Exchange Rate Instability on NonPetroleum Exports in Iran. *Journal of Basic and Applied Scientific Research*, 2(7), Pp: 6955-696.
4. Fuadi, Faiq. 2018. Analisis Penawaran Ekspor Tekstil dan Produk Tekstil Indonesia ke ASEAN (Studi Kasus Negara Malaysia, Thailand, Vietnam, Philipina dan Kamboja).
5. Juliantari, Desak Putu Emmei dan Nyoman Djinar Setiawina. 2015. Analisis Pengaruh Kurs Dollar Amerika Serikat, Inflasi dan Penanaman Modal Asing Terhadap Nilai Ekspor Makanan dan Minuman di Indonesia. E- Jurnal EP Unud, Vol.4 No.12: 1507-1529.
6. Kementrian Perindustrian Republik Indonesia. RI-Korea Kerja Sama Tekstil. 2012. Tersedia pada: [Http://www.kemenperin.go.id](http://www.kemenperin.go.id)
7. Komalasari, Aida. 2009. Analisis Tentang Pelaksanaan Plant Layout Dalam Usaha Meningkatkan Efisiensi Produksi. Bandung: Universitas Widyatama.
8. Kurniawati Azmy Maulida, Edy Yulianto, dan Yusri Abdillah. 2016. Pengaruh Harga Tembakau Internasional, Jumlah Produksi Domestik, dan Nilai Tukar terhadap Nilai Ekspor Tembakau Indonesia (Studi Ekspor Tembakau Indonesia tahun 1985 – 2014).
9. Larasati, Anak Agung Istri Sita. 2018. Pengaruh Inflasi dan Kurs Dollar Terhadap Nilai Ekspor Alas Kaki Indonesia ke China Tahun 1997 – 2016 (Studi pada Asean-China Free Trade Area).
10. Paramartha, I Putu Gede Deva Satria dan Ni Putu Wiwin Setyari. 2020. Pengaruh Produksi, Nilai Tukar Dollar Amerika Serikat, dan Inflasi terhadap Ekspor Minyak Sawit Indonesia. E-Jurnal EP Unud Vol.9 No.12: 2792 – 2820.
11. Pompiye, Ke-Chung, Nuhfil. 2017. The Competitiveness Analysis of Indonesian Cocoa Beans Export in the World Market. *Sch j Econ Bus Manag*, 4(7): 399-408.
12. Setyari, Ni Putu Wiwin. 2017. Teori Produktifitas Industri Produk Ekspor Indonesia. *Jurnal Ekonomi Kuantitatif Terapan*, Vol. 10 No. 2, Februari 2017.
13. Sukirno, Sadono. 2002. Pengantar Teori Makroekonomi, Cetakan Keempat belas. Penerbit PT Raja Grafindo Persada, Jakarta.
14. Syarif, Ahmad. 2018. Pengaruh Jumlah Produksi, Harga, dan Kurs terhadap Nilai Ekspor Kakao Indonesia 1996 – 2015. Universitas Islam Negeri Alauddin Makassar.