Examining the Impact of Safeguard Measures on Local Firms' Performance : The Case of Fabrics and Yarn Import in Indonesia

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RACHMAN, Ayu Amalia

THESIS

Submitted to

KDI School of Public Policy and Management

In Partial Fulfillment of the Requirements

For the Degree of

MASTER OF PUBLIC POLICY

2022

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Approval as of December, 2022

ABSTRACT

The textile sector is one of the important labor-intensive industries in Indonesia with an integrated supply chain, a high level of employment, and a significant share in manufacturing growth. In 2019, Indonesian government imposed safeguards on fabrics and yarn to protect domestic firms from an excessive number of imported products. This paper examines the impact of the safeguard measures on exports of Indonesian producers. I collected exports and imports data from Statistics Indonesia (BPS) from 2011 to 2021 and employ the Differences in Differences method (DID). The results provide evidence that the imposition of safeguards contributes to decreasing exports value by 31.8 percent and reduces imports value significantly by 26.5 percent. In this study, the safeguards policy is quite effective in slowing down the value of imports but it also has a drawback in decreasing exports. This finding may be used as a reference for the Indonesian government to formulate more effective policies in improving the performance of the local textile industries and decide on the extension of the safeguards for the next three years.

Keywords: safeguards, differences in differences, tariffs, export, import, textile, yarn, fabrics, Indonesia

ACKNOWLEDGEMENTS

First and foremost, my gratefulness to Allah SWT my Lord for his grace and bounty. Secondly, I would also like to thank my parents, my siblings, and my relatives for their love and prayers during this time. Further, I would like to express my gratitude to my supervisor Professor Yoon Chungeun for the guidance and support provided during my master's thesis project at KDI School. I am also extremely grateful to Professor Lim Wonhyuk for his constructive comments and insightful feedback in completing my research.

I am indebted to the Korea International Cooperation Agency (KOICA) for the funding which allowed me to further my education and without which this work would not have been possible. I also want to express my thanks to Professors Lee Siwook − the KOICA program coordinator − and my sincere appreciation goes to the staff of KDI School for all the kind assistance throughout my studies.

Last but not the least, I wish to acknowledge my friends and my classmates at KDI school as well as my colleagues in the Assistant Deputy of Industrial Development − Coordinating Ministry for Economic Affairs for the Republic of Indonesia − for the encouragement and for walking me through this path.

Table of Contents

List of Figures

List of Tables

I. Introduction

Safeguards are one of the instruments allowed by the World Trade Organization (WTO) to protect local producers from unfair import competition (WTO, n.d; WTO, 2009). According to the General Agreement on Tariffs and Trade (GATT) (1994) article XIX, restricting imports through the safeguards is permitted when domestic industries of the member have experienced a serious injury caused by a sudden influx of import of the likely or directly competitive products. The duration of this safeguard's imposition should be for a certain period under certain terms and conditions to enable local competing industries to catch up technologically as well as gain profit in the meantime (WTO, 2009). The debate on whether the use of safeguards will improve the economic well-being of domestic industries or may, in fact, induce counter-productive effects has been widely discussed (Crawley, 2007; WTO, 2009). There has been a growing body of literature on the role of safeguards, both tariff-based and non-tariff-based safeguards, as a prominent four-policy tool in protecting local industries (for an in-depth review on safeguards, see Bown & Tovar, 2011; for safeguards in quota tariff scheme, Takechi, 2020; for non-tariff-based measures, Muhammad & Countryman, 2021). However, these studies show little agreement on the significant impact of tariff-based safeguards on local producers. Crowley (2007) and Muhammad and Countryman (2021) claim that the relationship between rising import tariffs and domestic firms' prices is vague. The safeguards mechanism potentially may increase the volatility of the global price of commodities that will affect local imported producers (Hertel et al., 2010). Takechi (2021) argues that the temporary safeguards can cause harm to local firms and domestic producers due to restrictions on access to economic inputs (see also Gupta, 2021). Additionally, the effect of tariff-based protectionism may reduce the local firm's performance in the global market hence discouraging export growth (see Handley et al., 2020; Cali & Montfaucon, 2021). Despite the elusive effect of safeguard's implementation on domestic welfare, the tendency toward protectionism has been increasing recently as a response to the trade war between the large

economy countries and global financial uncertainty (Enderwick, 2011; Riksbank, 2017). The rising of protectionism is also due to the lack of powerful effect of trade liberalization that has put the trend against establishing new traditional tariff and non-tariff barriers was on the rise since 2016 (Altenberg, 2021).

The existing scholarship on the impact of safeguard measures on the manufacturing sectors is relatively limited (for downstream effects of protectionism on metal industry, see Barattieri & Cacciatore, 2020; for impact of safeguards on domestic steel sector in Vietnam; see Dang & La, 2020). Dang and La (2020) found that temporary trade protection on steel industry has negative effects on downstream users of steel. The increasing price of steel due to safeguards has significant impacts on decreasing downstream firms' sales, profit, and productivity. Using input-output data linkages, Barattieri and Cacciatore (2020) also concluded the adverse effects of trade barriers (TTBs) on downstream firms. They found that protectionism has minimal beneficial effects for protected firms but has severe effects on the downstream industries due to the increase in intermediate inputs and final product prices.

Many scholars mostly discuss the safeguards in the agricultural fields given the nature and sensitiveness of the products (see Takechi, 2020; Das et al., 2021; Muhammad & Countryman, 2021). In addition, the extant literature and empirical studies related to safeguard policies in the industry of textile and products of textile (TPT) are very limited. Thus, this research intends to examine the impact of safeguard measures on Indonesian local fabric and yarn firms that have been experiencing an excessive surge of imported products since 2016 by 31.08% and 44.38%, respectively (Indonesia Safeguards Committee, 2019a, 2019b; WTO, 2019). This study casts light on the effect of tariff protectionism, especially in the context of domestic sales and export growth, by seeking answers to the following research questions: First, what is the impact of the safeguards on exports of local firms? Second, how is the effect of tariffs on the import of the products subjected to safeguards? Lastly, how effective are the safeguards imposed in protecting local

producers and improving the company's performance? This paper is organized as follows: In the first section, the background of the context is described. In the second section, the literature review and theoretical frameworks are presented. The methodology, hypotheses, and data collection will be described in the third section. The fourth section discusses the data analysis. Then the last section provides conclusions and recommendations.

II. Literature Review

According to the World Trade Organization (WTO) (n.d), safeguards are permissible protectionism acts in restricting imports temporarily when the domestic industries experience threats or serious injury due to the rising imports of similar or competitive products. Under the GATT (1994) article XIX provisions related to safeguards, member countries are allowed to levy both tariffs above the maximum binding and quantitative restriction as protective trade policy measures (Crowley, 2007). Having discussed the safeguards definition, we now touch upon the form and rationale of safeguards implementation. The effects of the safeguards on the local economy's well-being have been discussed widely in various contexts. One of the rationales often used both by developed and developing countries in imposing protectionism is to nurture their infant and potential industries to develop the technology and reduce the gap with foreign producers (for safeguard in the developed countries see Handley et.al., 2020; Muhammad & Countryman, 2021; for safeguards in the developing countries see Dang & La, 2020; Takechi, 2020; Das et al., 2021). From an economic perspective, the presence of the government in the local economic activities is to address market failure and improve national welfare (WTO, 2009). The safeguards to provide temporary protection for domestic producers who experienced a decline in demand and comparative disadvantages against foreign competitors can be in the form of tariffs and non-tariff measures − all trade measures other than custom tariffs and tariff-rate quotas − (Patunru & Rahardja, 2015).

2.1.The Implementation of the Safeguards

This part highlights some trends, main theoretical findings, as well as practical issues related to safeguards implementation. The re-emergence of protectionism has been increasing for the last decade as the absence of meaningful effects of tariff liberalization since the 2000s (Fajgelbaum et al., 2020; Altenberg, 2021). According to Riksbank (2017), the recent signal of widespread protectionism has been labeled as global protectionism that differs from traditional

approaches. While the infant industries argument has been used for some time to justify the measures of traditional form, national sovereignty is used as a motive in global protectionism (Enderwick, 2011; see Takechi, 2020 for tariff-based protectionism; for non-tariff-safeguards, see Muhammad & Countryman, 2021). However, the question of whether the local firms benefit from safeguards policy imposed by the government has been a longstanding debate and remains vague. A strand of literature claims that tariff protectionism has a contra-productive effect on domestic producers (Handley et al., 2020; see also Takechi, 2020; Cali & Montfaucon, 2021). There are few studies that focus on the effect of tariff-based protectionism on export growth (but see Handley et al., 2020; Cali & Montfaucon, 2021). Cali and Montfaucun (2021) found that the rising exposure of NTMs may reduce the competitiveness of domestic producers in the global market as well as at the local level. At its simplest, the rise in import tariffs limits access of domestic producers to economical inputs which leads to the high production cost and causes the output to be less competitive in the market (Takechi 2020; see Gupta, 2021 for the effect of NTM in lower Total Factor Productivity (TFP). However, these few research lack in providing explicit studies related the competition at the micro level and solely rely on market concentration and export performance. Hertel et al. (2010) also argue that the safeguards mechanism may increase the volatility of the global price of commodities that bring disadvantages for local imported producers. Likewise, Muhammad and Countryman (2021) pointed out that tariff protectionism has an insignificant effect in reducing import volume and affecting local prices. They found that the reduction in US blueberry prices in 2016-2018 was insignificant to the level of import growth.

Another growing body of literature raises concerns about the effect of safeguards on downstream industries (Barattieri & Cacciatore, 2020; Dang & La, 2020). Baratttieri and Cacciatore (2020) through a comprehensive input-output data linkage revealed that protectionism has significant negative effects on downstream chains rather than in protected industries. They found that the downstream firm's productivity and employment decrease along with the

increasing price in the direct or intermediate inputs subject to safeguards. Despite a robust empirical analysis presented in this literature, they limit using aggregate data samples to examine production networks across the chain.

2.2.The Safeguards in Manufacturing Sectors

There are several studies that focus on the impacts of safeguards imposed by the government in specific sectors (see Barattieri, 2020 on the steel sector in the USA; Muhammad & Countryman, 2021 on the blueberries in the USA; Dang & La, 2020 on the steel sector in Vietnam; Takechi, 2020 on vegetables in Japan; Das et al., 2021 on the agricultural sector in India). Much of this existing literature mainly discusses the effect of the safeguards on the agricultural fields given the perishable nature of the products. On the other hand, safeguards implementation in manufacturing sectors is mostly caused by the rise of global protectionism in recent decades. The tendency toward protectionism started has become stronger since 2016 after the world experienced a downward trajectory in tariff liberalization after its peak during the 1990s (Altenberg, 2018). This phenomenon has been worsened by the trade war between the U.S. and China that started in 2018. The U.S accused China of intellectual property (IP) theft and used the national security rationale to start the war. The tariffs-based safeguard imposed by the U.S. began in February 2018 and is divided into these major events:

1. The 1st wave, at the beginning of 2018, Trump imposed global safeguards on $ 8.5 billion in solar panels and $ 1.8 billion in washing machine imports that have injured domestic producers.
2. The 2nd-3rd waves in March-June 2018, the tariffs announcement on all trading partners targeted iron and steel as high as 25% applies to countries that exported $10.2 billion, and 10 % aluminum applies to countries that exported $7.7 billion to the U.S. in 2017.
3. The 4th-6th wave against China's unfair trade practices and IP theft specifically was implemented in June-September 2018. The tariffs targeted approximately $247 billion

worth of imports from China, with subsequent tariff hikes from 10% to 25% on 11,207 (48.8%) imported products from China especially machinery, telecommunication, and electronic appliances (Fajgelbaum et al., 2020).

The global safeguards imposed by the USA at the beginning of 2018 on washing machines for the 1st wave and iron, aluminum, and steel for the 2nd wave, triggered responses from the trade partners subject to tariffs. Retaliatory tariffs were imposed on the U.S. by Canada, China, Mexico, Russia, Turkey, and the EU with the total targeted across 8,073 products worth $127 billion (8.2%) of annual U.S. exports. The retaliatory tariff increases were enacted mostly on U.S. agriculture exports, followed by crop, fishing, and beverage and tobacco products, resulting in a 9.9-11 % decline in U.S. exports (Fajgelbaum et.al., 2020). Amiti, et.al. (2019), found that the immediate effects of the trade war raised the prices of products subject to tariffs by 10-30% per unit value. The U.S. firms bearing all the cost of higher U.S. import tariffs for the Chinese input or intermediate goods would likely reduce their profitability. Additionally, the final goods U.S. consumers also would have to pay higher prices because the U.S. suppliers may have increased prices, either because of the higher production cost or because they could do markups due to the lower import competition (Amiti, et.al., 2020). Fajgelbaum et al (2020) found that the increased tariffs reduce the real income of U.S. consumers and firms that buy imports by $51 billion equal to 0.27% of GDP. This led to a total deadweight loss of about $1.4 billion/ month by end of 2018 (Amiti, et.al., 2019).

Whereas many studies on protectionism have been conducted at the country level, only a little research has examined the impact of the safeguards at the firm's level, especially in manufacturing sectors in Indonesia (but see Amiti & Konings, 2005; Cali & Montfaucon, 2021; Gupta, 2021). Amiti and Konings (2005) used manufacturing sectors to investigate the impact of trade liberalization on firms using the data from the Survey Industry (SI) from 1991 to 2001. They found that reducing tariffs on imported inputs by 10 percent can increase productivity by 11

percent for importing firms and 3 percent for all firms. Access to affordable input materials may induce tougher import competition by improving the know-how, providing product variety, and better quality. In addition, only a few studies to date focused on textile and products of textile (TPT) industries in Indonesia (but see Rahmadani & Pahlawan, 2011 for the influence of safeguard measures on imported cotton yarn from India; Riesfiendiari et al., 2021 for the impact of safeguards on yarn industry's using CGE model). Riesfiendirari et al. (2021) find that tariffs levied on imported yarn decreased its import and export value by 1.16% and by 0.13%, respectively. Their finding also claimed that the imposition of the safeguard tends to decline the economy utility with compensating variation (CV) value of -32.99%. However, one limitation of this result is it used static assumptions and had short research horizons.

Having discussed the prior studies on safeguards in several sectors and the potential gap that can be filled, this paper will add a contribution to the recent studies by examining the impact of the safeguards in TPT sectors that are still lacking. Considering that the Indonesian government took several measures related to safeguards for fabrics and yarn in TPT sectors in the mid-2019s (WTO, 2019), it is necessary to examine the impact of this policy on domestic's firms which will be explained in the next chapter of this paper.

2.3. Safeguards Implementation in Indonesia

The return of protectionism policy in Indonesia was on the rise after the Asian financial crisis, as it also arose in many emerging countries in Asia (Bird et al., 2007). In the aftermath of the twin crises, both political and economic, there has been a growing foreign sentiment in the Indonesian economy, especially as a post-effect of IMF programs. Regarding this situation, protectionism in the form of tariffs and non-tariff measures became a popular trade policy instruments to preserve the nation's interest and improve the deteriorated domestic economy (see Ing et al., 2018). During this period, the government started interventions toward trade activities by enacting laws that banned the export of mineral products and regulated import permits for

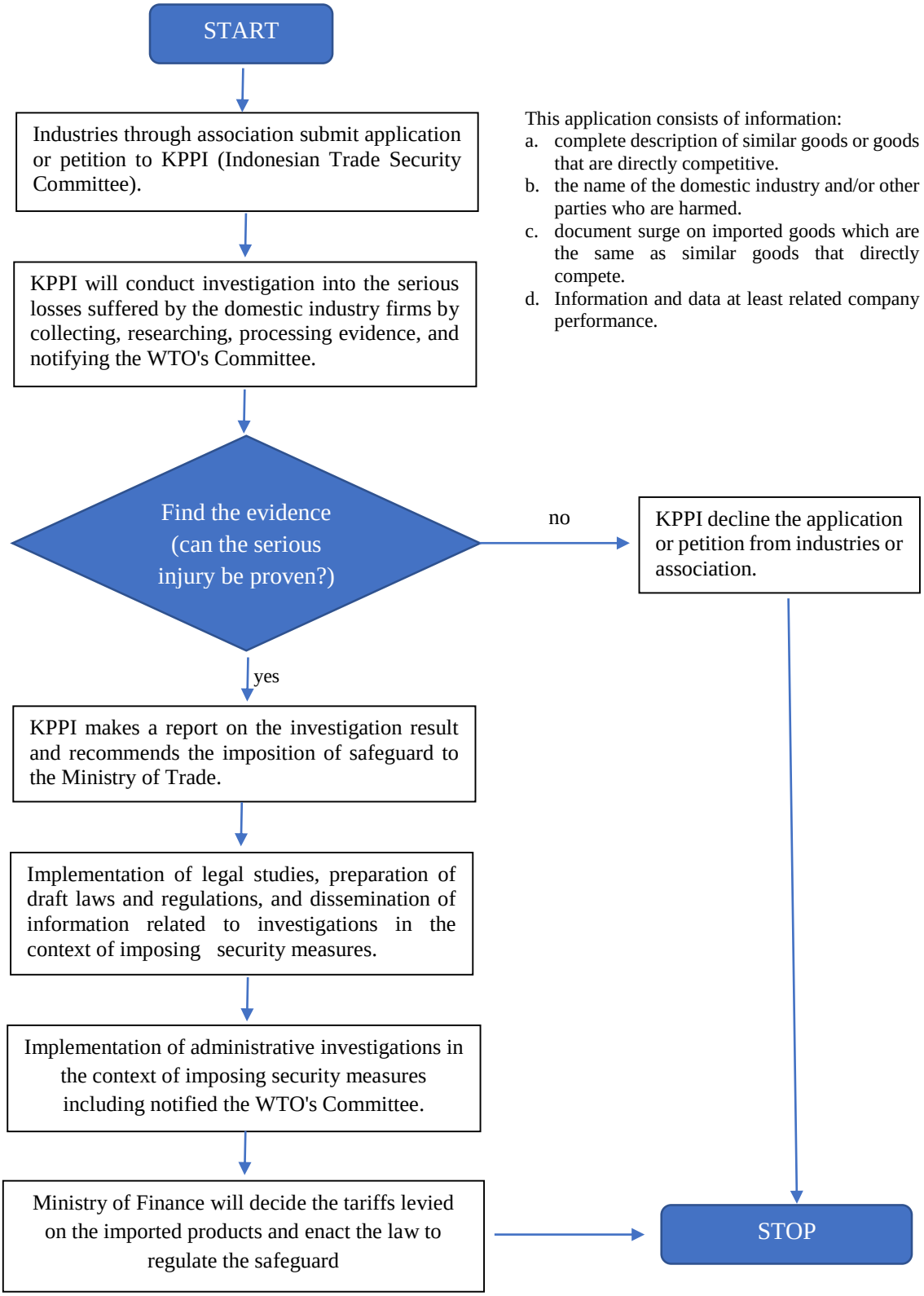
mining, farming, and horticulture (Patunru & Rahardja, 2015). Additionally, for several products in these sectors, the government overly controlled the distribution of imported items. While Indonesia has consistently decreased the tariffs over time since 1995, the imposing of non-tariff-based measures has increased continuously and broadened the coverage area into manufacturing sectors. For instance, the government passed a bill that allows the related Ministry to set a standard and increase local content requirements (LCRs) for machinery, smartphones and other electronic devices, and vehicles in 2011 (Ing et al., 2018). According to the WITS (2015) and USTR (2020), the Indonesian government also levied further increases in tariffs on consumer goods and increased the tariffs rate on several imported goods that compete head-to-head with domestic products, such as chemicals, electronics, cosmetics, pharmaceuticals, milling machinery, and a range of agricultural products.

Indonesia's pattern of economic reform that the government is pursuing, which started during the tenure of Susilo Bambang Yudhoyono's presidency and has been continuing under President Joko Widodo's administration, is profoundly protectionist in nature (Patunru & Rahardja, 2015). They argued that one of the rationales for re-emerging protectionism is the drop in Indonesia’s competitiveness after China acceded to the WTO and entered the global market. The massive expansion and strong penetration of Chinese products around the world immediately became obstacles for Indonesia, trying to upgrade the value chain by developing heavy industries. As also stated in Cali (2018), the Indonesian government uses protectionist policies to impede foreign trade activities, stabilize local prices, and encourage linkages in the local economy by promoting domestic industries and their share in domestic value added. The legal standing for Indonesian safeguards is administered by Government Decree number 34 of 2011, consisting of trade safeguards, anti-dumping, and retaliation measures. Based on the KPPI (n, d), some requirements must be fulfilled before the government decides to impose safeguards on certain products as illustrated in figure 1, it is also including:

1. there has been a surge in imports over the last 3 years;
2. local manufacturers experience serious losses or threats against similar or directly competing goods, and;
3. there is a causal relationship between the two.

As one of the five priority industries in Indonesia, the TPT sector is also the main object of protectionist trade policies both tariff and non-tariff measures. Since the commodity boom in 2004 and 2011, the export of labor-intensive products including textiles has declined considerably (Aswicahyono et al, 2009). Domestic trade strategies have been implemented for the past decade to promote domestic industries and increase economic activities both locally and globally. Several protectionism policies imposed by the government in textile industries in terms of non-tariff barriers for instance: verification of foreign raw materials in textiles regulated in Regulation number 2 of 2010 by the Ministry of Trade. The exemption from raw materials technical inspection is applied only for textiles produced in bonded zones. The other non-tariff barrier measure is in the form of local content requirements. This was administered under The Ministry of Industry Regulation number 15 of 2012 which increased local content requirements in the textiles, clothing, and footwear industry. Regarding export measures, Indonesia imposed Regulation 34 of 2009 by the Ministry of Energy and Mineral Resources (MOEMR) related revitalization program for small and medium enterprises in textiles and leather.

Figure 1. Procedure of safeguard imposition in Indonesia



Note. Adapted from *safeguard measure in Indonesia*, by KPPI (Indonesia Safeguards Committee), n.d, (http://kppi.kemendag.go.id/faq/index/8)

KPPI conducts the safeguard investigation on a detailed product level based on a petition or application proposed by the association. Indonesia uses 8 digits HS codes as product classification in international trade, thus, these 8 digits HS codes are used as a standard for any trade policy measures. HS code or harmonized system is a list of numbers determined by the World Customs Union (WCO) to easily classify and identify a product in global trade. The first six digits of the HS code will be common for all countries, and the following digits may be different for each country.

In some cases, before Import Duty for Trade Safeguard Measures (BMTP) is executed, sometimes the government implements temporary BMTP (BMTPs) parallel with the investigation process to avoid more severe conditions for domestic firms. The validity period of temporary safeguards is 100 days while for the BMTP is 300 days of evaluation before the government decides whether the safeguards need to be extended for the other period (KPPI, 2020).

2.4. Textile and Products of Textile (TPT) in Indonesia: Fabrics and Yarn Industries

The industry of textile and products of textile (TPT) is one of the crucial labor-intensive industries in Indonesia that emerged as one of the non-oil primary exports since the 1970s (Hermawan, 2011). TPT sector consists of fiber making, spinning (spun and fill), fabric processing, apparel or garment, and other textile industries as shown in figure 2. Indonesia's TPT industries are considered a well-established and integrated sector that connects high-capital fiber production upstream to the labor-intensive garment manufacturing in the downstream alongside fabrics and yarn industries as intermediaries (Negara 2010; Vickers, 2012; Rahmadi, 2020). According to the BPS "Statistics Indonesia" (2021), the TPT sector contributes 1.06% of the Gross Domestic Product (GDP) and approximately 7% to the non-oil manufacturing sector. In addition, these industries create employment for 3.96 million laborers, and revenue from textile commodities exports about 6.18% of the national income (Ministry of Industry, 2021).

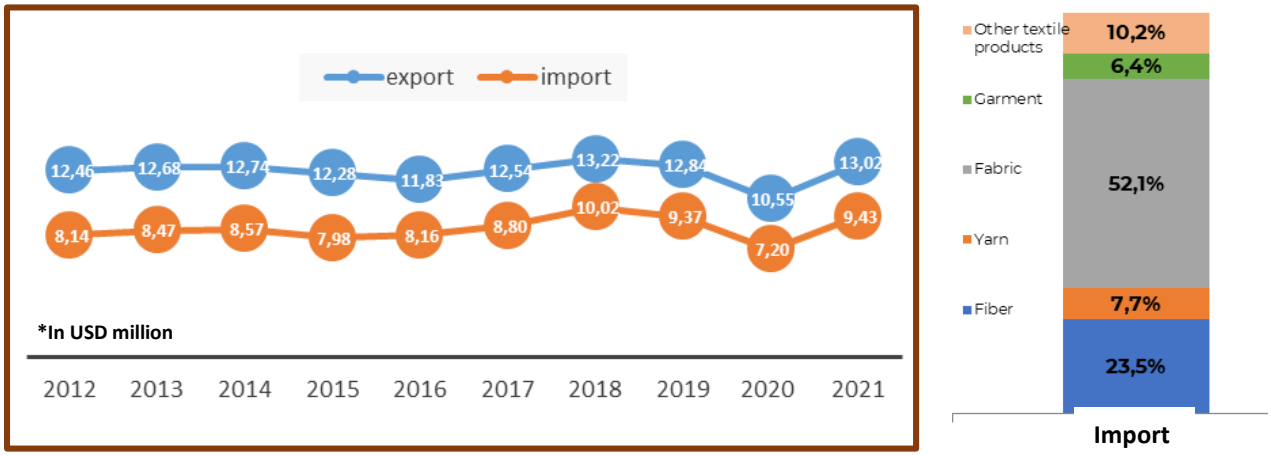
Figure 2. TPT supply chain network by 2021

Note. Adapted from *TPT Industry Facts and Figures*, by Ministry of Industry, 2021

However, for the past decade, the contribution of TPT industries to the manufacturing sector and the GDP has been declining remarkably as the impact of the expanding growth in China's textile production since 2010 (Vickers, 2012). Indonesia's market share continues to decrease from 1.66% in 2009 to 1.35% by 2020, making Indonesia out of the top ten textile exporting countries (Trademap, 2021). One of the reasons why TPT industries have been experiencing a significant downturn in both export and local sales is due to the fact that it faces serious competitive obstacles from a surge of import products (Negara, 2010; Susanto, 2017). This situation also arises because of the inefficient supply chain and the erosion of competitiveness in intermediary industries (Soesastro & Basri, 2005). This situation is reflected by the composition of the import TPT, which is dominated by fabrics and yarn that contribute almost 60% of total import TPT (Statistics Indonesia, 2021). In addition, the fabric industry also has the lowest productivity and higher import volume compared to the other subsectors with utilization rates of 33.21 percent and a trade deficit 537.9 million tons or equal to USD 2.68 million by the year 2021. According to the Ministry of Industry (2021), several internal constraints make these two sub-sectors lose their competitiveness. First is high material and energy cost. Indonesia has a

significant portion of imported raw materials in intermediary industries, such as cotton and textile chemicals. These raw materials are priced in US dollars and levied by import tariffs (GBG, 2018). Additionally, gas and electricity prices form 25 percent of the upstream textile industry cost structure in Indonesia. The second factor is outdated technology, aging machinery, and equipment. Currently, around 30 percent of yarn and fabric factories in Indonesia use equipment that is over 25 years old, compared to textile manufacturers in China that use machinery less than 10 years old and have restructured regularly (Meison, 2010). This factor leads to lower productivity and inefficiency in production processes. These domestic issues still burden Indonesia's TPT sector as a whole and have hindered its export potential. Yet, Vietnam, Bangladesh, and Cambodia have gradually overtaken Indonesia's share in the domestic and export markets.

Figure 3. Trade composition of TPT industries



Note. Adapted from *Indonesia GDP Annual Growth Rate 5.02 percent*, by Statistics Indonesia, 2021, (https://www.bps.go.id/)

2.5. The Safeguards of Fabrics and Yarn Products in Indonesia

For the past 10 years, the Indonesian government has implemented several safeguards on various types of yarn and fabrics to improve the performance of intermediary industries in the TPT sector. Enderwick (2011) argued that the reason for Indonesia's drift toward a more protectionist policy is to establish local industries and give a space for local producers to be developed and catch up with the technology against foreign manufacturers. This narrative has been triggered by the level of the competitive strength of domestic firms that are relatively weaker than the importers resulting in government intervention in the market. The imposing of tariff-based safeguards for yarn and fabrics products has started since Indonesia actively engaged in Free Trade Agreement (FTA) including ASEAN-India Free Trade Area (AIFTA) and ASEAN-China Free Trade Area (ACFTA) (Adine et al., 2016). According to the Textile Association (API) (2013), these FTA caused harm to local TPT firms since the cheaper products from China and India can get zero tariffs which leads to a high import volume. KPPI (2019b) reported that the main source of yarn supply in Indonesia came from mainland China with 67.42 percent. While for the fabrics, India had the biggest share in the domestic market with approximately 47 percent. Therefore, in 2011 government implemented safeguards for 40 HS codes of cotton yarn other than sewing thread and fabrics to restrain imported products, especially from China and India. These safeguards were extended for another 300 days until 2017 due to the local firms still unable to remedy damage from the previous losses. In 2019, the government re-implemented the safeguards for 6 types of yarn from synthetic staple fibers and 104 fabric products. The reason for the imposition of these temporary safeguards (BMTPs) is that during the period 2016-2018 imports of fabrics and some types of synthetic yarn rose exponentially by 31.08% and 44.38%, respectively (KPPI 2019a, 2019c; WTO, 2019). Related to this situation, from 2020 to 2022, the Indonesian government has imposed safeguards (BMTP) for fabrics and some types of yarn to protect the domestic industries and to boost the performance of local firms (Reuters, 2019, 2022).

III. Methodology

This research aims to investigate the impact of the safeguard's imposition on local firms' performance. This study focuses on the trade performance of local yarn and fabric manufacturers in Indonesia. To obtain the firms' performance on trade, both values, and volume, secondary datasets were fetched from the customs office and Statistics Indonesia (BPS). The empirical method in this research follows the Differences in Differences (DID) approach to estimate the relative changes in the value of export-import on yarn and fabrics industries as an impact of the safeguards imposed. Additionally, this thesis limits the event on the last safeguards enforced by the Indonesian government, which entered into force in 2019 as a treatment effect.

The first part of this section will explain the data used in this research as well the treatment and control group. Later, the hypotheses development will be explained and followed by the characteristics of the DID strategy used in this research and validation of the identification assumptions in the last part of this section.

3.1.Data Collection

In order to perform empirical analysis on this study, panel data was gathered covering the period of 2011 to 2021. The unit analysis of this study is the monthly export-import data at the 8-digit HS codes level of products in the TPT sector, both in value (in million USD) and volume (in kgs). Where the treatment group is consisting of yarn and fabric products on which the safeguard was levied, and the control is the other TPT products that are not affected by the safeguards. Summary key variables used for this analysis are presented in table 1. The data available for the treatment group covers the period from 2011 to 2021 while the availability of the data for the control group starts from 2013. Since there is a different starting point between the treatment and control groups, the data used in the regression analysis will only cover the year 2013-2021. The are 113 products in the treatment group (6 items of yarn and 107 items of fabrics), while the treatment group consists of 1062 products. The unique identification used in the DID models is the interaction

between the HS code, type of industry, and year of observation.

Table 1. Variables of analysis

No	Data set	Year	Key Variables	Unique identification
1	fabrics and yarn products imposed by safeguard	2011-2021	Export Volume (Kg)	HS codes X industry X year (113 HS codes)
			Import Volume (Kg)	
			Value of Export (USD)	
			Value of Import (USD)	
2	other TPT products not imposed by safeguard	2013-2021	Export Volume (Kg)	HS codes X industry X year (1062 HS codes)
			Import Volume (Kg)	
			Value of Export (USD)	
			Value of Import (USD)	

Table 2 presents the descriptive statistics for all the variables used in this study. In this research, all the variables are in logarithm forms to de-scaling the effect of the large number and for ease of calculations. There are 10575 observations in total after we merged two datasets, with an average level of 10.43 for export value and 11.72 for import value. In terms of trade volume, the average export was 8.73 compared with an average of 9.59 for imports.

Table 2. Descriptive statistics

Variable	#Observation	Mean	Std. Dev.	Min	Max
Log of Export Value	10575	10.428	5.902	0	20.606
Log of Export Volume	10575	8.727	5.253	0	19.794
Log of Import Value	10575	11.724	4.706	0	21.089
Log of Import Volume	10575	9.585	4.538	0	20.453

3.2. Development of Hypotheses

This research compares the relative changes in the trade performance of fabric and yarn firms in Indonesia on which the safeguard was imposed. The form applied the model specification as follows: A major concern is that the performances in several of yarn and fabric products could be different from the other TPT products, and these differences may be correlated with safeguards imposed. For example, the HS codes in which the import performance decreased may have been the ones that experienced increases in tariffs due to safeguards. Therefore, the DID model is a suitable approach in this research as it enables to control for time-invariant unobserved heterogeneity (Galliani et al., 2005) and recognizes that in the absence of shock, treatment and control groups are likely to move in parallel or have the same trend (Angrist & Pischke, 2015). However, one of the main shortcomings of DID's validity is the existence of unobserved time-varying covariates that are correlated with the decision of the government in implementing the safeguards and trade performance. For instance, the Covid-19 pandemic that happened in the middle of the years of observation, which was 2019, may affect the trade performance of the TPT products since the global consumption dropped, and the supply shortened. In this case, the correlation between safeguards imposed and trade performance would be confounded by the effect of the pandemic. In principle, the factors that confounded identification might come from unobservable characteristics that vary across time and individuals. Whether the trade performance was induced by time-varying shocks is essential to the subsequent impact analysis. Even though we are unable to test this hypothesis directly, if the result in DID model shows that the trade performance is uncorrelated with observed time-varying variables, then it is less likely to be correlated with unobserved covariates.

IV. Empirical Analysis

The model specification in this empirical strategy pursues the Differences in Differences (DID) method and takes the following forms:

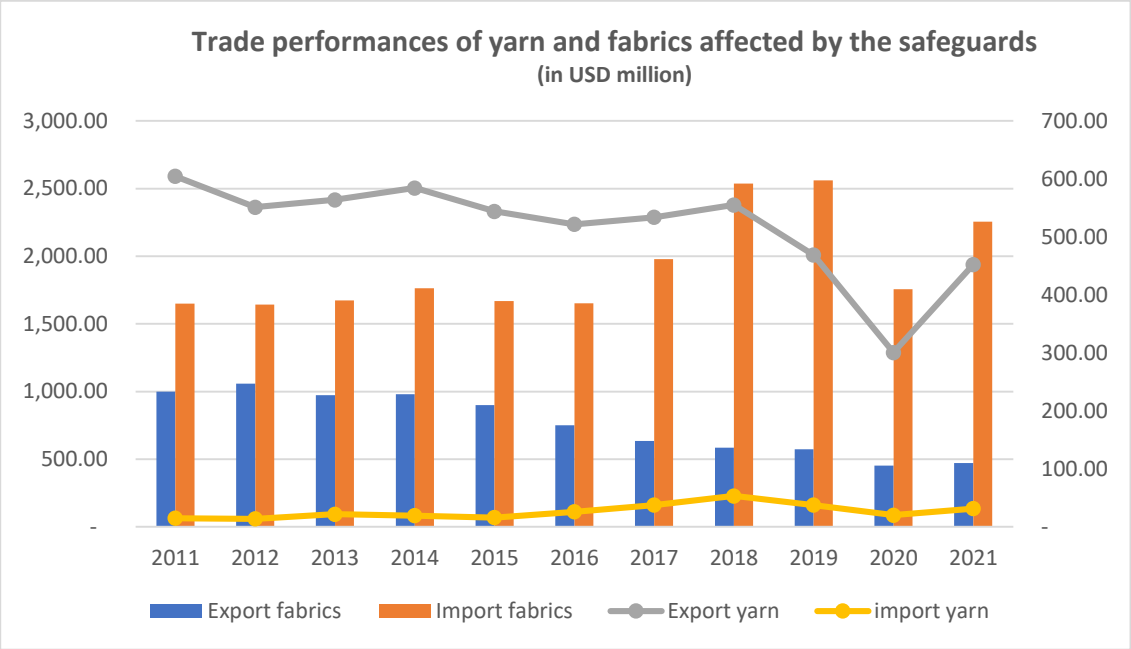
$$(1)\ Y_{it} = \alpha + \beta(Treat_h\ x\ Post_t) + \delta_h + \sigma_t + \varepsilon_{ht}$$

where *i* indexes' products (HS codes) and *t* indexes years; $Treat_h$ is a dummy variable that equals one for the product subject to safeguard and zero otherwise. Thus, the treated group comprises products subject to safeguard while the control group consists of the other (non-safeguard) TPT products. $Post_t$ is a dummy variable that equals one for the years after the safeguard is implemented. In equation (1) also contains control for HS code fixed effects, δ unique to product h and σ as a year fixed effect in period t. HS codes fixed effects control for all time-invariant factors that vary between products. While year fixed effects oversee for any temporal patterns of the firms' performance that uniformly affect all the products. The error ε_{ht} is a product time-varying error and might be correlated across time and space. It is suspected to be distributed independently of all δ_h and σ_t.

The coefficient of interest in equation (1) is β, which reflects the interaction term between the Treat and Post dummy variables that estimate the impact of the safeguard on the trade performance. The coefficient is expected to be negative for imports but otherwise for export, indicating a significant decrease in imports will boost the export and improve overall trade performances of the safeguarded products. This model defines the pre- and post-shock periods by the first safeguards implemented on yarn of synthetic and artificial staple fibres and fabrics sea in 2019 for following reasons. First, the 2019 safeguard, is still enacted until 2022, and the examination of this trade policy has highly relevant for the government in extending the safeguard and implementing the subsequent efficient policy in the yarn and fabrics industries. Secondly, the data is only available from 2011 onwards, thus by taking 2019 as a treatment year we can get sufficient observations for pre- and post-event. The last one is because these changes likely

affected the trade performance of the local yarn and fabrics industries, as can be observed in figure 4, which indicates the change in local TPT industries' behaviour since then. Additionally, the 2019 treatment provides a clear identification, considering that those later years could be endogenous to defined trade performance conditions. Therefore, 2019 would be a reasonable treatment year choice for analysis purposes.

Figure 4. Trade performances of product subject to safeguards



Note. Adapted from *TPT Industry Facts and Figures*, by Ministry of Industry, 2021

This strategy has all the favours and potential downturns. It also includes year dummies to capture the possibility that products decumbent to nuisances may have different responses compared to normal events. This identification entrusts the assumption that there are no other omitted variables beyond the controlled ones that concur with the firms' performance. The second mode is thus presented as:

$$(2)\ Y_{it} = \alpha + \beta(Treat_h\ x\ Year_t) + \delta_h + \sigma_t + \varepsilon_{ht}$$

In the second model, the interaction term $Treat_h\ x\ Year_t$ is denoted with the β coefficient. It accommodates the difference in time trends between the treated and control groups. This model is built to confirm the pre-common assumption, whether there is any differential trend in the data

before the shocks. The results will be summarized in table 5 in the next chapter, which includes various sets of control variables to acquire the table columns' results.

This DID approach also examines a year-by-year estimating equation that takes the following model:

$$(3)\ Y_{it} = \beta_0 + \sum_{\tau=2013}^{2021} \beta_\tau \, Treat_h \, x \, Year_t^\tau \ + \delta_h + \sigma_t + \varepsilon_{ht}$$

This last form measures the time dimension of exposure to the safeguards. All variables in equation (3) are defined as in equation (1), but the only difference is that in equation (3), it interacts with the treatment variable with each of the year fixed effects (relative to 2019), treating the period of 9 years (2013-2021), which 7 years before 2019 as the reference group. The estimated coefficients of $\beta\tau$ explain the disparities between the treated and control groups during those years. Since we expect that safeguard has a significant impact on local fabrics and yarn firms' performance, we estimated $\beta\tau$ to be constant over time for years before the safeguards entry into force and increase after the safeguards took place.

V. Result and Discussion

The basic formulation of DID strategy is illustrated using simple two-by-two tables as shown in table 3. It presents the means of log of export value and import value from treated and control groups. The result of the difference in these differences portrays a causal effect of the treatment. This study relies on the assumption that in the absence of the safeguard's imposition, the fluctuation in trade performance would not have been systematically different in the products to safeguards and other TPT products. The DID estimates that the export value fell in both the treatment and control groups, with a much sharper drop for products subject to safeguards. For the log of import value, DID estimates lesser event effects for the treatment group compared to the control group. The estimator suggests that the treatment effect contributed to a significant decrease in the log of export value on average by 0.318 and lowered the log of import value by 0.265 when the safeguard was initiated. According to reference studies related to the impact of safeguards on the supply chain (see Barattieri & Cacciatore, 2020; Dang & La, 2020), the imposition of safeguards in the upstream has more sizeable effects on downstream industries. The increasing price in the upstream industries will significantly affect downstream industries that used those products intensively as their inputs. However, in this case, the log of export in the yarn and fabrics as a treated group decreases more sharply than in the control group which consists of garment and other textile products as the downstream industries. To explain this phenomenon, we should examine the percentage of the products subject to safeguards used as an input in the downstream industries. In this study, the six items of yarn imposed by the safeguards are yarn (other than sewing thread) of synthetic and artificial staple fibers that are mostly used as raw materials for the weaving process of fabrics of synthetic filaments and/or staple fibers which also subject to safeguards as shown in table 3. Thus, the rising in prices of yarn of synthetic and artificial staple fibers will immediately affects the export value of its downstream products.

Table 3. Safeguards on fabrics of synthetic filaments and/or staple fibers

Product	HS Code	Total Items	Initiated
Woven fabrics of synthetic and artificial filament yarn	HS. 5407.10.29, 5407.10.91, 5407.20.00, 5407.30.00, 5407.44.00, 5407.51.00, 5407.52.00, 5407.53.00, 5407.54.00, 5407.61.90, 5407.74.00, 5407.81.00, 5407.82.00, 5407.83.00, 5407.84.00, 5407.91.00, 5407.92.00, 5407.93.00, 5407.94.00, 5408.22.00, 5408.24.00, 5408.32.00, and 5408.34.00.	23	30-Sep-19
Woven fabrics of synthetic staple fibres	HS. 5512.29.00, 5513.11.00, 5513.12.00, 5513.21.00, 5513.23.00, 5513.39.00, 5513.49.00, 5514.12.00, 5514.21.00, 5514.22.00, 5514.29.00, 5514.42.00, 5514.43.00, 5514.49.00, 5515.11.00, 5515.12.00, 5515.91.00, 5515.99.90, 5516.11.00, 5516.13.00, 5516.14.00, 5516.22.00, 5516.24.00, and 5516.92.00.	24	30-Sep-19

In the other hand, the 107 fabrics imposed by the safeguards represents approximately 25% of 431 yarn products in Indonesia. Those items used as direct or intermediate inputs for wide range of products. Though the increasing price of those fabrics may reduce the export of their downstream, the magnitude is relatively small compared to the exports from other textile products not affected by the safeguards. Hence, the export value in the control group declines more modestly relative to the treated group.

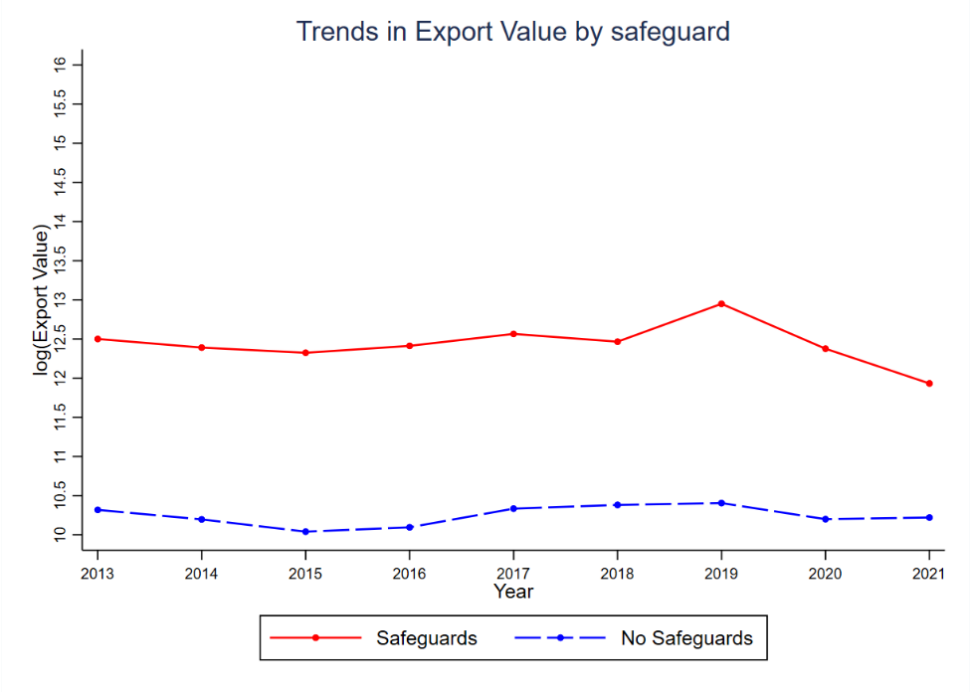
The pattern of increase in trade performance could vary across TPT products systematically. However, an implication of the identification assumption can be evaluated because individual items in the controlled group were not exposed to the safeguards. Thus, the decrease in trade performance between other TPT products in this group should not differ statistically across industries.

Table 4. Means of log (value of export) and log (value of import) by treatment and control group

	Log (Export Value)			Log (Import Value)		
	Safeguard			Safeguard		
	Before	After	Difference	Before	After	Difference
	(1)	(2)	(3)	(4)	(5)	(6)
Experiment of interest						
fabrics and yarn subject to safeguard	12.5152	12.1543	-0.3609	15.1846	15.3571	0.1725
	(0.1627)	(0.2991)	(0.3399)	(0.077)	(0.1103)	(0.1343)
Other products not subject to safeguard	10.2527	10.2099	-0.0428	11.2547	11.6921	0.4374
	(0.0698)	(0.1269)	(0.1449)	(0.0568)	(0.0915)	(0.1077)
Differences	2.2625	1.9444	**-0.3181**	3.9299	3.6650	**-0.2649**
	(0.177)	(0.3243)	(0.3695)	(0.0956)	(0.1431)	(0.1721)

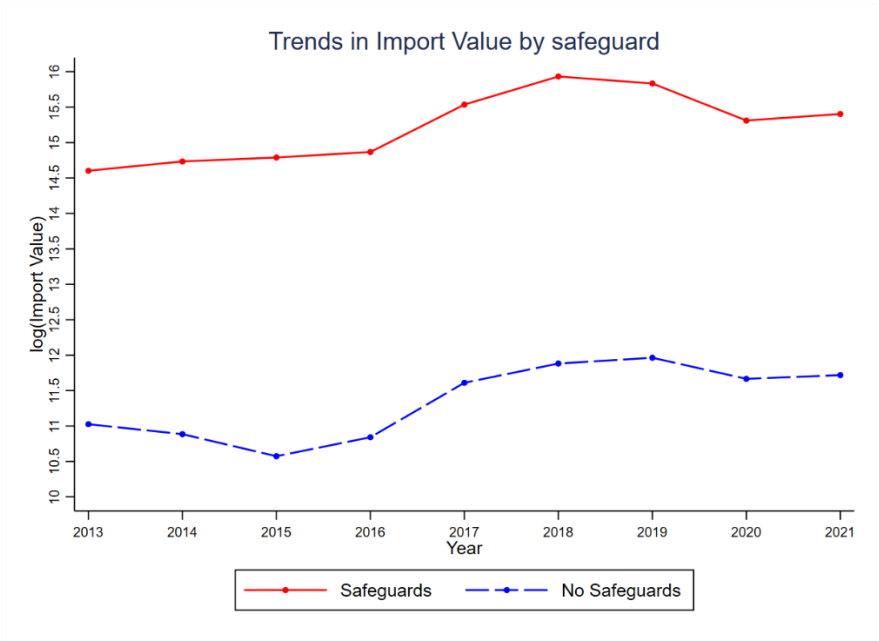
The Differences in Differences logic in this study is illustrated in figure 5 and figure 6 which plots the export and import values of the product subject to safeguards and other textile products from 2013 to 2021. The data from those periods were connected by solid lines for the treated group and dashed lines for the control group. Both figures highlight the fact that the safeguards effect results in a reduction in trade performance both on export and import which also confirmed the DID analysis obtained in table 4. In figure 5, both the treatment and control groups moved at the same trend before the shock occurred in 2019. However, after the safeguards were imposed, the export value fell more sharply in the treated group compared to the export value of the control group. In terms of import, both treated and control groups relatively move at the same pace during those years. Even though, there was a slight decrease in import value for the treated group after 2019 as depicted in figure 6.

Figure 5. Trends in export value of yarn and fabrics imposed by the safeguard and the other TPT products



Note. Figure 5 illustrates the Differences in Differences analysis for export value.

Figure 6. Trends in import value of yarn and fabrics imposed by the safeguard and the other TPT products



Note. Figure 5 illustrates the Differences in Differences analysis for import value.

Table 5 shows the baseline estimates derived from equation (1), where the dependent variable is the value of trade performances. For both columns control for HS codes and year fixed effects. This approach concedes for us to override all time-invariant product characteristics and year events that collectively affect all industries (see Cao & Chen, 2002). For each column, we report

three sets of standard errors. First, the standard errors in the parentheses are for the normal regression while the second one is the robust standard errors. The third standard errors are clustered at the product level. The results obtained across all specifications are negative and quite significant. For example, in the estimated coefficients in column 1, the log of the export value was negative and significant at the 10 percent level, suggesting a decrease in export performance by 0.318 after the safeguard was implemented. The point estimator for the log of import value reported in column 2 also has magnitudes similar to those reported in column 1. The safeguard imposed also has a significant impact in reducing the import value of the treated group by 0.265 compared to the control group with a five percent (5%) level of significance.

Table 5. Safeguard and export- import performance: Baseline Estimation

	(1)	(2)
VARIABLES	Log (Export value)	Log (Import value)
Safeguard*post-periods	-0.3181*	-0.2649**
	(0.2097)	(0.1730)
	[0.1808]	[0.1054]
	{0.2096}	{0.1464}
HSCode FE	YES	YES
Year FE	YES	YES
Observations	10,575	10,575
Adjusted R-squared	0.7990	0.7852

Standard errors are in parentheses. Robust standard errors are in brackets. Standard errors clustered at the HS Code are in braces. All the regressions are controlled by year and HS Code dummies.

* Statistically different from zero at the .1 level of significance.

** Statistically different from zero at the .05 level of significance.

*** Statistically different from zero at the .01 level of significance

The analysis in table 6 presents equation (2) estimation results for trade performance from all years of observations. All columns report the results for a model in equation (2) using the entire observations, including no covariates except for products and year dummies. Both columns have two sets of standard errors, where standard errors in brackets are robust standard errors. The

coefficient of interest retrieved across all specifications both log of export and import value are close to zero and insignificant statistically. This result is consistent with the model's identification assumption that there are no pre-existing differential trends for untreated periods.

Table 6. Safeguards and export-import performance: Pretreatment trends

VARIABLES	(1) Log (Export value)	(2) Log (Import value)
Safeguard*pre-trends	0.0291	0.0356
	(0.0483)	(0.0397)
	[0.0433]	[0.0262]
HSCode FE	YES	YES
Year FE	YES	YES
Observations	8,225	8,225
Adjusted R-squared	0.8108	0.8081

Robust standard errors in brackets

*** p<0.01, ** p<0.05, * p<0.1

The result in table 7 is derived from equation (3), which measures time dimensions' exposure to the safeguards with controlling the products (HS codes) dummies. The year 2019 when the safeguard took place is omitted from the regression. This model is also accomplished by introducing product and year effects, a set of dummies for every product in the observation as well as indicating each year in the sample, except for one, which is omitted as a reference group. The coefficient of interest captures the effect of the safeguards on trade performance by considering products and year-fixed effects as control variables. Table 7 shows a similar insignificant statistical result across all specifications for the years before safeguards. The interaction term, $Treat_h \; x \; Year_t^\tau$ only shows a significant result in the year 2021 as presented in column 1. It contracted export value by 0.832 and is highly significant at a 1 percent level. In contrast, the value of import shows that none of the results were statistically significant across the years.

Table 7. The time dimension of exposure on safeguards

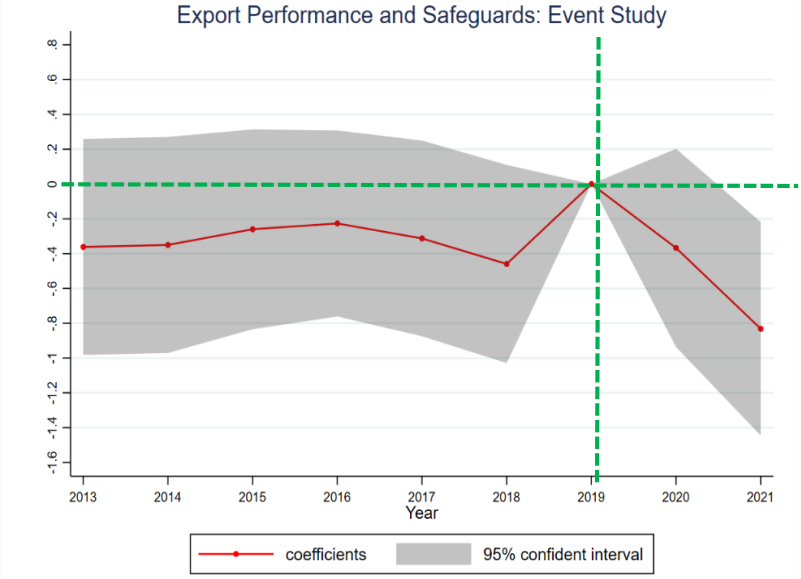
VARIABLES	(1) log (Export Value)	(2) log (Import Value)
1.treat#2014.Year	-0.3503	-0.0218
	(0.3166)	(0.1898)
1.treat#2015.Year	-0.2600	0.3447*
	(0.2927)	(0.1809)
1.treat#2016.Year	-0.2267	0.1549
	(0.2725)	(0.1801)
1.treat#2017.Year	-0.3128	0.0546
	(0.2868)	(0.1668)
1.treat#2018.Year	-0.4596	0.1800
	(0.2902)	(0.1656)
1.treat#2019.Year		
1.treat#2020.Year	-0.3675	-0.2250
	(0.2906)	(0.1738)
1.treat#2021.Year	-0.8320***	-0.1853
	(0.3127)	(0.1868)
Observations	10,575	10,575
Adjusted R-squared	0.7989	0.7852
HSCode FE	YES	YES
Year FE	YES	YES
Omitted the year of shock (2019)	YES	YES

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

The estimates of equation (3) are also plotted in figure 7 and 8. Those figures depict the differences in trade activities between yarn and fabrics subject to safeguards versus non-safeguards TPT products before and after the 2019 imposition. Each point on the solid line represents the coefficient of the interaction between a dummy in the products subject to safeguards and the trade performance from 2013 to 2021, considering product (HS code) and year fixed effects. Standard errors clustered at the HS code level are illustrated by shaded area that reflects 95 percent confidence intervals. The dashed vertical line represents the 2019 treatment year, and the periods are grouped pre- and post-relative to this year. These coefficients not that much fluctuate for export value at the pre-safeguard periods as shown in figure 7. The estimated coefficient increased after 2018 then dropped sharply when the safeguard was implemented. The regression estimators illustrated in figure 7 also confirm the pre-common trends assumption since

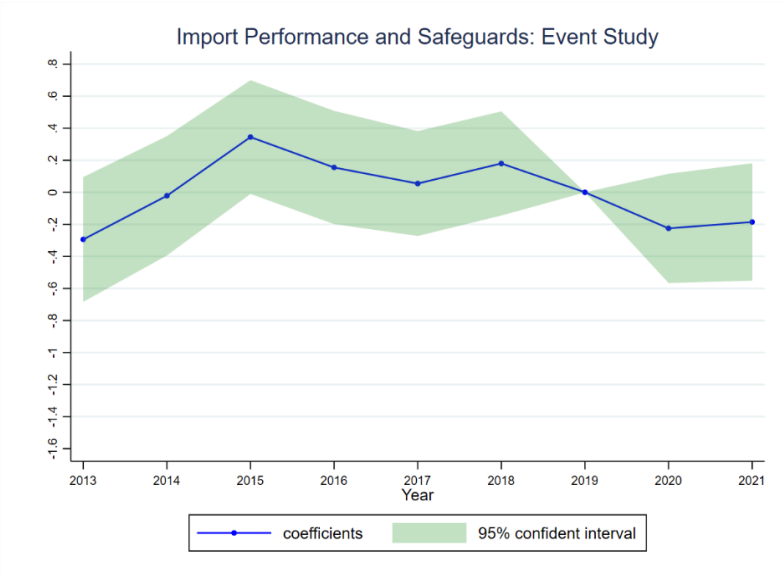
the difference between the treated and control groups has a small magnitude during untreated periods.

Figure 7. Export performance and safeguards: event study



Meanwhile, there was considerable fluctuation in the import's performance at the beginning of the periods as shown in figure 8. The fall in import activities during this period more likely corresponds to the safeguard's imposition for cotton yarn and fabrics from the end of 2014 until 2017. The difference between safeguards and non-safeguards rose again after the safeguard was ended. A pattern portrayed in figure 8 implies that the imports performance responded to the changes in trade policy during this period. After the 2019 safeguards, the coefficient further steps downward in 2020 and increased modestly in 2021.

Figure 8. Import performance and safeguards: event study



VI. Conclusion and Policy Implications

This study examined the impact of the safeguards on local yarn and fabrics firms' performance. It observes the different behavior between products subject to safeguard and non-safeguard in terms of trade activities. The differences in differences (DID) approach with a panel data fixed effect model was used to perform empirical analysis in this research. Data are collected from Statistics Indonesia and Indonesia Customs Office for the period 2011 to 2021 for all TPT across subsectors (fiber, yarn, fabrics, garment, and other textile products). The variables used in this research are foreign trade performance on exports and imports values. This thesis hypothesized that the implementation of a trade protectionist policy may impact the trade outcomes of local manufacturers.

After conducting an empirical analysis, it is found that the trade protectionism measures in the form of tariff-based safeguards adopted at the end of 2019 had resulted in the negative impact on the domestic firms' performance of yarn and fabrics. The difference-in-differences method estimates a contraction in the import value of products subject to safeguard by 26.45 percent. Safeguards policy turned out high likely reducing import values and resulting in a decrease in export performance by 31.8 percent on average. The model confirms that there are no pre-existing

differential trends in the data other than from the shocks since the result of pre-treatment trends regression for all specifications is tiny and statistically insignificant.

The findings obtained in this paper are essential because they present evidence that the government-administered intervention in trade activities was effective in impacting firms' performance in Indonesia. The results suggest that even though the safeguards significantly influenced the reduction of imported products, but it also decreases the export value. The intervention meant to protect domestic industries against unfair trade of foreign importers sometimes might result in the deterioration of export performance. In this case, the safeguards' imposition of yarn and fabrics limit access of downstream industries to affordable raw materials. Furthermore, the export value of the treated group declined more sharply compared to the untreated group (which includes textiles that use fabrics and yarn) can be caused by fabrics and yarn producers have found that it was more profitable to divert their sales to the local market rather than to do exports because of the higher domestic price after the imposition of the safeguards. While the benefits of this policy go to a few parties, the costs of protection are broader and expand over many actors which potentially overriding any advantage Indonesia gains from trade liberalization. Another reasons for the fall in trade performance of TPT products may have been caused by the Covid-19 outbreak that arose right after the safeguard was imposed. The textile and apparel industry was one of the industries that were hardest hit by the pandemic. Global demand for garments fell sharply as lockdowns were in force. The U.S. and EU as the two biggest world textile markets reported a drop in sales of clothing by around 60% and 50% respectively (USDA, 2020). Weak demand for textiles and clothing led to order cancellations that were followed by massive production shutdowns and laid-off in major exporting countries including Indonesia. According to the Indonesia Exim Bank (2021), the growth of TPT industries dropped by 5.41 percent during the first wave of the pandemic. Furthermore, the value of TPT exports from Indonesia only reached USD10.55 million, this represents a 17.7 percent decrease from 2019

(-17.7% YoY). The decline occurred in all of the product segments including yarn (-27,3% YoY), fabrics (-15,7% YoY), and finished garments (-15,1% YoY). Therefore, the effect of the pandemic likely confound the correlation between safeguards imposed and trade performance in this case.

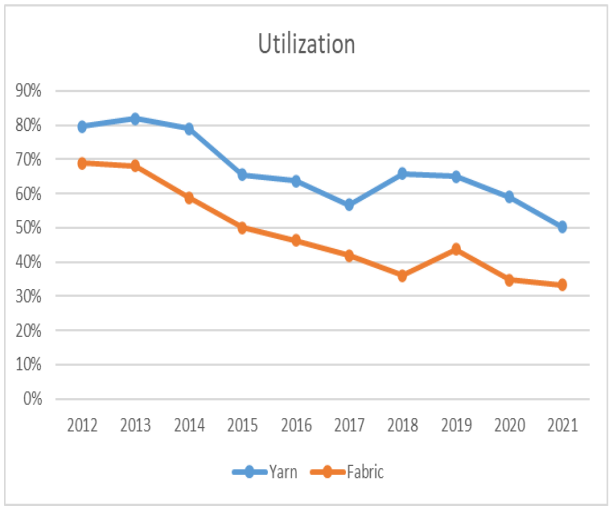
This study concentrated on estimating the impact of the safeguard to export and import value during the period of observations. The fall in exports and imports may have had a larger effect on the Indonesian economy, especially on the TPT sector. The data from the Ministry of Industry (2021) shows that after the safeguard's implementation in 2014 and 2019, there was no significant improvement in total industry utilization and its share in the local market. The utilization of yarn and fabric industries tends to keep declining over those years, indicating lower production capabilities. Figure 9 illustrates that the share of yarn industries in the domestic markets remains stagnant and even tends to decrease since 2012. In the other hand, the domestic share of Indonesia's fabrics had a negative trend in pre-2019 but spiked in 2020 before declining in 2021. This was caused by the significant downturn in domestic consumption by 28.41 percent due to the pandemic as described in table 8. During the first wave of the pandemic, local fabrics firms were able to cover domestic consumption by 75.8 percent despite their reduction in production volume by 18.07 percent.

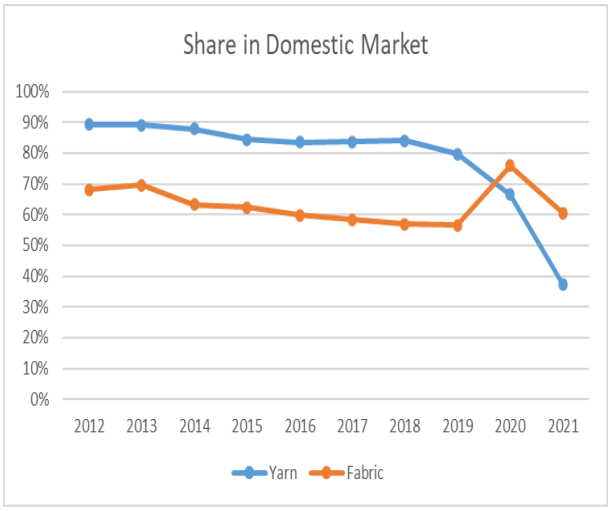
Table 8. The fabrics industry statistics

Description	Unit	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Production Capacity	Ton	2,316,445	2,442,300	2,452,745	2,723,000	2,824,318	3,134,665	3,667,000	3,667,000	3,767,000	3,767,000
Production Volume	Ton	1,595,954	1,661,028	1,441,269	1,363,085	1,308,562	1,315,104	1,323,000	1,599,000	1,310,000	1,251,000
Export Volume	Ton	281,833	286,341	349,633	304,626	270,641	216,668	199,594	189,204	152,525	164,140
Import Volume	Ton	521,498	595,941	628,962	634,605	693,272	654,817	745,021	733,570	527,155	702,010
Value of Export	US$ 000	1,855,659	1,802,128	1,813,815	1,673,596	1,497,056	1,226,253	1,133,676	1,074,571	819,418	916,565
Value of Import	US$ 000	4,163,624	4,559,863	4,601,489	4,608,368	4,747,525	4,361,568	4,830,897	4,718,955	3,497,137	4,810,006
Utilization	%	68.90%	68.01%	58.76%	50.06%	46.33%	41.95%	36.08%	43.61%	34.78%	33.21%
Domestic Consumption	Ton	1,909,400	1,974,800	1,725,100	1,697,600	1,735,800	1,813,800	2,005,800	2,125,000	1,527,000	1,797,000
Share in the domestic market	%	68.10%	69.60%	63.30%	62.30%	59.80%	58.40%	56.90%	56.50%	75.80%	60.48%

Note. Adapted from *TPT Industry Facts and Figures*, by Ministry of Industry, 2021

Figure 9. Utilization and share in domestic market of yarn and fabric industries





Note. Adapted from *TPT Industry Facts and Figures*, by Ministry of Industry, 2021

Protectionist policy in the form of tariffs here does benefit domestic producers to some extent and justifies the rationale of the Indonesian government to help the suffering local firms. Nonetheless, safeguards are perhaps just only the 2nd best because it is only effective in solving the problems suffered by industries occasionally rather than as a way of improving the overall economy (Lawrence & Litan, 1987). Moreover, the loss of rising consumers' costs due to safeguards is more than the local import-competing firms gain from safeguards (Krugman, 1987 & Krugman, 1996). In this research, the cost of raw materials for garments in downstream industries spiked by 30 percent after the safeguards' implementation for yarn and fabrics in 2019 (Textile SMES's Association, 2021). As in some cases, the consequence of protectionism is that it leads to a high social cost or deadweight loss compared to direct capital subsidies (Krugman et al, 2018). As Rodrik (2010) argued that the safeguards potentially result in "picking the losers" because it is difficult for the government to identify and recognize which industry can survive and develop with this protectionist policy. If such industries are weak and lose their comparative advantage in the global competition, providing support to these sectors would not immediately improve their performance. It requires far more than the elapse of time to regain competitiveness. As can be learnt in this study, on the long-term period, the possibility of shifting from exports to domestic sales for the safeguarded products may have an adverse effect on technology spillover

and productivity enhancement of local firms. They would just fall back on the domestic market to a greater extent rather than pursuing exports which will restrict their dynamic learning experiences and reduce their competitiveness. Although safeguards may be effective to provide breathing space for domestic producers (including multinational subsidiaries in Indonesia) against a surge of imports, they should be supplemented by other measures designed to encourage productivity improvement and dynamic learning which Indonesia is still lacking. There are no follow-up assessments or procedures after the safeguard's implementation on whether the local producers have improved their productivity during the imposition of the safeguard and gained some learning experiences. The Ministry of Trade and the Ministry of Industry just solely rely on data or information from associations and particular industries. Hence, the safeguards often keep repeating for the same sub-sector but under different products thus inducing rent-seeking behavior.

Lastly, this study offered evidence that will help the government, policymakers, and textile associations to formulate effective policies in improving the competitiveness of the local textile industries. The finding can also be used as a reference for whether to extend the implementation of the safeguards for the next three years. In this study, the safeguards policy is quite effective in slowing down the import rate, but it also has a downside effect in decreasing export performance. However, this study limits the variables on export and import data which only gives a glimpse of the firms' performance in terms of foreign trade activities, and it may not represent the overall performance of local firms. The data limitations on domestic's sales also prevent this study from making a definitive statement about whether there was a shifting of safeguarded products to domestic sales which made the exports for fabrics and yarn decrease more severely than that for the control group after the imposition of the safeguards. Additionally, given the fact that the last two years of observation were disrupted by the pandemic, that could be the other endogenous variable that affects the trade performance of the firms aside from the safeguards. Further research may select the other more representative variables on firms' performance in the local market and

extend the years of observation to 2022 to get robust estimated results. Thus, the findings obtained will confirm the impact of safeguards on firms' performance decisively since the local yarn and fabric industries have recovered from the pandemic.

References

Adine, M., Mahmudah, S., & Proyono, D., FX. (2016). Tindakan pengamanan perdagangan terhadap kain tenun dari kapas dan benang kapas sebagai akibat peningkatan volume import tekstil [Safeguard measures on cotton knitted fabrics and cotton yars as a result increasing textile imports volume]. *Diponegoro Law Review 5*(2). https://www.ejournal-s1.undip.ac.id/index.php/dlr/

Angrist, J., & Pischke, J.-S. (2015). *Mastering 'Metrics: The path from cause to effect*. Princeton University Press.

Altenberg, P. (2021, July 28). *Rising protectionism signals valuable lessons have been forgotten.* https://www.iisd.org/articles/rising-protectionism-signals-valuable-lessons-forgotten

Amiti, M., & Konings, J. (2007). Trade liberalization, intermediate inputs, and productivity: Evidence from Indonesia. *American Economic Review 97* (5), 1611–38. https://doi.o rg/10.1257/aer.97.5.1611

Amiti, M., Redding, S. J., & Weinstein, D. E. (2019). The impact of the 2018 tariffs trade war on U.S. prices and welfare. *National Bureau of Economic Research, 25672*. https://doi.org/10.3386/w25672

Amiti, M., Kong, S. H., & Weinstein, D. E. (May 2020). *The investment cost of the U.S.-China trade war. Liberty State Economy*. https://libertystreeteconomics.newyorkfed.org/2020/05/the-investment-cost-of-the-us-china-trade-war/

Aswicahyono, H., Hill, H., & Narjoko, N. (2009). Industrialization after a Deep Economic Crisis: Indonesia *Journal of Development Studies*, 46 (6), 1084–108. DOI:10.1080/00220380903318087

Barattieri, A., & Cacciatore, M. (2020). Self-Harming trade policy? Protectionism and production networks. *NBER Working Paper, w27630*. DOI 10.3386/w27630

Bird, K., H. Hill & S. Cuthbertson. (2008). Making trade policy in a new democracy after a deep crisis: Indonesia, *The World Economy 31*(7), 947-968. https://doi.org/10.1111/j.1467-9701.2008.01110.x

Bown C., & Tovar P. (2011). Trade liberalization, antidumping, and safeguards: Evidence from India's tariff reform. *Journal of Development Economics*, *96*(1), 115–25. https://doi.org/10.1016/j.jdeveco.2010.06.001

BPS (Statistics Indonesia). (2021, February 7). Indonesia GDP Annual Growth Rate 5.02 percent (y-on-y). https://www.bps.go.id/ressrelease

Cali, M. (2018). Trade Protectionism and Indonesian Policy for Intermediate Industry. *World Bank Group* http://documents.worldbank.org/curated/en/251051540825428024

Cali, M., & Montfaucon, A.F. (2021). Non-tariff measures, import competition, and exports. *World Bank Policy Research Working Paper, 9801*. https://openknowledge.worldbank.org/handle/10986/36387

Cao, Y & Shuo, C. (2022). Rebel on the canal: Disrupted trade access and social conflict in China, 1650–1911. *American Economic Review, 112* (5): 1555-90. DOI: 10.1257/aer.20201283

Crowley, M.A. (2007). Why are safeguards needed in a trade agreement? *Federal Reserve Bank of Chicago Working Paper, 06*. https://dx.doi.org/10.2139/ssrn.931215

Dang, D.A., & La, H.A. (2021). The effects of the temporary protection on firm performances: Evidence from the steel industry in Vietnam. *The Journal of Development Studies, 57*(8), 1336-1350. https://doi.org/10.1080/00220388.2020.1862799

Das, A., Sharma, S. K., Akhter, R., & Lahiri, T. (2021). Special safeguard mechanism for agriculture: implications for developing members at the World Trade Organization. *The Journal of World Investment & Trade, 22*(5-6), 835-859. https://doi.org/10.1163/22119000-12340230

Enderwick, P. (2011). Understanding the rise of global protectionism. *Thunderbird International Business Review, 53,* 325-336. https://doi.org/10.1002/tie.20410

Fajgelbaum, P. D., Goldberg, P. K., Kennedy, P. J., & Khandelwal, A. K. (2020). The return to protectionism. *Quarterly Journal of Economics, 135*(1), 1-55. https://doi.org/10.1093/qje/qjz036

Galiani, S., Gertler, P., & Schargrodsky, E. (2005). Water for life: The impact of the privatization of water services on child mortality. *Journal of Political Economy, 113*(1), 83–120. https://doi.org/10.1086/426041

GBG. 2018. *Manufacturing | Indonesia's Garment and Textile Sector: Remain Optimistic Amid Mounting Pressure*. http://www.gbgindonesia.com/en/manufacturing/article/2018/

General Agreement on Tariffs and Trade (GATT). (1994). *Agreement on safeguards*. https://www.wto.org/english/docs_e/legal_e/25-safeg.pdf

Gupta, K. (2021). The heterogenous impact of tariff and NTM on total factor productivity of Indonesian firms. *Bulletin of Indonesian Economic Studies, 1-29*. https:doi.org/10.1080/00074918.2021.2016613

Ghosh, S., Rahardja, S., & Varela, G. (2012). How the macroeconomic environment and investment climate have affected the manufacturing sector. *The World Bank Policy Note (3)* http://siteresources.worldbank.org/EASTASIAPACIFICEXT/Resources/226300 1349835451376/

Handley, K., Kamal, F., & Monarch, R. (2020). Rising import tariffs, falling export growth: When modern supply chains meet old-style protectionism. *FRB International Finance Discussion Paper*, 1270. http://dx.doi.org/10.17016/IFDP.2020.1270

Hermawan, I. (2011). Analysis of the impact of macroeconomic policies on textile industry and its products in Indonesia. *Buletin Ekonomi Moneter dan Perbankan, 13(4), 357-390.* https://doi.org/10.21098/bemp.v13i4.398

Hertel, T. W., Martin, W., & Leister, A.M. (2010). Potential implications of a special safeguard mechanism in the World Trade Organization: The case of wheat. *The World Bank Economic Review, 24*(2), pp. 330-359. https://www.jstor.org/stable/40891370

Indonesia Eximbank. (2021). *Bertahan di Tengah Pandemi, Eksportir Pakaian Jadi Indonesia Berangsur Bangkit* [Surviving in the midst of a pandemic, Indonesian apparel exporters gradually recover] https://www.indonesiaeximbank.go.id/news/

In Ing, L. Y., In Hanson, G. H., & In Indrawati, S. M. (2018). The Indonesian economy: Trade and industrial policies. *ERIA Studies in Development Economics.*

KPPI (Indonesia Safeguards Committee). (2019a, September 2). *Press release commencement of safeguard investigation on yarn products (other sewing thread) from synthetic and artificial staple fibers.* http://kppi.kemendag.go.id/daftar_kasus/detail_produk/2/5/117

KPPI (Indonesia Safeguards Committee). (2019b, September 18). *Investigation of threads (other sewing thread) of synthetic and artificial staple fibers*. http://kppi.kemendag.go.id/daftar_kasus

KPPI (Indonesia Safeguards Committee). (2019c, October 1). *Press release commencement of safeguard investigation on fabric products.* http://kppi.kemendag.go.id/daftar_kasus/detail_produk/

KPPI (Indonesia Safeguards Committee). (n.d). *Safeguard measure.* http://kppi.kemendag.go.id/faq/index/8

Krugman, P.R. (1987). Is free trade passé? *Economic Perspective 1*(2), 131-144.

Krugman, P.R., Maurice, O., & Melitz, M. (2018). *International Economics: Theory and Policy, 11th Edition*. Pearson

Krugman, P.R. (1996). *Pop Internationalism.* The MIT Press http://www.ebook3000.com/Pop-Internationalism_45567.html

Lawrence, R.Z., & Litan R.E. (1987). Why protectionism doesn't pay. *Harvard Business Review*

Ministry of Industry Republic of Indonesia. (2021). *TPT Industry Facts and Figures*.

Medina, A.F. (2020). *Indonesia's textile and garment industry: Opportunities for foreign investors* https://www.aseanbriefing.com/news/indonesias-textile-garment-industry-opportunities-foreign-investors/

Muhammad, A., & Countryman, A. M. (2021). Safeguard measures and fresh produce trade: The case of US blueberry imports. Q Open, *1*(2), qoab018. https://doi.org/10.1093/qopen/qoab018

Negara, S. D. (2010). Fragmentation of electronics and textile industries from Indonesia to CLMV countries', in R, Banomyong and Ishida, M (Eds.), *A Study on upgrading industrial structure of CLMV countries* (pp.158-220). ERIA *research project report 2009-7-3*. https://www.eria.org/uploads/media/Research-Project-Report/RPR_FY2009_7 3_Chapter_5.pdf

Patunru, A., & Rahardja, S. (2015). *Trade protectionism in Indonesia: Bad times and bad policy*. https://www.lowyinstitute.org/publications/trade-protectionism-indonesia-bad-times-and-bad-policy

Rahmadani, F & Pahlawan, I. 2017. Pengaruh penerapan tindakan pengamanan perdagangan (*safeguard*) produk impor benang asal India bagi industri TPT di Indonesia tahun 2011 (The impact of the safeguards on imported yarn from India for Indonesia's the TPT industries in 2011). *Jurnal Online Mahasiswa Fakultas Ilmu Sosial dan Ilmu Politik Universitas Riau*, *4*(2), pp. 1-14. https://jom.unri.ac.id/index.php/JOMFSIP/article/view/16163

Rahmadi, A. (2020), I4R for circular economy: Transition trends and readiness of Indonesia – textile and electronic sectors', in Anbumozhi, V., K. Ramanathan and H. Wyes (Eds.), *Assessing the Readiness for Industry 4.0 and the Circular Economy, ERIA, pp.251-302.* https://www.eria.org/uploads/media/Books/2020-Assessing-the-Readiness-Industry-40-and-Circular-Economy/12_Ch-8-Indonesia-Textile-Electronic.pdf

Reuters. (2019, October 11). Indonesia to tighten textile import rules following the influx of goods: official. https://www.reuters.com/article/us-indonesia-textiles-idINKBN1WQ1KD

Reuters. (2020, May 29). Indonesia imposes tariffs on some textile imports until 2022. https://www.reuters.com/article/indonesia-textiles-idUSL4N2DB17F

Riesfandieri, I., Nugroho A. S., &- Wahyudi, T., W. 2021. Dampak safeguard atas impor benang terhadap perekonomian: Pendekatan model CGE (The impact of safeguards on imported yarn on the economy: Using CGE model method). *Jurnal Perspektif Bea dan Cukai*, *5*(2). https://doi.org/10.31092/jpbc.v5i2.1307

Riksbank. (2017). The economic consequences of increased protectionism. *Monetary Policy Report*. https://www.riksbank.se/globalassets/media/rapporter/ppr/fordjupningar/engelska/2017/the-economic-consequences-of-increased-protectionism-article-in-monetary-policy-report-april-2017

Rodrik, D. (2010). Diagnostics before Prescription. *Journal of Economic Perspectives 24*(3), pp. 33-44. DOI: 10.1257/jep.24.3.33

Soesastro, H., & Basri, M. C. (2005). The political economy of trade policy in Indonesia. *ASEAN Economic Bulletin*, *22*(1), 3–18. http://www.jstor.org/stable/25773840

Takechi, K. (2020). Do domestic producers benefit from safeguards? The case of a Japanese safeguard on Chinese vegetable imports in 2001⋆. *Japan & The World Economy 55* https://doi.org/10.1016/j.japwor.2020.101024

Trademap. (2022, February 22). List of products exported by Indonesia yearly time series. https://www.trademap.org/Product_SelCountry_TS.aspx?nvpm

Vickers, A. (2012). Clothing production in Indonesia: A divided industry. *International Journal of Institutions and Economies Faculty of Economics and Administration University of Malaya*, *4*(3), 41-60. https://ideas.repec.org/a/umk/journl/v4y2012i3p41-60.html

World Trade Organization. (2009). *Economic, disciplines and practices.* https://www.wto.org/english/res_e/booksp_e/anrep_e/wtr09-2c_e.pdf

World Trade Organization. (2019, September 20). *In Indonesia launches safeguard investigation on fabrics, on yarn and curtains.* https://www.wto.org/english/news_e/news19_e/safe_idn_23sep19_e.htm#:~:text=

World Trade Organization. (n.d). *Safeguard measures.* https://www.wto.org/english/tratop_e/safeg_e/safeg_e.htm

United States Trade Representative (USTR). (2020). Trade Summary Indonesia. https://ustr.gov/sites/default/files/Indonesia_0.pdf

United States Department of Agriculture (USDA). (2020). COVID-19 Sows Uncertainty for Textile Industry. *Voluntary report of Indonesia on Cotton and Products, ID2020-0027* https://apps.fas.usda.gov/newgainapi/api/Report/