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Research Article

THE IMPACT OF THE MANDATORY APPLICATION OF INDONESIAN NATIONAL STANDARDS (SNI) AND THE INTERNATIONAL ORGANIZATION FOR STANDARIZATION (ISO) OF TEXTILE AND TEXTILE PRODUCTS ON THE IMPORT EXPORT OF TEXTILE AND TEXTILE PRODUCTS IN INDONESIA

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Abstract: This research discusses the effect of the mandatory application of SNI and ISO for Textiles and Textile Products (TPT) on the export and import of Indonesian TPT with data for the period 2010-2019 using the Econometric Model Analysis (Fixed Effect Model) and the OLS Method using multiple regression analysis. The variables used are the total volume of imported TPT and the total volume of TPT exports. The independent variables are real GDP, real exchange rate and the dummy of mandatory application of SNI and ISO for Textiles and Textile Products to Indonesian textile and textile products and imports. The results of this study indicate that there is a positive influence between the mandatory application of SNI and ISO for Textiles and Textile Products on Indonesian TPT Exports and Imports, and provides an analysis of the impact of Indonesian government policies in making regulations on the textile and textile product industry in Indonesia. Economic policies are still needed, such as economic incentives, such as lowering bank interest rates for investment and a relatively stable Rp/US$ exchange rate that will help textile producers in calculating raw material costs and profits.

Keywords: Indonesian National Standards, The International Of Standardization, Import Export of Textiles and Textile Products.

1. Introduction (Times New Roman 10 Bold)

The industrial sector is believed as a leading incountries economic progress. Products from the industrial sector are considered to have a high value added and profit than other sectors (Dumairy, 2002: and Ahmad H.F, 2007). In the current, the industrial sector has contributed significantly to the formation of exports compared to other sectors. This conditions interpretates that the industrial sector contributes greatly to national growth.A potential performance problems in the industrial sector affects the national economy disruptions. Based on data from the Indonesian Ministry of Industry, the Indonesian textile and textile product (TPT) industry is a strategic industry that has an important role in the national economy with export contributions of up to 10.52 percent of total national exports (second largest after palm oil exports) in 2018, and absorb 4.65 million workers or about 20 percent of the total workforce in the processing industry.

In addition, the textile industry is one of the priority industries in the "making Indonesia 4.0" program set by the Ministry of Industry. So far, the textile industry has played a role in increasing non-oil and gas exports, foreign exchange, people's income, absorbing workers, and creating jobs. This industry is also one of the industries that support the fulfilment of national clothing needs (Ridhwan, 2015). According to the Ministry of Trade (2013) there are several barriers to be considered in entering the international market, namely as follows: 1. Standardization, DIN standards for textiles and apparel and textile machinery which determine requirements, dimensions, technical terms and testing standards in the textile industry . 2.Labeling, all imported and sold products must be labeled which shows the composition of the ingredients, treatments and provisions on how to wash them, 3.Certification, which aims to show that the textile is free from harmful substances from the beginning to the end. 4. REACH regulations, textile producers and importers containing chemicals must register these substances with the ECHA (European Chemical Agency) 5. Import regulations, textile products entering Europe that do not have a bilateral agreement with the EU must show an import license In the future, the textile industry still has promising market prospects even though the competition in the textile industry is very tight, both between ASEAN countries and the world.

Several countries have become major competitors for Indonesia such as Vietnam. Currently, Indonesia is still in the top 10 of the world's TPT supplier ranks, although it is still below Vietnam (Ashari, 2015). The Indonesian Textile Association stated that based on data from the Central Statistics Agency (BPS) throughout 2007 from 1.22 million tons of domestic consumption, legal and illegal Indonesian TPT imports surged to 72.55% and 69.35%, thereby suppressing the market share of local products. Illegal imported products entering Indonesia are dominated by garments. In 2003, the value of imports and imports of illegal Indonesian garments was 25 thousand tons and 238 thousand tons, respectively. The value of legal imports and illegal imports became 88 thousand and 861 thousand tons in 2007. The mandatory enforcement of SNI and ISO TPT is one of the functions of the government as a regulator in carrying out its role to ensure product quality in order to protect consumers and keep national companies in the competition. healthy ones. The WTO through the approval of technical barriers to trade (technical barriers to trade) has regulated the application of product standards as technical barriers to trade as long as it is based on K3L (Health, safety, human and environmental security), fair business competition, and does not intentionally hinder international trade. There is still little empirical research that analyzes the impact of technical barriers to trade policies, especially the implementation of mandatory SNI and ISO on Indonesian international trade and seeing the large role of the textile industry on the economy, especially on exports and employment, this research will look at the extent to which the textile industry is affected by the system. free trade, as well as analyzing the policies that have been issued by the government as well as government policy recommendations to save the textile industry.

2.Significance Of The Study

The increasing trend of TPT imports entering Indonesia has increasingly worried domestic textile companies to be able to compete and survive to maintain their production. This requires the government to issue policies that can protect domestic textile companies against imported textile products and also protect the interests of consumers on product quality. Secretary General of the Indonesian Textile Association (API) Ernovian G.Ismy said 70 percent of Indonesia's domestic textile market is currently dominated by imported textile products, both legal and illegal. While the remaining 30 percent is only fulfilled by domestic textiles. In fact, the domestic textile industry is dominated by small and medium-sized industries, so that the rise of imported textiles can lead to the death of the domestic textile industry.The declining competitiveness of Indonesian textile products is partly due to several things, including:1. emergence of new competitors in fiber production (mainly China and India); 2. stockpiles of ready-to-wear garments in developed countries that are export destinations (US and Japan); 3. the tendency to change consumption patterns to types of products with high added value, such as silky cotton fabrics or cotton synthetic blends;4. high interest rates and tariff structures between products and downstream which are considered less harmonious; and5. lack of design development, pattern, and maintenance and maintain the design.This was compounded by the flood of illegal imported products, which were dominated by products from China after the quota policy system ended. The PRC government has indeed made various efforts to further increase the demand for its textile exports in export destination countries. One of the policies taken by the PRC government is to cut export taxes for garment products.

3.Review Of Related Studies

The theory of international trade was put forward by David Ricardo (1772-1823) who assumed that international exchange traffic only applies between two countries where there is no customs wall between them, and the two countries only circulate gold money. Trade theory has changed the world towards globalization more rapidly. In the past, countries that had absolute advantages (the ability to produce at low costs) were reluctant to trade, thanks to Ricardo's "law of comparative costs", Britain began to reopen its trade with other countries.

The principle of comparative advantage says that each country will produce and export goods with relatively low production costs compared to other countries. On the other hand, each country will import goods with relatively high domestic production costs compared to other countries. The theory of comparative advantage has developed into a dynamic comparative advantage which states that comparative advantage can be created. Therefore mastery of technology and hard work are the success factors of a country. Countries that master technology will increasingly benefit from free trade, while countries that only rely on natural resources will lose in international competition.

International trade can be defined as a trade transaction between the economic subjects of one country and another country's economic subjects, both regarding goods and services. The subjects of the state economy in question are residents consisting of ordinary citizens, export companies, import companies, companies, state companies or government departments which can be seen from the trade balance (Sobri, 2000). Trade or exchange can be interpreted as an exchange process based on the voluntary will of each party. Each party must have the freedom to determine the advantages and disadvantages of the exchange and then decide whether to make an exchange or not (Boediono, 2000).

In the international trade regime, a world trade organization was formed, namely the World Trade Organization (WTO) in 1995 as a continuation of the GATT (General Agreement on Tarriffs and Trade). The WTO plays a major role in promoting free trade in the process of globalization. The main purpose of the establishment of the WTO is to encourage and develop trade liberalization and provide a safe world trade system. In addition, the WTO plays a major role in carrying out every rule that has been set in every world trade agreement.Export product quality standards emerged as an international agreement on certain quality measures and other provisions that accompany an export product or commodity. The international trade regime through the WTO tries to convince member countries of the privileges or benefits that are promising if the fulfillment of this export standard is fulfilled by the exporting country. Products that pass the qualification are believed to be easier to get to markets in many regions around the world. The WTO also assures exporters that market standards are established not as protection but as trade accelerators, which is why it seems that regulations are required to be implemented by exporters in international trade activities.Principles and thoughts about the quality standard of a product, in detail the concept is divided into five stages as follows:

1. Stages without quality, history begins before the 18th century, where products made do not pay attention to quality problems, this condition occurs if the organization has no competitors.

2. Inspection stage, at this time the concept of quality is only attached to the final product, in other words quality problems are related to damaged or defective products. This happened during the revival phase of the industrial revolution where goods were produced through mass machines.

3. Statistical Quality Control stage, if during the inspection period there is a deviation in product attributes resulting from standard attributes, the inspection department cannot detect whether the deviation is caused by an error in production or just due to coincidence. However, in this era the detection of statistically very significant deviations has begun so that product quality can be controlled from the beginning of the production process.

4. Stages of Quality Assurance, the concept of quality at this time has undergone expansion, from previously limited to the production stage to increase to other stages such as design and coordination between departments. Management involvement in quality handling starting from suppliers to distribution so that there is a correlation between preventive measures to produce damaged or defective products and the cost of factory overheating.

5. Stages of Strategic Quality Management or Total Quality Management, in this era, the involvement of top management is very large and decisive in making quality to put the company in a competitive position where the concept of quality is part of the soul and management strategy. So the concept of quality is the integration into the thinking of all employees, from the lowest level to the highest level.

Standardization is a process of planning, formulating, establishing, implementing, enforcing, maintaining, and supervising Standards that are carried out in an orderly manner and in collaboration with all Stakeholders (State Secretariat, 2014). The standard set by BSN and applicable in the territory of the Unitary State of the Republic of Indonesia is the Indonesian National Standard (SNI). The application of standards is carried out through the application of requirements to goods, services, systems, processes, or personnel. The application of standards is carried out voluntarily or can also be enforced obligatory. The application of SNI is proven through the ownership of a certificate and/or affixing the SNI mark and/or conformity mark issued by the certification body (Susanto & Hadiyanto, 2016). The application of standards provides economic benefits and advantages for industry and SMEs (Susanto & Ritonga, 2017).To meet the need for goods that cannot be obtained from domestic sources for the production process, national consumers and to maintain a conducive business climate in the textile sector in the country. To prevent unfair trade practices that result in losses to the textile industry and consumers, it is necessary to reorganize the textile policy. Currently, there are several provisions that regulate textile imports in Indonesia, including the issuance of Minister of Trade Regulation Number 85/M-DAG/PER/10/2015, it is hoped that business actors in the textile sector will feel there is clarity and convenience to strengthen the competitiveness of the textile industry.

4.Objectives Of The Study

The objective of the research is to formulate policy recommendations for the mandatory application of the Indonesian National Standard (SNI) and The International Organization of Standards (ISO) for the textile industry and textile products on imports and exports. The Policy is required in increasing the competitiveness of Indonesian textile products.

5.Hypotheses Of The Study

The hypotheses carried out in this study are:

- The mandatory enforcement of the Indonesian National Standard (SNI) for the textile industry and the real exchange rate (rupiah to US$ 1), has a significant relationship and is suspected to have an influence on textile imports.
- The mandatory application of The International Organization of Standards (ISO) for the textile industry and the real exchange rate (rupiah against the US dollar), has a significant relationship and is suspected to have an influence on textile exports.
- Real Gross Domestic Product (GDP) and the interaction of mandatory application of SNI and ISO for the textile industry with real GDP have a significant relationship and are thought to have a positive influence on textile imports and exports.

6.Population and Sample

This study analyzes the significance of the relationship between the implementation of mandatory SNI & ISO TPT and other factors (real gross domestic product, real exchange rate and textile prices) with textile imports and exports. The study was conducted by conducting a regression test of econometric models on time series data from the number of monthly imports and exports in the period 2008 – 2018. This study uses secondary data which includes the number of imports and exports of textiles and real gross domestic product TPT, real exchange rates, textile prices and the policy of mandatory application of SNI and ISO for textiles and textile products. The data is sourced from the National Standardization Agency, the Central Statistics Agency, the Ministry of Industry, the Ministry of Trade, the Indonesian Textile Association (API), Economic Research, World Integrated Trade Statistics and various references and economic journals.

Analysis of the use of time series data is a collection of research data with variable values originating from different times, collected based on successive time in an interval, such as daily, weekly, monthly, quarterly or annually. The measured variable is Indonesia's textile exports compared to the value of Indonesian textile imports. Completely, the variable and the source of information is described at Table 1.

Table 1. Research variable and data source

Variable	Variable Name	Information	Source
RER	Real exchange rate	Rupiah	Central Bank of Indonesia
GDP	real GDP	2010 constant price.	Central Bank of Indonesia
T	Time	Explain the time/period dimension.2010- 2019 (10 years)	Central Bank of Indonesia
Import	Import Value	TPT Indonesia (Thousand Tons)	Central Bank of Indonesia
Export	Export Value	TPT Indonesia (Thousand Tons)	Central Bank of Indonesia

6.1.Statistical Techniques Used in the Present Study

Time series data estimation was carried out using the Ordinary Least Square (OLS) least squares approach. This OLS approach seeks to minimize the squared deviation between the actual value and the estimated value of the dependent variable or in other words minimize the number of squared errors. Estimation of the regression coefficients of a linear regression model using the OLS method to produce an estimator that is BLUE (Best Linear Unbiased Estimate). To get BLUE estimation results, the data used must be free from problems of multicollinearity, heteroscedasticity and autocorrelation.

The development of GDP can affect the amount of imports of a country. The greater the GDP of a country, the greater the imports made by that country. The increase in GDP causes an increase in the level of welfare, but is followed by changes in people's tastes who are increasingly fond of imported products.

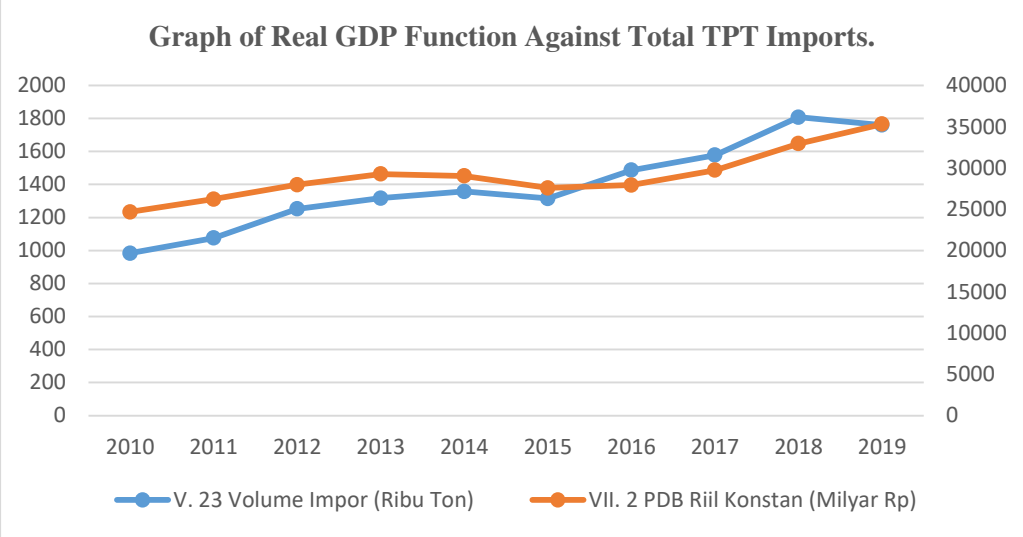


Figure 1 Graph of Real GDP Function Against Total TPT Imports.

In graph 1 it can be seen that real GDP shows a fairly stable upward trend in 2010-2019. However, there is no significant difference in the amount of TPT imports before the mandatory implementation of SNI on TPT products in 2010-2015 with after the implementation of SNI on TPT imported products in October 2015-2019 obligatory. The increase in GDP was followed by an increasing trend in the number of TPT imports. The enforcement of this mandatory SNI for Import of TPT requires that all foreign TPT producers who will market their TPT products to Indonesia fulfill all the quality requirements contained in the SNI. As proof that the producer is able to produce TPT according to SNI requirements is the obtaining of a Product Certificate for Using the SNI Mark (SPPT SNI) issued by the Product Certification Institute (LSPro).

The decrease in the number of TPT imports that occurred after the implementation of the mandatory SNI for TPT imports was not effective. It is suspected that foreign TPT producers can quickly make adjustments to the fulfillment of the mandatory requirements for TPT SNI, so that the import trend will continue to increase until 2019.

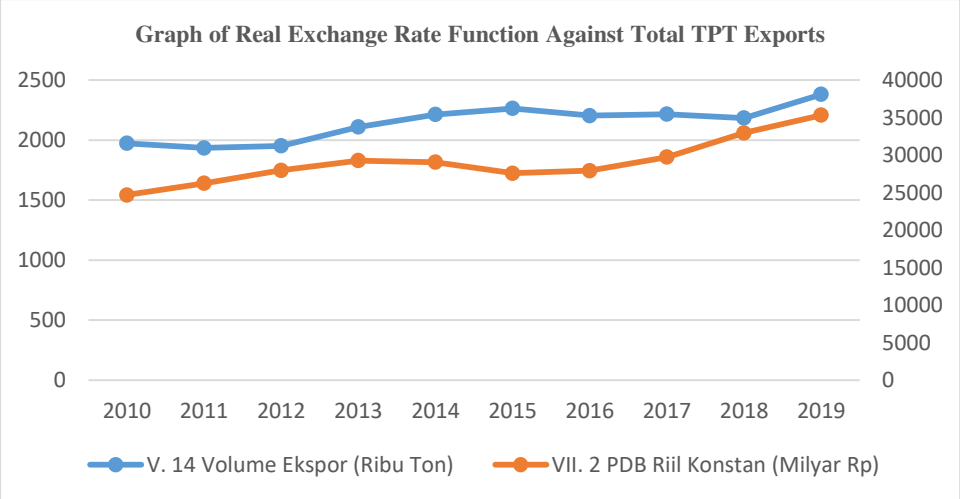


Figure 2 Graph of Real Exchange Rate Function Against Total TPT Exports.

In graph 2 it can be seen that real GDP shows a fairly stable upward trend in 2010-2019. However, there is a significant difference in the number of textile exports with the imposition of ISO on mandatory textile exports in 2015 where the number of exports greatly increased while the value of GDP decreased. The increase in GDP should be followed by an increasing trend in the number of textile exports. This is because prices are always changing due to inflation which is a problem that must be solved by economists when they use money as a benchmark, so a more accurate measure is needed to calculate the level of output and national income. The mandatory application of ISO TPT exports requires all domestic TPT producers who will market their TPT products abroad to meet all the quality requirements contained in ISO. As proof that the producer is able to produce TPT according to ISO requirements is the obtaining of a Product Certificate Using the ISO Mark issued by a Certification Agency accredited by KAN.

The increase in the number of TPT exports that occurred after the implementation of the mandatory ISO TPT exports was still effective. Domestic TPT producers are suspected of being able to quickly make adjustments to the fulfillment of the mandatory requirements of ISO TPT, so that exports will continue to increase until 2019.

The function of the real exchange rate on the number of imports and exports of TPT

If the value of the rupiah depreciates against foreign currencies, it will have an impact on the value of exports increasing while the value of imports will decrease.

The value of the rupiah depreciating against foreign currencies (US$) means that the real exchange rate increases.

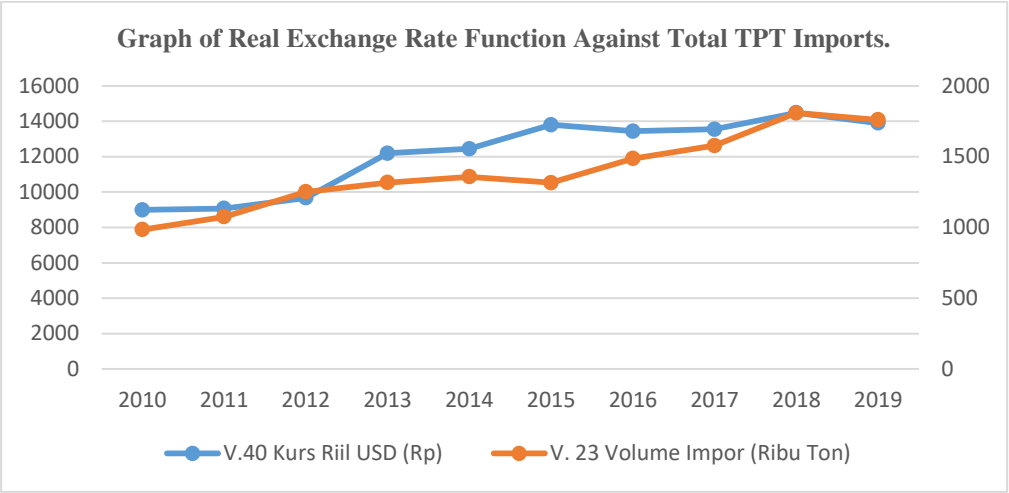


Figure 3 Graph of Real Exchange Rate Function Against Total TPT Imports.

In Graph 3 it can be seen that the exchange rate in 2015 was Rp. 13795 against US$ 1 which was followed by a drastic decrease in the number of imports. After 2015, the real exchange rate showed a gentle decline followed by an increasing trend of TPT imports until 2019. When the real exchange rate in 2017 showed a downward trend, the number of imports continued to increase in line with the mandatory implementation of SNI TPT. The mandatory application of this TPT SNI requires that all TPT producers, both domestic and foreign producers who will market their TPT products to Indonesia, fulfill all the quality requirements contained in the SNI.

The decline in the number of imports that occurred after the implementation of the mandatory SNI TPT turned out to be only temporary, foreign textile producers were suspected of being able to quickly make adjustments to the fulfillment of the mandatory requirements for SNI TPT, so that the import trend continued to rise until 2019.

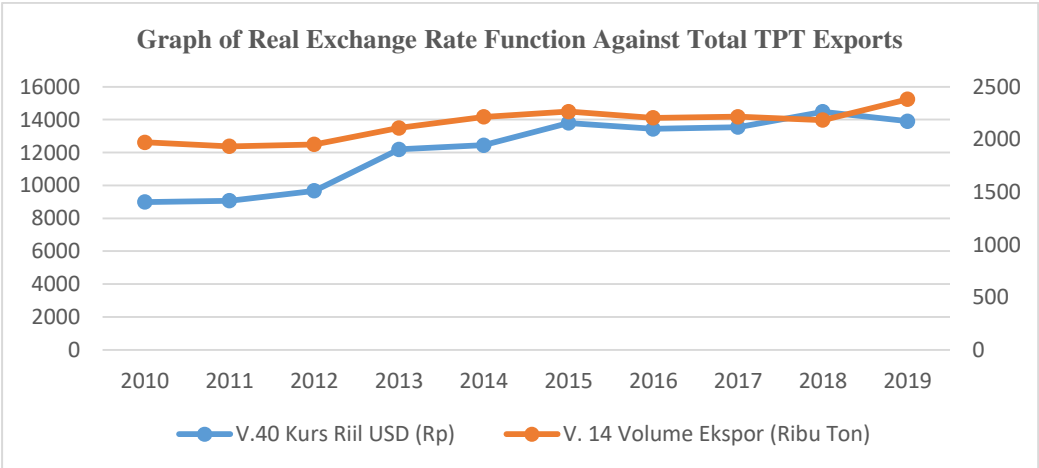


Figure 4 Graph of Real Exchange Rate Function Against Total TPT Exports

In Graph 4 it can be seen that the exchange rate in 2010-2019 showed a gentle upward trend followed by a very stable increase in the number of exports in line with the mandatory implementation of ISO TPT with the total volume of exports exceeding the average volume of imports. The mandatory implementation of this TPT ISO requires that all domestic TPT producers who will market their TPT products abroad can quickly make

adjustments to the mandatory quality requirements contained in ISO, so that the export trend remains stable and increases along with the increase in the real exchange rate.

6.2.Econometric Analysis

Data processing in this study uses software Eviews (Econometric views) version 9 with the Ordinary Least Square (OLS) - White heteroscedasticity consinent coefficient covariance model which is a regression model by minimizing the sum of the squares of errors for each observation. the percentage level of the awareness on the dietary habits among prospective teachers in Tirunelveli District**.**

Table 1.TPT Import Equation Estimation Results.

Variable	coefficient	t-statistic	profitability
LOG (Y) PDB Riil	1.702025	4.237113	0.0002
LOG (XR) Kurs Riil	0.027204	0.148558	0.8828
M(-1) *lag*	0.000854	2.786664	0.0086
DSNI	4.240424	2.173444	0.0368
DSNI*LOG(Y)	-0.936798	-2.148705	0.0389
Adjusted – R^2	0.787521	Durbin-Watson stat	2.120692
Prob(F-statistic)	0.000000		

Based on the results of the regression in table 1 above, the value of the coefficient of determination (Adjusted R2) shows a good number, namely 0.787521 or 78.75%, meaning that the independent variable consists of Indonesia's real GDP (Y), the value of the rupiah exchange rate of US $ 1 (XR) and the dummy application. mandatory SNI for TPT (DSNI) can explain the dependent variable, namely imports of TPT of 78.75% while the remaining 21.25% is influenced by other factors. In other words, the model obtained is able to explain import behavior during the 2010-2019 period by 78.75%.

Table 2

TPT Export Equation Estimation Results.

Variable	coefficient	t-statistic	profitability
LOG (Y) PDB Riil	0.182165	0.972699	0.3376
LOG (XR) Kurs Riil	0.278839	3.273232	0.0024
M(-1) *lag*	0.000464	3.001970	0.0050
DISO	0.002710	0.002988	0.9976
DISO*LOG(Y)	-0.002723	-0.013436	0.9894
Adjusted – R^2	0.657039	Durbin-Watson stat	1.937546
Prob(F-statistic)	0.000000		

Based on the regression results in table 2 above, the value of the coefficient of determination (Adjusted R2) shows a good number, namely 0.657039 or 65.70%, meaning that the independent variable consists of Indonesia's real GDP (Y), the value of the rupiah exchange rate of US $ 1 (XR) and the dummy application mandatory ISO TPT

(DISO) can explain the dependent variable, namely textile exports of 65.70% while the remaining 34.30% is influenced by other factors. In other words, the model obtained is able to explain export behavior during the 2010-2019 period by 65.70%.

The regression coefficient significance test (t test) aims to determine the effect of each independent variable on the dependent variable. Based on the test results obtained prob value. t-stat for each independent variable is showed at Table 3.

Table 3. TPT Import t-test.

Variable	Probability		α	Decision	Influence
Real GDP	0.0002	<	0,05	Reject H0	Significant
Real Exchange Rate	0.8828	<	0,05	Receive H0	Not Significant
M(-1) *lag*	0.0086	<	0,05	Reject H0	Significant
DSNI	0.0368	<	0,05	Reject H0	Significant
DSNI*LOG(Y)	0.0389	<	0,05	Reject H0	Significant

Based on table 3 the estimation results of the TPT import t-test model it is known that the independent variables real GDP, M(-1) lag, and DSNI show statistically significant results on output at the 95% confidence level (α = 0.05). This is indicated by the prob value. t-stat is less than 0.05. However, the real exchange rate variable did not show statistically significant results on output at the 95% confidence level (α = 0.05). This is indicated by the prob value. t-stat is greater than 0.05.

Table 4 TPT Export t-test.

Variable	Probability		α	Decision	Influence
Real GDP	0.3376	<	0,05	Receive H0	Not Significant
Real Exchange Rate	0.0024	<	0,05	Reject H0	Significant
M(-1) *lag*	0.0050	<	0,05	Reject H0	Significant
DISO	0.9976	<	0,05	Receive H0	Not Significant
DISO*LOG(Y)	0.9894	<	0,05	Receive H0	Not Significant

Based on table 4 the estimation results of the export t-test model, it is known that the independent variables Real exchange rate and M(-1) Lag show statistically significant results to the output at the 95% confidence level (α = 0.05). This is indicated by the prob value. t-stat is less than 0.05. However, real GDP and DISO variables did not show statistically significant results on output at the 95% confidence level (α = 0.05). This is indicated by the prob value. t-stat is greater than 0.05.

Model significance test (F-Test)

The significance test of the model (F-Test) aims to test the effect of the independent variables on the dependent variable together or as a whole.

Ho: 1 = 2 ….. i = 0, meaning that overall there is no significant effect of the independent variable on the dependent variable.

H1: 1 0, meaning that at least one independent variable has a significant effect on the dependent variable.

When Prob. F-stat < means rejecting H0, otherwise Prob. F-stat means accept H0. Based on tables 1 and 2 shows that prob. F-stat of 0.0000 < 0.05 means H0 is rejected, this means that all independent variables together have a positive effect on the number of imports and exports of textile products.

Classic assumption test

To see that this research model is the best model, it must be seen the value of the BLUE (Best Linear Unbiased Estimator) parameter, namely by testing the classical assumptions below.

a. Multicollinearity test

To test multicollinearity in the model, it is done by means of partial correlation test between independent variables. If the correlation coefficient is high enough > 0.8, it can be assumed that there is multicollinearity in the model. Conversely, if the correlation coefficient is relatively low, it is suspected that the model does not contain elements of multicollinearity (Agus Widarjono, 2007: 114-115).

Table 5. The value of the correlation coefficient between the independent variables of TPT imports.

Variance Inflation Factors
Date: 07/07/21 Time: 19:38
Sample: 1 40
Included observations: 40

Variable	Coefficient Variance	Uncentered VIF	Centered VIF
LOG__Y_	0.161359	69170.39	7.815298
LOG__XR_	0.033533	11978.17	4.787432
M__1__LAG	9.40E-08	1.009896	1.002237
DSNI	3.806463	34899.75	20067.36
DSNI_LOG_Y_	0.190081	35134.38	20203.80
C	1.833731	39559.20	NA

Table 6. The value of the correlation coefficient between the independent variables of textile exports.

Variance Inflation Factors
Date: 07/07/21 Time: 19:56
Sample: 1 40
Included observations: 40

Variable	Coefficient Variance	Uncentered VIF	Centered VIF
LOG__Y_	0.035073	69879.88	7.895461
LOG__XR_	0.007257	12048.08	4.815371
M__1__LAG	2.39E-08	1.013274	1.011937
DISO	0.822773	35061.51	20160.37
DISO_LOG_Y_	0.041086	35296.99	20297.31
C	0.397549	39861.36	NA

Table 5 shows the value of the correlation coefficient between the real exchange rate (XR) of 0.033533 with GDP (Y) of 0.161359, and the DSNI of 3.806463. Seeing the value of the correlation coefficient between independent variables if it is above 0.8, then this model has a multicollinearity problem.

While table 6 shows the correlation coefficient between the real exchange rate (XR) of 0.007257 with GDP (Y) of 0.035073, and DISO of 0.822773. Seeing the value of the correlation coefficient between the independent variables if it is below 0.8, then this model does not have a multicollinearity problem.

According to Agus Widarjono (2004:98), that multicollinearity is the existence of a perfect linear relationship (near perfect) between some or all of the independent variables. This often appears and becomes a problem in economics because in economics, everything depends on everything else.

Heteroscedasticity test

To detect heteroscedasticity, a test is carried out using the white heteroscedasticity test by regressing the squared residual with the independent variable. Based on the results of calculations using Eviews, the following results can be seen:

Table 7.TPT Import Heteroscedasticity Test.

Heteroskedasticity Test: Glejser

F-statistic	2.646123	Prob. F(14,25)	0.0164
Obs*R-squared	23.88285	Prob. Chi-Square(14)	0.0473
Scaled explained SS	17.28474	Prob. Chi-Square(14)	0.2413

Table 8. TPT Export Heteroscedasticity Test.

Heteroskedasticity Test: Glejser

F-statistic	1.116247	Prob. F(14,25)	0.3914
Obs*R-squared	15.38610	Prob. Chi-Square(14)	0.3523
Scaled explained SS	9.531693	Prob. Chi-Square(14)	0.7956

The presence or absence of heteroscedasticity can also be tested through the probability of Obs*R-squared (chi-square), if the probability of chi-square = 0.05 then heteroscedasticity is found, otherwise if the probability of chi-square > = 0.05 then no heteroscedasticity is found. . In this calculation it is found that the result value of the import probability is 0.0473 < 0.05. It means that in the import estimation model there is heteroscedasticity. While the export probability is 0.3523 > 0.05. This means that in the estimation model there is no heteroscedasticity.

Autocorrelation test

The autocorrelation test is the phenomenon that the confounding factors are related to one another. To detect autocorrelation problems, the Durbin-Watson (D-W) test is used. With a confidence level of = 5%, if D-W lies between -2 to +2 then there is no autocorrelation.

From the test results of the import model in table 1, the Durbin-Watson stat value is 2.120692 and the export model in table 2 produces the Durbin-Watson value 1.937546, the value when rounded is between -2 to +2, thus it can be concluded that the estimation model does not find any autocorrelation.

Economic Analysis

The economic analysis will discuss the relationship of each independent variable (real GDP, real exchange rate, interaction between independent variables, import lag and SNI-ISO dummy) to the dependent variable, namely the number of imports and exports of textile products.

Table 9. The results of the significance of variables with the TPT import hypothesis

Variable	Coefficient	Results	Hypothesis
Real GDP	1.702025	Significant (+)	Significant (+)
Real Exchange Rate	0.027204	Significant (+)	Significant (-)
M(-1)	0.000854	Significant (+)	Significant (+)
DSNI	4.240424	Significant (+)	Significant (-)
DSNI*LOG(Y)	-0.936798	Significant (-)	Significant (+)

Table 10 The results of the significance of variables with the TPT export hypothesis.

Variable	Coefficient	Results	Hypothesis
Real GDP	0.182165	Significant (+)	Significant (+)
Real Exchange Rate	0.278839	Significant (+)	Significant (-)
M(-1)	0.000464	Significant(+)	Significant (+)
DSNI	0.002710	Significant (+)	Significant (-)
DSNI*LOG(Y)	-0.002723	Significant (-)	Significant (+)

Real gross domestic income (real GDP) to the number of imports and exports

Table 5 shows the coefficient value of the GDP variable at 1.702025, and in table 6 shows the coefficient value of the GDP variable at 0.182165. This value means that Indonesia's real gross domestic income has a positive effect on the amount of TPT imports. In other words, for every 1% increase in real GDP, the number of TPT imports and exports will increase by 1.702025%, and the number of TPT exports will increase by 0.182165%. The results of these calculations confirm the research hypothesis that real GDP has a significant relationship and is thought to have a positive influence on the number of imports and exports of textile products. The nature of real GDP on the number of imports and exports is elastic, as can be seen from the coefficient value of real GDP (Y) which is close to one, which means that an increase in real GDP has an effect on an increase in the number of imports and exports.

The real exchange rate (exchange rate) against the number of imports and exports

Table 5 shows the coefficient of the exchange rate variable at 0.027204, and in table 6 shows the coefficient value of the exchange rate variable at 0.278839, this value means that the real exchange rate has a positive effect on the number of imports and exports of textile and textile products. In other words, for every 1% increase in the real exchange rate, the number of TPT imports will increase by 0.027204%, and the number of exports will increase by 0.278839%. The results of these calculations confirm the research hypothesis that the real exchange rate (rupiah to US$ 1) has a significant relationship and is thought to have a positive influence on imports and exports of textile products. The nature of the real exchange rate on the amount of imports is elastic, as can be seen from the value of the real exchange rate coefficient (XR), although it is not greater than one, it means that an increase in the real exchange rate affects the decrease in the number of imports.

The number of imports and exports in the previous and subsequent periods

Table 5 shows the value of the coefficient of the variable M(-1) (import lag) of 0.000854, while table 6 shows the value of the coefficient of the variable M(-1) (import lag) of 0.000464. This value means that the number of imports and exports of TPT in the previous period has a positive effect on the number of imports and exports of textiles in the next period. In other words, if the number of TPT imports and exports in the previous period increased by 1%, then the number of TPT imports in the next period would increase by 0.000854% and the number of TPT exports in the next period would increase by 0.000464%. The nature of the number of imports and exports of the previous period to the next period is inelastic, as seen from the coefficient value of the number of imports and exports in the period before (M(-1)) which is less than one, which means that the increase in the number of imports and exports in the period before has only a slight effect on the increase in the number of imports. exports in the next period.

Compulsory application of SNI TPT on the number of imports and exports

Direct influence

The direct effect of mandatory application of TPT SNI on the number of imports can be seen in table 5 which shows the value of the DSNI (dummy) variable coefficient of 4.240424, this value means that the application of mandatory SNI has a positive effect on the number of TPT imports. In other words, after the implementation of mandatory SNI TPT, the number of TPT imports is 4,240424% higher than before the implementation of mandatory SNI TPT. The results of these calculations break the research hypothesis that the imposition of mandatory TPT is thought to have a negative effect on the number of TPT imports. The nature of the mandatory application of SNI TPT to the number of imports is elastic, as can be seen from the coefficient

value of the mandatory application of SNI TPT (DSNI) which is greater than one, which means that the application of mandatory TPT has a significant effect on the increase in the number of imports.

The direct effect of the mandatory application of ISO TPT on the number of exports can be seen in table 6 which shows the value of the DISO (dummy) variable coefficient of 0.002710 this value means that the mandatory application of ISO has a positive effect on the number of TPT exports. In other words, after the implementation of mandatory ISO TPT, the number of TPT exports was 0.002710% higher than before the implementation of mandatory ISO TPT. The results of these calculations break the research hypothesis that the mandatory application of ISO TPT is thought to have a negative effect on the number of TPT exports. The nature of the mandatory application of ISO TPT to the number of exports is elastic, as can be seen from the coefficient value of the mandatory application of ISO TPT (DISO) which is less than one, which means that the mandatory application of ISO TPT has little effect on the increase in the number of exports.

Interaction of mandatory application of SNI ISO TPT with real GDP

Table 5 shows the coefficient value of the DSNI*LOG(Y) variable of -0.936798. This value means that the interaction between the mandatory application of SNI for TPT and Indonesia's real gross domestic product is negative on the amount of TPT imports. In other words, after the implementation of mandatory SNI for TPT, for every 1% increase in real GDP, the number of TPT imports will be 0.936798% lower.

Table6 shows the coefficient value of the DISO*LOG(Y) variable of -0.002723 this value means that the interaction of the mandatory application of ISO TPT with Indonesia's real gross domestic product is negative on the number of TPT exports. In other words, after the implementation of mandatory ISO TPT, every 1% increase in real GDP, the number of TPT exports is 0.002723% lower.

The results of these calculations break the research hypothesis that the interaction of mandatory application of SNI ISO TPT with Indonesia's real gross domestic product is thought to have a positive influence on the number of imports and exports of TPT. The nature of the interaction of mandatory application of SNI ISO TPT with Indonesia's real gross domestic product on the number of imports and exports is elastic, as seen from the coefficient values of DSNI*LOG(Y) and DISO*LOG(Y) not greater than one, which means that the interaction of mandatory application of SNI TPT with Indonesia's real gross domestic product has little effect on the decline in the number of imports and exports of textiles.

To calculate the total value of the effect of the mandatory application of TPT SNI on the number of imports and exports, the coefficients of the mandatory application of TPT SNI (DSNI) and the interaction of the mandatory application of TPT SNI with real GDP (DSNI*LOG(Y)) are calculated.

Total score = DSNI + DSNI*LOG (Y)

d Log(M)/d DSNI = 4.240424 + (- 0.936798)

d Log(M)/d DSNI = 4.240424 – 0.936798

d Log(M)/d DSNI = 3.303626

From the above calculation results show that with the implementation of mandatory SNI for TPT, the number of TPT imports is 3.30% higher than before the implementation of mandatory SNI.

To calculate the total value of the effect of mandatory application of ISO TPT on the number of imports and exports, the coefficient of mandatory application of ISO TPT (DISO) and the interaction of mandatory application of ISO TPT with real GDP (DISO*LOG(Y)) are calculated.

Total value = DISO + DISO*LOG (Y)

d Log(M)/d DISO = 0.002710 + (-0.002723)

d Log(M)/d DISO = 0.002710 – 0.002723

d Log(M)/d DISO = -0.000013

From the above calculation results show that with the implementation of mandatory ISO TPT, the number of TPT exports is 0.000013% lower than before the mandatory implementation of ISO.

Formulate recommendations for Government Regulations on the Textile Industry

Development of Standardization of Textiles and Textile Products

Currently, in accordance with the performance targets of the Ministry of Trade and the Ministry of Industry, various efforts need to be made to boost the increase in Indonesian exports in the international market, one of which is increasing competitiveness through the application of the Indonesian National Standard (SNI) in

line with strengthening the domestic market in order to protect consumers. , then the products with SNI that are traded will have competitiveness in the export destination country. The same applies to imported products.

In this study, the dummy integration of SNI and ISO TPT standards has a significant effect on the export and import of Indonesian textiles. The process of integrating TPT standards for 10 years reduced Indonesian textile exports by 0.000013% compared to before the mandatory implementation of ISO, while the number of TPT imports was 3.303626% higher than before the mandatory implementation of SNI. Indonesia has prepared itself in the field of standardization for quite a long time. The number of national standards in the field of textiles and textile products owned by Indonesia is quite a lot. However, there is a feeling of ineffectiveness in this activity which is marked by the low application of standards in the real sector (BSN, 2006). This situation can be caused by the ineffectiveness of the standard function in the market or the absence of a standard that can be used as a reference that arises due to incomplete standards in the supply chain of the related industry.

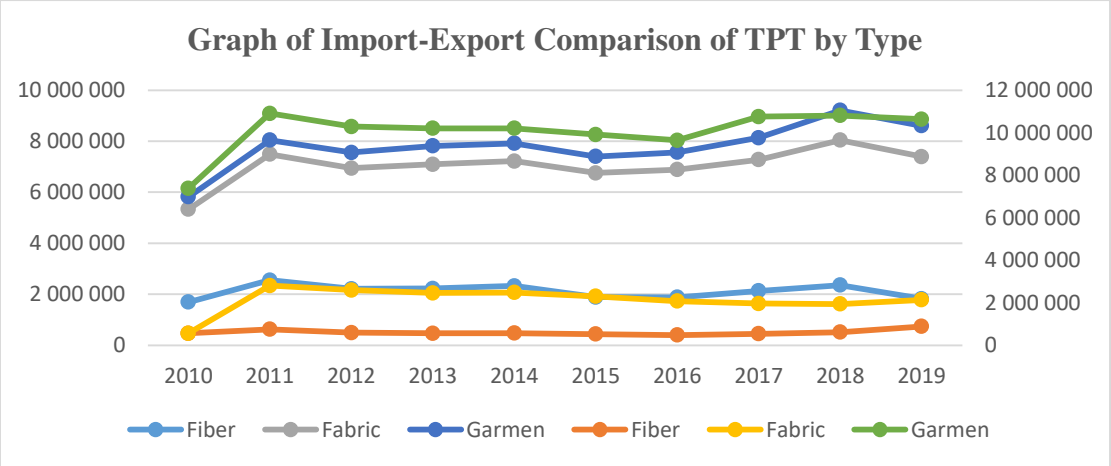
This broad scope of textiles and textile products implies the need for a considerable amount of standards. The development of the formulation of SNI for textiles and textile products has decreased in the last decade, although up to now, 373 standards have been compiled. Most of the existing standards are quite old and need to be revised. This is one of them marked by the revision of the standards it refers to. There are about 89% of the standards are more than 5 years old, which require a review of the feasibility and current of these standards. The Indonesian government, in this case BSN and related technical agencies, is trying to provide adequate national standards so that the needs of producers and other market players can be properly facilitated.

Analysis of the Indonesian Textile and Textile Product Industry System

The profile of the domestic textile industry consists of two categories, namely large industries with export market orientation and mostly in bonded zones. Then the majority fill in textiles for the domestic community of Small and Medium Industries (IKM). The textile and textile product industry sector has great growth potential, given Indonesia's adequate natural resources, as well as absorbing a very large workforce (3.6 million people in 2018).

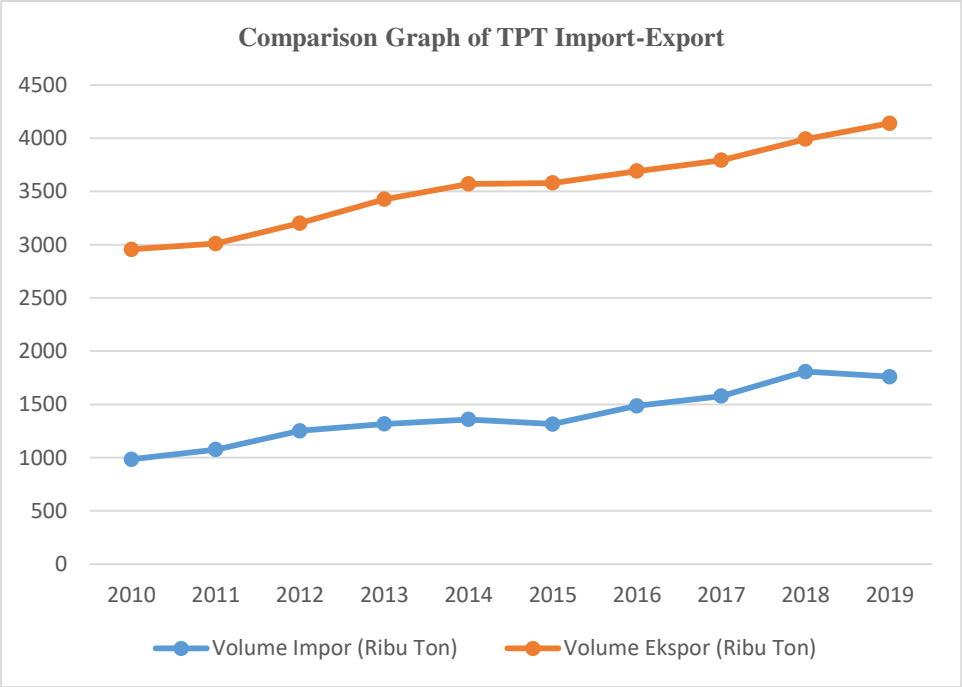
According to world bank data in 2019, Indonesia ranks 9th in the world for textile and clothing exports. The textile and clothing industry also made a brilliant performance in the first quarter of 2019. During these three months, the growth of the textile and apparel industry was the highest at 18.98%. The number increased significantly compared to the same period last year at 7.46% and also increased from the acquisition during 2018 of 8.73%. In 2018, the textile industry became a significant foreign exchange earner with an export value of USD13.22 billion, an increase of 5.55 percent. Data from the Central Statistics Agency (BPS) also shows that the production of large and medium manufacturing industries (IBS) in the first quarter of 2019 rose 4.45% compared to the same period last year. The increase in IBS production was supported by the production of the apparel industry sector which skyrocketed by 29.19% due to the abundance of orders, especially from the export market. the growth rate of the textile industry throughout 2018 which was recorded at 8.73%. The development of exports and imports of textiles and textile products by type during the period 2010-2019 can be seen in the following figure 5:

Figure 5. Graph of Import-Export Comparison of TPT by Type



The obstacles faced by the Indonesian textile and textile product industry are the dependence on imported raw materials, especially cotton; supporting industries are not well developed, such as dyeing materials, accessories, and spare parts; several competing countries are able to market their products at more competitive prices; as well as the existence of several trade barriers in the form of dumping, safeguards, environmental issues, human rights, social responsibility, and several other non-technical barriers that are not easily overcome.

Figure 6. Comparison Graph of TPT Import-Export.



Source : Bank Indonesia, 2021

According to (Hermawan, 2011) an economic policy that is only able to increase production and exports in one sector is the policy of raising interest rates. This policy reduced Indonesian garment production and exports and made textile production and exports stagnant. The textile industry is one of the high-risk industries, so banks are less interested in providing investment credit. In general, banks only provide short-term (90 percent) and medium-term (10 percent) loans or credit to the textile industry. Meanwhile, the restructuring of the textile and textile industry machinery requires long-term loans ranging from 10 to 15 years. The textile industry is capital-intensive compared to the garment industry, so that restructuring problems are more prevalent in the textile industry. Outdated machinery and non-modern technology can affect the productivity of the textile industry.

Policies that are still able to increase production and exports in both sectors are monetary policy through adjustments to the Rupiah exchange rate against the US$ and a combination of wage policies, liberalization, and an increase in GDP for Indonesia and several developed countries. Since Indonesia adopted a floating exchange rate regime, the Rupiah exchange rate fluctuated all the time. Nevertheless, Bank Indonesia can still intervene to stabilize it through monetary policy instruments.

A relatively non-fluctuating exchange rate will assist producers in calculating and determining production costs and business risks. Therefore, this monetary policy is able to increase Indonesia's exports of textiles and textile products. A stable Rupiah exchange rate helps exporters and importers to calculate and predict future costs and profits.7.Recommendations

1. The strategy to increase the role of SNI in the effort to strengthen the domestic market and increase exports is carried out through the following operational steps:

- Adjusting SNI with the standards of export destination countries in an effort to increase market access abroad. Meanwhile, other requirements that already exist in SNI and are unique (not in the standard of the destination country) are maintained.
- The development of the formulation of SNI for Textiles and Textile Products has decreased in the last decade, although up to now, 373 standards have been compiled. Most of the Indonesian TPT SNIs need to be reviewed with increasing national differences to be enforced mandatory in order to minimize the circulation of low quality TPT products in the domestic market.

2. In terms of the supply chain of the textile industry and textile products, the available standards still do not cover all existing products, especially products that have trade potential. It is necessary to formulate new standards in support of industry interests and to facilitate trade**.**
3. The application of mandatory standards is worth considering considering that there are many imported textile products with low prices that do not use the provisions of SNI and are of doubtful quality.
4. The application of mandatory standards is worth considering considering that there are many imported textile products with low prices that do not use the provisions of SNI and are of doubtful quality.
5. The competitiveness of Indonesian textile products is still relatively strong. The results of the comparison of TPT export volumes show that the value is still greater than TPT imports, but it is still necessary to develop several types of Indonesian TPT that are able to adapt to market desires and tastes, including Cotton, Other Man-Made Fibers Suitable for Spinning, Worn Clothing and Other Worn Textiles. Articles, Men's or Boy's Clothing of Textile, Knitted, Croche, and Articles of Apparel Clothing Access, Special Yarn, Special Textile Fabrics and Floor Coverings.
6. The competitiveness of Indonesian textile exports needs to be improved by constantly observing the development and dynamics of the real exchange rate, tariffs, FDI in the manufacturing sector of the country of origin, and the GDP of the country of destination.
7. Improve the procedure for managing the certification process which is still long and the validity period of SNI certification is short.
8. Increase the number of conformity assessment institutions that are evenly distributed and easily accessible by business actors in supporting the application of mandatory SNI.
9. To educate the public about the importance of SNI in supporting the strengthening of the domestic market.
10. The government is expected to improve the overall infrastructure program in order to cut the supply chain and distribution of goods, one of the infrastructures that support the textile industry is the construction of dryports.
11. Conduct marketing of domestic products both online by collaborating with various E-commerce and offline such as exhibitions and fashion week/Fashion week as a concept of bringing together prospective buyers and potential sellers.
12. Capital which is currently often an obstacle for industry players, it is hoped that the government can design a Creative Economy Fund program so that it can be allocated specifically for the creative economy sector as funding for creative economy projects in a pool of fund scheme consisting of grants (crowdfunding), equity, and bank loan.
13. For further research, research can be conducted on the impact of mandatory application of SNI for TPT from countries with relatively small import share in Indonesia.

8.Conclusion

Based on the analysis carried out on the results of the model estimation, several conclusions can be drawn as follows: The mandatory application of TPT SNI has a significant and positive effect on the number of TPT imports, which means that the mandatory application of TPT SNI greatly affects the number of Indonesian TPT imports in the period 2010-2010. 2019. The mandatory application of ISO TPT has an insignificant relationship and does not affect the number of TPT exports, which means that the mandatory application of ISO TPT does not affect the number of Indonesian TPT exports in the 2010-2019 period. Real GDP has a significant relationship and has a positive effect on the amount of TPT imports, which means that the increase in real GDP greatly affects the increase in Indonesian TPT imports in the 2010-2019 period. Real GDP has an insignificant

relationship and has a negative effect on the number of textile exports, which means that the increase in real GDP has no effect on the increase in Indonesian textile exports in the 2010-2019 period. The real exchange rate/exchange rate (rupiah to US$ 1) has an insignificant relationship and has a positive effect on TPT imports, which means that the increase in the real exchange rate has no effect on the increase in the number of Indonesian TPT imports in the 2010-2019 period.The real exchange rate/exchange rate (rupiah to US$ 1) has a significant relationship and has a positive effect on textile exports, which means that an increase in the real exchange rate affects the increase in the number of Indonesian textile exports in the 2010-2019 period. The policy for the implementation of the Decree of the Minister of Industry NO. 86/M-IND/PER/9/2009 concerning the Enforcement of Industrial SNI and the Regulation of the Minister of Trade of the Republic of Indonesia Number 85/M-DAG/PER/10/2015 concerning Provisions on the Import of Textiles and Textile Products is not effective in preventing or reduce Indonesia's TPT imports in the 2010-2019 period. It is suspected that the imposition of mandatory SNI for TPT actually increases imports due to increased consumer confidence in the quality and safety of imported goods or the quality requirements of SNI are not too difficult to fulfill for countries with a very large import share in Indonesia. Although the main purpose of the application of SNI is to protect the domestic market, it is possible that the application of SNI in the country can also be beneficial for business actors who export, because some of the parameters listed in SNI refer to international standards so that for business actors who have applying SNI will be easier to adjust to international standards applied in export destination countries.

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