Who is Peer Pressured by WTO Trade Policy Review Mechanism?

-The Cases of Japan, South Korea, and China-

WTO 무역정책검토에 의한 피어프레셔가 국가 별
통상정책에 미치는 영향 분석
- 일본, 한국, 중국 사례연구를 중심으로 -

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Abstract

Although the international community faces challenges with the rise of protectionism, World Trade Organization contributed to the expansion and stabilization of the world economy as a center of the international trade system. Among the key institutional pillars of the WTO, the Dispute Settlement Mechanism (DSM) has attracted major scholarly attention in contemporary research on trade organizations. Yet, this study focuses on the least studied Trade Policy Review Mechanism (TPRM), another key function to safeguard against protectionism. TPRM is a mechanism that imposes peer pressure, a social criticism related to 'naming and shaming' rather than oppressive sanctions, which can help raise awareness of member states' trade practices and polices and increase responsibility and transparency. Despite its significance, the main reasons for the lack of attention by trade scholars are semantic complexity of review reports and a vast amount of text.

To overcome the existing limitations, this study analyzed TPR reports using information extraction (IE) techniques. A total of 18 TPR reports on the three East Asian trading partners (Japan, Korea, and China) were analyzed by Rapid Automation Keyword Extraction (RAKE) and TextRank algorithms. Based on this, major trade issues of the three countries were extracted. In the second phase, for an in-depth understanding and rich interpretation of the issue, a qualitative method of case study was conducted in accordance with peer pressure formation stages.

Keyword: World Trade Organization (WTO), Trade Policy Review Mechanism (TPRM), Peer Pressure, Information Extraction (IE), Rapid Automatic Keywords

Extraction (RAKE), TextRank, Comprehensive and Progressive Agreement for Trans-Pacific Partnership (CPTPP), Rice Tariffication, State-Owned Enterprise (SOE)

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Chapter 1. Introduction

1.1 Study Background[①]

The General Agreement on Tariffs and Trade (GATT) and its subsequent agreement, the World Trade Organization (WTO), were established to promote trade liberalization. In the last 25 years, global trade has nearly doubled, while the dollar value of world trade has almost tripled. Tariff barriers are being torn down, with the average tariff almost halved from 10.5% to 6.4% in 2020. Although protectionism has become stronger and the trade environment is tense, it cannot be denied that it has created an interconnected and complementary system of rules to help the international trade community against the crisis (Goldstein, Rivers and Tomz, 2007; WTO, 2019, 2020a).

The WTO's Trade Policy Review Mechanism (TPRM) is particularly designed to check member states' trade practices and policies and to promote transparency and accountability, among the various institutional innovations that have contributed to the "substantial reduction of tariffs and other trade barriers and the elimination of preferences, on a reciprocal and mutually advantageous basis" (GATT 1947 Preamble). Individual TPR reports cover each WTO member's whole spectrum of trade-related policies and practices, as opposed to other institutional mechanisms that concentrate on the conformity of members' specific activities in

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[①] This thesis builds upon this author's previous publication entitled "When Text Mining Meets WTO Trade Policy Review: The Case of South Korea, Japan, and China" (Journal of *International and Area Studies*, Vol.28 No.1, pp. 163-178, co-authored with MG Koo and EH Kim) and extends its key findings in additional case studies on South Korea, Japan, and China.

relation to WTO norms and rules (Laird, 1999).

Thus, TPR reports serve valuable and insightful data for the international trade community. TPRM has played an essential role in monitoring the trade systems, generating trade-related information needed by members, supplementing domestic surveillance capacity, and developing peer review and peer-pressure practices. Periodic reviews conducted under the TPR mechanism have acts as a reminder of policy commitments and a mechanism for members to lock in their positions. TPRM's obligation to increase transparency has become more significant in a world where protectionism continues to grow (Francois, 2001; Elsig, 2010; Ghosh, 2010).

1.2 Purpose of Research

This study found that despite the considerable potential to transparently disclose and change trade policy characteristics of each member state, the devaluation of TPRM continues, and this study began with this fact. Reinforcing the TPRM could be a critical step toward WTO's recovery, which has faced tremendous challenges in recent years. TPRM benefits the multilateral trading system by enabling member states to recognize and evaluate one another, as well as by increasing transparency and understanding of national trade policies and practices. The peer pressure that occurs in the process is the key. Furthermore, if the WTO emphasizes the authority of TPRM to monitor domestic transparency in trade decision areas, it can lead to Dispute Resolution Mechanism (DSM) reform and support the DSM in interpreting and enforcing transparency via peer pressure -

related requirements included in WTO agreements. (Francois, 2001; Chaisse and Chakraborty, 2007; Ala'i, 2008; Trommer, 2017)

However, the TPR report is known to be difficult to read between lines when dealing with pending issues that can be particularly sensitive or controversial due to subtle descriptions. It is obvious that researchers pay much less academic attention to TPRM than other mechanisms, such as DSM, due to the characteristics of TPRM, which has a large amount of text and is difficult to easily grasp its meaning. Existing literature on TPRM is generally descriptive rather than analytical, and the scope of research is quite limited, such as focusing on countries or regions within some countries. (Kimura, 2008; Zahrnt, 2009; Luo and Zhang, 2010; Zhang, 2017; Okafor and Teo, 2019; Yu and Chan, 2019).

The study also focuses on TPR in three Northeast Asian countries: Japan, South Korea and China. In addition to its regional characteristics, the three countries have a large part of the global economy. As of 2019, the combined value of exports from Japan, South Korea, and China accounted for around 26 percent of the overall G20 value (OECD, 2020). In particular, Korea's economy is gradually shifting away from the U.S. economic dependence to the Chinese economy (Yoon and Park, 2015; Yoon and Yea, 2007). As the economic power of the three countries and their dependence on each other are growing, analyzing the trend of trade issues for the three countries provides interest.

This work attempts to analyze TPR reports using text mining techniques via systematic algorithms to push the boundaries of existing literature. Text mining techniques allow researchers to quickly grasp meaningful information in large amounts of text and contribute to the literature. Keyword extraction algorithms have received much attention as they are effective methods of obtaining useful

information from unstructured texts, while at the same time enabling more effective semantic mining (Rose et al., 2010). This study seeks to identify meaningful trade policy trends in the TPR report, then conduct case studies on trade issues, specifically confirming whether peer pressure was achieved and how peer pressure was activated. The case study provides a method for analyzing complex social units that contain multiple variables that may be essential in comprehending the phenomenon (Van Wynsberghe and Khan, 2007). Therefore, this study aims to derive a number of variables scattered in TPRM by text mining and analyze the issue's complicated implications through case studies.

As the first attempt to apply text mining techniques to specific issue areas, this study sets the foundation for the subsequent study. Text mining will allow for the quick and simple comprehension of enormous volumes of text, while the case study results will improve the research's validity and provide deeper insights. The insights will focus on the peer pressure mechanism and will give a new approach on the current trading environment.

Chapter 2. Theoretical Background and Literature Review

2.1 Transparency in Trade Environment

It is undeniable that DSM, a more direct dispute resolution, was the main mechanism, despite the fact that the WTO clearly has two huge pillars: DSM and TPRM. However, the current protectionism crisis facing the WTO shows no signs of improvement. Rather than directly resolving conflicts, it is necessary to preemptively reduce disputes. With the advent of the Corona era, the value of transparency, which is more illuminated, can be an alternative. In GATT's experience, moral persuasion was often more effective than retaliation. Increasing the transparency of each state's trade policies and practices can induce member states to faithfully fulfill their WTO obligations and maximize welfare at the national and global economic level through trade. If transparency is guaranteed, it is difficult to maintain policies and practices that are against the rules (Koo and Choi, 2019).

Transparency is one of the fundamental principles of the world trade system. It is a value that has long been valued in the international community and has already been accumulated that high transparency makes the flow of international trade desirable. Transparency can contribute to the international trade order by reducing the asymmetry of information and promoting systematic stability. (Robert, 2013). This is because the process of obtaining information on trade-

related policies is itself a cost of entering the market, and information asymmetry creates opportunities for discretionary behavior and disguised protectionism, making transaction costs higher as well as more unpredictable. (Lejarraga, 2011; Rauch, 1999; Rauch and Watson, 2003). Furthermore, studies on the possibility that improved transparency will account for a large proportion of trade liberalization and significant intra-regional trade gains have already been tested on a large number of occasions (Helble et al., 2009; Shepherd and Wilson, 2009).

The WTO describes the establishment of such transparency as "the degree to which trade policies and practices, and the process by which they are established, are open and predictable.". According to the Article X of the GATT and Article III of the GATS, the WTO requires all trade laws and regulations to be published by member states, requires notification in the WTO's multilateral or multilateral process, and establishes appropriate bodies and agencies to meet these notification requirements. Furthermore, the WTO Secretariat is making great efforts to ensure transparency in its trade policies and practices, requiring member states to compile and provide them with all amendments and policy announcements every year (Hoekman, 2002). Among them, TPRM is a fundamental system worthy of this purpose.

2.2 Trade Policy Review Mechanism

TPRM ultimately has three goals: Through frequent monitoring, raise transparency and knowledge of nations' trade policies and practices; raise the level of public and international engagement on the issues; and allow for a multilateral

assessment of policies' effects on the global trading system. (Woods and Narlikar, 2001). GATT (1947) mandated the TPRM in 1989 to periodically review and monitor transparency of trade practices and policies of all member states under the Memorandum of Understanding on Notification, Consultation, Dispute Resolution and Surveillance concluded at the 1979 Tokyo Round, but Since the transparency obligation was narrow and limited, the system was put in place for the stated purpose (Mavroidis, 1992).

For each review, the TPRM provides two documents: a report produced by a member state and a report independently analyzed by the WTO Secretariat. These two documents are examined by the World Trade Organization's General Assembly, which also functions as the Trade Policy Review Body (TPRB). The inspection and evaluation are carried out "in the context of the Member States' broad economic and developmental requirements, policies and objectives, and the external environment" (WTO, 2020b).

All 164 WTO member states are prone to periodic evaluation by WTO TPRM for this goal. The influence of individual members on the WTO's operation as well as its portion of global trade determines the review cycle. As of 2021, it is evaluating 4 certified trading partners such as the U.S., European Union, Japan, and China every 2 years. Every four years, South Korea, India, and Brazil are subjected to screening. Every six years, the other members are reviewed.

Over the past 25 years, TPR documents have accumulated significant amounts. As of June 2021, the WTO's TPRM conducted 410 reviews. In general, the number of individual reports in each country varies, but on average, they range from 100 to 200 pages. Document analysis is becoming increasingly difficult as the TPR archive of national reports increases in volume by more than 450,000 pages in

total. This is why most studies of TPR are usually limited to one country or year (Kimura, 2008; Zahrnt, 2009; Luo and Zhang, 2010; Zhang, 2017; Okafor and Teo, 2019; Yu and Chan, 2019).

2.3 Relations of the three East Asian states

This study focuses on three northeast Asian countries: South Korea, China, and Japan. China, the world's second biggest economy, has overtaken the United States as the leading exporter, with an export value of over USD 2 trillion (Statista, 2020). Japan and South Korea, both heavily trade-dependent countries, were the third and tenth largest economies in real USD terms in 2019.

The three countries share many of the features of the world's most dynamic trading nations. The trade structure and interconnections between Japan, South Korea, and China, the three Northeast Asian countries, show that they are highly dependent on each other, and that trade between industries and within industries is considerable. The Chinese economy's influence on the global economy has been growing as China's economic recovery has been accelerating since the recent Korona 19 crisis. After the Corona crisis, Korea's exports to China increased by 1.5%, and it can be predicted that trade relations between Korea and China will become tighter afterwards (Yonhap, 2020). Japan also serves as an absolutely necessary supply of intermediate goods for Korea's exports and has the characteristics of a complementary trade structure (Lee, 2015).

Given their positions and importance in international trade, a comparative and chronological examination of their trade and trade-related policies is long

required. In addition, it seems reasonable to analyze the three countries in East Asia, which have complex interdependent, competitive, and complementary relationships.

Chapter 3. Research Design

3.1 Conceptual Framework

This study began with a significant lack of existing research compared to the importance of TPRM reports, which publicly evaluate states due to the large amount of text and subtle naming. Therefore, this study uses text mining to systematically analyze TPRM reports to identify major trade policy trends in the three East Asian countries by country and chronology and extract key issues from the perspective of peer pressure mechanisms.

This study is conducted as a mixed study. First, the progress of this study is to analyze six-year TPR reports from Japan, Korea, and China through text mining algorithms to extract the flow of major trade policy issues by chronicle. Among them, it is selected as a major trend based on the most exposed and repeated issues by algorithms. Second, I would like to proceed with the case study of chosen trade policy concerns from the perspective of the peer pressure mechanism, the main function of TPRM. This will give a detailed understanding of important trade issues in the three nations identified by text mining, as well as compensate for the flaws of the two techniques. This experiment will analyze by country whether peer pressure mechanism worked in the process of major issues and how mechanisms were conducted. Furthermore, this study will also determine which countries were the most compliant with peer pressure and which countries were the most responsive to TPRM's recommendations.

3.2 Peer pressure mechanism

Peer pressure is one of the most common policy tools for global governance, as it is already frequently used by the WTO, the OECD, and the United Nations. Pagani (2002) asserts that "peer review is the systematic investigation and assessment of a state's performance by other countries, with the purpose of assisting the reviewed state in improving policymaking, adopting best practices, and adhering to set norms and principles.". He also explained that the effect of peer review depends on the influence and persuasion exerted by colleagues during the process, and that this effect is 'peer pressure'. Peer pressure (Guilmette, 2007; OECD, 2003) would encourage nations to willingly embrace recommended policy measures, creating socialization among individuals and nations committed to Western international standards and values.

According to OECD (2008) Peer pressure can arise from the peer review process for a range of factors, including (i) a mix of formal recommendations from reviewing countries; (ii) opinion of others (domestic public or national administrations); and (iii) censorship, comparisons. It is crucial to highlight that peer pressure does not take the shape of sanctions, legally enforced acts, or other enforcement mechanisms. The impact will be greatest when peer reviews are released to the public. In addition, they explain that although there is no such thing as a standardized peer review system, all peer reviews have several basic similar characteristics: a commitment to information sharing and transparency; selected actors to conduct the review; an agreed-upon set of principles; and a set of processes leading to the outcome.

The effect of Peer pressure is described primarily in conjunction with naming and shaming. Naming and shame are the social processes that bring together three different types of actors: ashamed actors, ashamed actors, and audience actors (Carraro et al., 2019). The audience's disapproval of the target's behavior, as well as the audience's support for placing pressure on the target, are required for naming and feeling shame. Social criticism, not material sanctions, plays a key role. Specifically, shaming is publicly denouncing the actions of actors and actresses in the belief that the social inconvenience of being criticized would force nations to comply (Franklin, 2015; Keck and Sikkink, 1998). This is based on regular monitoring of information on state policy performance and compliance by the international organization's Secretariat and other states ('peer') (Kandel, Lazear, 1992). State's review is able to use 'shaming' to target countries that fall behind expectations and pay attention to the recommendations received by these states (Shimp, 2004). This is supported by studies showing that when a particular country is selected as a poor performer or 'blacklist', pressure on subordinates is increased (Nance, 2015; Sharman, 2009). Therefore, receiving evaluations and rebukes from colleagues or the general public becomes a kind of naming and shaming (Greene and Boem, 2012; Terman and Voeten, 2017).

Many researchers have studied the effect of naming and shaming on targets and their motivation to succumb to peer pressure. Rationalists and liberal scholars claim that goals can yield to pressure not to give up certain interests, but to maintain honor. (DeMeritt, 2012; Krain, 2012; Murdie and Davis, 2012). Constructivists emphasize shame and the signaling role of the socialization process, pointing out that effective quantification is contingent on the peer community's acceptance of aspirations for goals. (Risee et al., 1999). There are different

perspectives, but one thing in common is that peer pressure affects human behavior. Although there is no such thing as a standardized peer review system, all peer reviews have some structural elements in common (OECD, 2008). These and TPRM's principles share much of the content.

In summary, the pressures that arise in the process of peer review influencing changes in national behavior are based on social interaction, not physical punishment, and factors that affect peer pressure are (i) mixed of formal responses from review counties; (ii) policy, compliance; Therefore, the study noted that peer pressure is likely to affect changes in national behavior. This study focused on selecting major commercial issues reported in Japan, Korea, and China TPRM and finding out whether peer pressure worked on changes in behavior by country in the process and how it worked based on variables.

3.3 Data and Methodology

3.3.2 Text Mining

This study aims to overcome such a hurdle by using text mining tools and critically examining a large corpus of TPR reports. Text mining is a field that uses natural language processing (NLP) to "automatically extract previously unknown and usable information from unstructured textual data" (Qiua et al., 2019). Until recently, extracting key phrases was a tricky task that frequently resulted in poor outcomes. However, as text embedding technology progresses, more complex algorithms for a wide range of fields have become available.

There is no reliable training available data for supervised machine learning in

the realm of trade and trade-related issues. This study employs two unsupervised machine-learning techniques—RAKE and TextRank—to navigate the extensive, complicated, delicate, and frequently ambiguous textual material contained in TPR reports. RAKE and TextRank are both unsupervised, domain-independent, and corpus-independent approaches for extracting keywords and sentences. RAKE is used to discover essential contextual clues about how the document is supposed to be interpreted, and TextRank is used to find prominent phrases as an extreme summary of the corresponding document. Although TextRank enables both key phrase extraction and text summarization, this study use RAKE for key phrase extraction as it provides better and more efficient results (Baruni, 2020).

1) RAKE

To further understand the RAKE algorithm, RAKE extracts candidate keywords without stop words before analyzing co-occurrence frequency within a candidate keyword pool. It then divides the text into arrays of words and builds word frequency (deg(w)) and co-occurrence (freq(w)) matrix that give each keyword a score. Finally, deg(w)/freq is used to calculate a ratio of the degree-to-frequency score for each candidate keyphrase (w). The overall score for each keyword is calculated for each key phrase (Rose et al., 2010; Jindal and Kaur, 2020). This study selects three-word key phrases and offers the top-five key phrases for each TPR report from Fox's stop words list.

2) TextRank

TextRank is an unsupervised key sentence extraction technique, similar to RAKE. TextRank has also been constructed for unsupervised text summarization.

It uses the PageRank algorithm to assign relevance scores to texts. It divides a text into sentences (vertex) and then counts the number of co-occurrence terms to determine the similarity score between sentences. Given two sentences Si and Sj, where a sentence is represented by the set of Ni words that occur in it, $S_i = W_1^i, W_2^i, \ldots\ldots, W_n^i$. The following is the defined function for Si and Sj: (Brin and Page, 1998; Mihalcea and Tarau, 2004).

$$\text{Similarity}(S_i, S_j) = \frac{|\{W_k \mid W_k \in S_i \ \& \ W_k \in S_j\}|}{\log(|S_i|) + \log(|S_j|)}$$

The scores are then used to generate a ranking of the sentences. Finally, the most crucial sentences are chosen and presented in the order in which they appear in the text, forming the summary (Barrios et. al., 2016). The algorithm summarized the report by extracting 300 words of key sentences.

3) Data

This study's data was utilized in TPR reports from three states: Japan, Korea, and Japan. As previously indicated, the TPR review periods varied from one another. At the time of this study in May 2021, the three northeastern Asian countries had completed a total of 25 TPRs: 12 for Japan in 1995, 1998, 2000, 2002, 2004, 2006, 2009, 2011, 2013, 2015, 2017, and 2020; six for South Korea in 1996, 2000, 2004, 2008, 2012, and 2016; and seven for China in 2006, 2008, 2010, 2012, 2014, 2016, and 2018. Six TPRs were chosen from each nation to meet the sample size for the following study.

3.3.3 Case study

This study focuses on the major trade policies of the three countries selected through text mining to proceed with a case study. In addition, it analyzes the flow of major trade issues in each of the three countries, Japan, Korea and China, and whether there was peer pressure related to policies and what processes were carried out in accordance with the three factors suggested by the OECD (2008): (i) a mix of formal recommendations from reviewing countries; (ii) opinion of others (domestic public or national administrations); and (iii) censorship, comparisons. However, since the contents of the first factor were explained in text mining, case analysis is conducted based on the other two factors. An assessment of the extent to which national policy reflected TPRM's opinion will also be made. Therefore, the case study will be a content analysis referring to various literature, government press releases and articles. Since it is a case analysis for three countries, I will proceed with multiple-case study. Each individual case study draws facts from a variety of sources and is used for the overall study. (Tellis, 1997). Therefore, the final assessment will be made of the compliance of the peer-pressures of the three countries.

Case studies combined with other methodologies and data, such as text mining, can enhance the validity of the study and provide deeper insights (Yin, 1984). This study attempts to identify whether key issues extracted using case study methodologies along with text mining data truly fit the major issues of the times. The analysis will provide deep insights through issue-related qualitative research beyond simple keyword extraction, adding meaning to text mining results. Similarly, text mining will compensate for the lack of validity problem when used exclusively in case studies.

Chapter 4. Results of Text Mining

4.1 Analysis of Japan's TextMining Results

Table 1. RAKE results for Japan's TPR reports.

Year/rank	1	2	3	4	5
2017	Trans-Pacific Partnership	commercial farm households	anti-monopoly act	HS 9-digit level	anti-dumping duties
2013	non-ad valorem duties	HS 9-digit level	anti-monopoly act	corporation tax rate	state-trading activities
2009	non-ad valorem duties	HS 9-digit level	ad valorem equivalents	non-performing loans	anti-monopoly act
2004	non-ad valorem duties	non-tariff border measures	ad valorem rates	quota-free treatment	anti-competitive activities
2000	non-ad valorem duties	non-tariff border measures	ad valorem equivalents	intellectual property rights	non-tariff barriers

4.1.1 Extracted Trade Issues

Japan TPR's RAKE and TextRank analysis revealed four major trade issues: non-ad valorem tariffs, generalized system of preferences, mitigation of non-tariff barrier and Trans-Pacific Partnership (TPP). RAKE and TextRank both reflect the evolution of the WTO's assessment of Japan's trade policies and practices.

4.1.2 Results Interpretation

1) **Non-ad Valorem Tariff**

Japan's tariff barriers to livestock and agricultural goods have been a source of concern for the WTO's TPRs. Between 2000 and 2013, "non-ad valorem duties" was at the top of RAKE's list of important phrases. Tariffs that are not based on a percentage of the price or value are known as non-ad valorem tariffs. They can take the shape of something distinct, something complex, something mingled, or something else entirely. TPR reports have regularly criticized Japan's non-ad valorem tariffs, which have set rates, especially for agricultural products. Non-ad valorem tariffs were applied in a less transparent manner in Japan, potentially distorting the pricing mechanism and domestic production patterns. In 2000, for example, TPR pointed that non-ad valorem duties' ad valorem equivalents (AVEs) varied from 40.1 % to 983.7 %.

2) Generalized System of Preferences (GSP)

The "HS 9-digit level" in respect to the GATT's Generalized System of Preferences (GSP) is another distinctive aspect of Japan's tariff policy identified by RAKE. In 2009, 2013, and 2017, the important phrase appears in the top five list three times in a row. According to the 2017 TPR report, Japan uses the GSP to grant favorable tariff rates to 138 developing countries and five territories, with extra advantages granted to the poorest developing nations (47 in 2016). However, it should be focused on that several HS 9-digit items on the priority tariff list, such as rice and meat, have been excluded which are advantageous to developing countries.

3) Mitigation of Non-tariff Barrier

Japan, on the other hand, has been adapted to and respected TPR assessments and suggestions to the point that its TPR reports are less likely to repeat important terms than those for South Korea and China. For example, "non-tariff border measures" including import prohibitions, import licensing, and quantitative limits were listed second in the 2000 and 2004 lists, but have subsequently dropped out of the top five. Even the typical suspect, non-ad valorem taxes, vanished from the top-five list of important keywords in 2017. According to the 2017 TPR report, the simple average rate for all AVEs given is 32.7%, with the highest rate being 389 %, a far lower rate than previously (see Table 1). Furthermore, the TextRank summary results show that Japan has worked hard to develop market liberalization by removing prohibitions on foreign capital investment and other non-tariff barriers. For example, according to the 2004 TextRank summary, changes to the Securities and Exchange Law have allowed foreign securities companies to trade directly with Japanese stock exchanges, while the 2009 summary states that Japan has continued to promote structural reforms in order to achieve a "fully opened market to the international community.".

4) Trans-Pacific Partnership (TPP)

The TPP is notable landmark in Japan's trade policy trend. The word came in first rank on the RAKE list in 2017. It is well known that Japan played a key role in resurrecting the Trans-Pacific Partnership (TPP) with 11 negotiating partners but no US. Despite agricultural groups' adamant opposition, Japan has liberalized many of its agricultural goods. 834 agricultural, forestry, or fisheries products were among the 929 items whose tariffs had not been abolished by Japan's prior FTAs. Around 30% of these heavily protected agricultural items are now tariff-free due to

the CPTPP (Terada, 2019).

4.2 Analysis of South Korea's Text Mining Results

Table 2. RAKE results for South Korea's TPR reports.

Year/rank	1	2	3	4	5
2016	out-of-quota rates	in-quota tariff	state-owned enterprises	tariff-rate quota	tariff quota system
2012	out-of-quota rates	state-owned enterprises	state-trading entities	unfair trade practices	intellectual property rights
2008	out-of-quota rates	non-ad valorem duties	state-trading entities	differentiated pricing system	intellectual property rights
2004	transparent market-driven economy	state-trading enterprises	non-performing loans	anti-dumping provisions	value-added rule
2000	shelf-life requirements	resisted protectionist pressures	state-owned enterprises	intellectual property rights	non-tariff barriers
1996	balance-of-payments grounds	state-trading entities	intellectual property rights	in-quota imports	import diversification program

4.2.2 Extracted Trade Issues

South Korea TPR's RAKE and TextRank analysis revealed three major trade issues: rice tariffication moratorium, SOE and mitigation of non-tariff barrier. The most commonly mentioned issue was the rice tariffication moratorium.

4.3.3 Results interpretation

1) Rice Tariffication moratorium

Above all, the RAKE and TextRank extraction results show that the WTO TPRM has judged the out-of-quota tariff rates on rice imports to be extremely troublesome[2]. According to RAKE, from 2008 to 2016[3], the term "out-of-quota rates" is at the top of the extracted list of key phrases. TextRank analyses of TPRs from 2008 and 2012 support the point: "The continually substantial unfilled proportion of tariff quotas on some commodities, even with comparatively low in-quota rates, implies that their administration and distribution may, among other things, limit imports." TPRs on South Korea have so consistently urged for trade barrier reductions and changes to the agricultural price support regime.

According to the 2016 TPR, "at the border, tariffs continue to be the key mechanism supporting local pricing, notably on rice," notwithstanding a 20-year moratorium on rice tariffication, during which South Korea permitted minimal market access chances of 1–4% of its domestic consumption (Lim and Blandford, 2009).

2) State-Owned Enterprise (SOE)

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[2] The South Korean government successfully negotiated special treatment for rice and rice products during the final stage of Uruguay Round negotiations (1986–1994) on the condition that it be required to import a minimum amount of rice that would gradually increase until the grace period ended in 2004. The South Korean government reached an agreement with the World Trade Organization (WTO) and important rice exporting nations to prolong the tariff-rate quota (TRQ) mechanism for another ten years, until 2014. TRQ regime allows a lower tariff rate (a.k.a. in-quota rate) on a specified quantity of imports, while allowing a higher tariff rate on imports that exceed that quantity (a.k.a. out-of-quota rate) (Koo and Choi, 2019).
[3] According to the 2008 TPR report, South Korea's tariff rate is far above 100% on numerous non-quota commodities and as high as 887.4% on several agricultural products.

Meanwhile, state-owned enterprises (SOEs) have grown as important actors in world trade. Despite SOEs' significant role in supplying public goods to the domestic economy, the privileges they enjoy have resulted in negative externalities that impede competition and weaken efficiency (The Economist, 2012; Chafuen, 2019; Lee, 2019). In this context, the South Korean economy's dependency on public and semi-SOE has proven problematic. According to the TextRank summary, WTO concerns about "the central government's contingent liabilities associated with loan guarantees (3% of GDP), the rise in state-owned enterprises' debt (to 23% of GDP) mainly related to real estate, and the expected increase in spending (amounting to 11% of GDP) associated with the expanded range of services covered by the National Health Insurance and pensions during the next 50 years owing to South Korea's rapidly aging population." The RAKE findings confirm this point: SOEs present in all six TPRs under examination, ranking second or third (see Table 2).

3) Mitigation of Non-Tariff Barrier

South Korea's achievements in non-tariff barriers in other sectors, as well as in the intellectual property rights (IPRs) regime, are praised by the TPRM. Indeed, South Korea has received little criticism in the manufacturing sector, and its IPRs reform effort has been cited as one of its strong points. "The simple average applied most-favored nation (MFN) tariff rate on imports of manufacturing products was 11.3%, and the rate on manufacturing excluding food processing products was 6.3%; both are much lower than the rates for agricultural products," according to the 2016 TPR. In addition, the 2016 TPR recognizes it as a plus that South Korea has worked hard to eliminate technical trade barriers. This is

supported by a decrease in the number of items subject to the minimum shelf-life requirement, which many countries, including Japan, complained about in the second half of the 1990s. Moreover, RAKE results show that transparency of information disclosure and reinforcing IPR have been continually cited as strengths.

4.3 Analysis of China's Text Mining Results

Table 3. RAKE results for China's TPR reports.

Year/rank	1	2	3	4	5
2018	out-of-quota rates	inter-ministerial joint conference	anti-unfair competition law	state-owned enterprises	foreign-invested cinemas
2016	out-of-quota rates	inter-ministerial joint conference	non-ad valorem rates	state-owned enterprises	foreign-funded banks
2014	wholly foreign-owned companies	anti-unfair competition law	state-owned commercial banks	state-trading enterprises	state-owned enterprises
2012	Chinese-foreign joint-venture bank	authentic high-tech enterprises	wholly foreign-owned enterprises	anti-unfair competition law	state-owned enterprises
2010	anti-unfair competition law	wholly foreign-owned enterprises	state-owned banks	state-owned enterprises	anti-monopoly law
2008	Chinese-foreign joint venture bank	out-of-quota imports	wholly foreign-owned enterprises	state-owned commercial banks	state-owned assets supervision

4.3.1 Extracted Trade Issues

China TPR's RAKE and TextRank analysis revealed three major trade issues: SOE, New food safety regulations and Market Opening. TPR's recommendations for the same issue were repeatedly extracted, among which SOE-related phrases were the most noticeable.

4.3.2 Results Interpretation

1) State-Owned Enterprise (SOE)

Concerns and disputes have arisen as a result of China's unfair trade policies and practices. The RAKE and TextRank extraction results demonstrate that the WTO TPRM has frequently considered China's "excessive government intervention" in market activity to be a major issue. State-owned companies and other state-owned groups appear in the top-five list of key phrases in all six TPR reports under review, according to RAKE. The 2010 TPR, for instance, states that SOEs' monopolistic position gives them a competitive advantage over private firms, and that SOE benefits continue to grow. It was also observed that SOEs have a large market share in certain strategic areas of the economy, and that since the global financial crisis of 2007-2008, shadow financing has emerged as an crucial source of funding for those who have benefited from government stimulus measures in the form of infrastructure projects and other fiscal measures.

The challenges with China's SOEs are similar to those with the anti-competition law. Rather than fostering and protecting competition, the Chinese government has applied the laws in a way that favors SOEs (Kim, 2014; Lee, 2015). The RAKE results reveal that the phrase "anti-unfair competition law" comes in the top-five list of key phrases on a regular basis, showing its restrictive character for "foreign-owned enterprises," a term that also comes in the top-five list of all TRP reports under examination.

2) New food safety regulations

Meanwhile, the TextRank summaries suggest that the food safety law has been enhanced by imposing harsh penalties for law and regulatory infractions. New food safety regulations can be used as a camouflage for protectionism against international suppliers under the expanded regulations. According to the 2016 TPR report, for instance, it is noted that "foreign suppliers who export food products to China and Chinese firms who import foreign food products are both subject to strict state entry–exit inspection and quarantine regulations to the point that they worry about the cancellation of their registrations and about the risk of damage to their reputation due to public accusations of alleged violations".

3) Market Opening

It is apparent that China's contribution to global free trade is not to be overlooked. China has opened its enormous domestic market to international exporters and investors over the past two decades. It has also become a foundation of productive change, hence raising global living standards. According to the RAKE results, key expressions including the term "foreign" exist in the top-five list for all of the years examined, implying that foreign investment is becoming more accessible. China has risen to become the world's manufacturing hub, with a surge in primary and intermediate products imports. Foreign investment in the exploration and development of all forms of oil is promoted, according to the 2018 TPR report. It also highlights the fact that foreign investment possibilities are likely to grow, particularly in the transportation, gas, and telecommunications sectors.

Chapter 5. Case Study on the Trade Policy: Stages of Peer Pressure Formation

5.1 Japan's Trade Issue: Change in Position towards Regional Economic Integration

5.1.1 Background of the Issue: CPTPP

As a result of text mining, Japan was found to be the most compliant with TPR recommendations. Among the three countries, the most diverse issue-related phrases, and issues such as preferential tariff system, tax on the agriculture sector and TPP, and the least repeated comparison by chronology. Thus, this study conducts a case study on Japan's TPP issue, which is the most recent and has had a significant impact on the change of Japanese trade policy

Japan has profited from the free and open foreign trade system since it entered the GATT in 1955. However, until the 1990s, Japan had a reputation for being defensive about international competition as seen in its famed non-tariff obstacles (Pempel, 1998). Furthermore, the Japanese government has been quite inactive particularly concerning regional economic integration (Krugman, 2019; Tomiura et al., 2016). Japan has consistently emphasized globalism represented by GATT and WTO and used it as a basis for trade policy. Even though the number of regional trade agreements has increased globally in the 1990s, Japan did not actively participate in the trend being cautious about the FTA.

Japan began its endeavor to take an active role in the global trade system during the 1997–1998 financial crisis, shifting from its passive attitude. Japan's new trade policy and strategy were marked by the signing of the first Asian-only trade agreement with Singapore in 2001 and the trans-Pacific agreement with Mexico in 2003. (Park, 2007; Solis, 2009; Koo, 2018). Nevertheless, factors preventing Japan's trade liberalization have not fade away.

One of the main reasons Japan was hesitant to develop a regional economic integration was the fear of causing conflicts in other areas, particularly in North America where 32.2 percent of Japan's exports were accounted for in 1998. (Kim, 2001). The economic growth of surrounding nations at the time made economies of scale difficult to anticipate. Thus, Japan remained inactive in free trade, and the conventional attitude of the international community was that Japan might incur losses by paying economic expenses (Lee, 2004).

The real problem, however, was Japan's internal obstacles. The political burden of defending the country's economic interests is emerging as a visible impediment when gathering opinions. Opening and tariff reductions in agricultural, fishery, high-tariff, non-tariff items, and services, in particular, can be a major issue, as can reaching domestic and foreign political agreements on country-of-origin rules, exclusion of most favored countries, market restrictions, and investment agreements (Park, 2012). The pattern, which is politically protected by empathetic relationships with Liberal Democratic Party politicians, has been considered as the cause of Japan's postwar political and economic inefficiencies. Agriculture is the most prominent example. Agricultural interests have been used as rural power weapons to build special ties with Liberal Democrat politicians to avoid changes that may jeopardize existing law or budget measures in agricultural protection (Lee,

2018). The politicians desperately prevented the opening of the agricultural sector. Even when concluded, their power in Japan has been strong enough to obtain massive governmental subsidies. When the rice market partially opened, they secured 6 trillion yen as a subsidy since 1993 (Kindle, 2017). For Japan, domestic politics was the biggest obstacle to implement active trade policies.

5.1.2   Peer pressure on CPTPP

1)   Formation of Peer Pressure

1.   Opinion of surroundings (domestic public or national administrations)

In that atmosphere, the key stimulus that altered Japan's trade policy attitude was the 2007 FTA between South Korea and the United States. Japan seriously raised concern over the Korea-U.S. FTA. Japanese media pointed out that the Korea-U.S. FTA would make Korean products tariff-free while Japanese products are imposed of 4 percent tariff rate on average. Japanese interest groups strongly pressed the government in November 2005 by issuing a joint statement urging the U.S. to sign an economic alliance agreement (Sohn and Koo, 2011). If the Korea-U.S. FTA is signed, Japan would be at a great disadvantage in industries such as cargo trucks where the U.S. imposes 25 percent tariffs. Following the conclusion of the FTA, Japanese corporations consistently urged changes in trade policy due to the FTA's impact on South Korea and the continued spread of yen damage (Kim, 2013).

2.   Censorship and Comparison

Japan has long felt the need for free trade agreements. Japan was responsible

for incoming external pressures and could not avoid internal criticisms. Also, strengthening regional trade alliances, such as the EU and NAFTA, were focused on colossal exporters, which resulted Japan's continuous failure in WTO negotiations with them. In the course of multilateral trade round negotiations, such as NAFTA and MERCOSUR, the Japanese government felt the need for a free trade agreement as it actively enjoyed the benefits of the free trade system and generated profits. Since then, Japanese government department had positively evaluated that regional integration activities can contribute to the multilateral trade system and had reported the need for Japan to act more flexibly concerning regional integration (Kim, 2001). Furthermore, Japanese political and financial groups had expressed a sense of crisis over the Korea-U.S. FTA. This sense of crisis pressured Japan to act as a regional trade leader.

5.1.3 The Change of Action

Concerns over the U.S. market blockade have forced Japan to resume attempts to form regional economic integration like ASEAN+6 and the East Asian Summit. Japan also focused on the 2015 Trans-Pacific Partnership (TPP) negotiations with new trade policies and global leadership (Terada, 2010, 2019).

Japanese leadership in the Comprehensive and Progressive TPP (CPTPP) represents a breakthrough in Japan's trade policy history. It is worth noting that the trend of global governance agreements has put Japan under pressure. Fear of being high tariff rate enforced Japan to renew its attempt to form regional economic integration like ASEAN+6 and the East Asia Summit. Its new trade policy and global leadership resulted in the successful conclusion of the TPP negotiation in 2015 and the CPTPP discussion in 2018, rescuing the TPP that had never come into

effect owing to the US withdrawal (Terada, 2010, 2019).

Furthermore, peer pressure also significantly influenced Japan's participation and leadership in the TPP and the CPTPP. Japan did not enlist in the initial TPP membership indeed. The TPP was launched in 2006 with four countries: Singapore, Brunei, Chile, and New Zealand.[④] Following the United States' decision to join the TPP in 2009, Australia, Peru, and Vietnam committed to join the TPP, followed by Mexico, Canada, and Malaysia (Katada, 2016). Since the participating countries in the negotiations were small economies except for the U.S., the prevailing anticipation was that if Japan became a member, the TPP would be effectively an FTA between Japan and the U.S. (Kim, 2013). The rest of the world expected Japan to succumb under the pressure. The belief was proven right as Japan eventually authorized the trade due to peer pressure.

However, Japan remained in the TPP despite the risk of the US seceding amid the agreement. "The U.S. is moving toward an era of bilateral trade agreements based on America First," President Trump officially declared his withdrawal from the TPP in 2017. Despite the withdrawal of the U.S., Japan stood to become the center of regional free trade agreements among countries conscious of the U.S.'s bold action and renamed the alliance CPTPP. Until CPTPP, Japan refused to make changes or renegotiate the clauses on agriculture and fishery markets. The participation was Japan's first move towards opening of their 'inviolable' markets. Under the CPTPP system, the rate of trade liberalization in Japan is 95 percent. Furthermore, it is surprising that a trade-defensive Japan is now leading the CPTPP that consist of world's 15 percent of the GDP (Ping, 2019).

[④] In the late 1990s, the United States did not advocate economic liberalization inside the APEC framework, but in 2005, it began to develop a Free Trade Area of the Asia-Pacific (FTAAP) under the auspices of APEC.

Finally, peer pressure in the multilateral trading system led the way towards market opening.

As confirmed earlier, Japanese leadership in CPTPP is a groundbreaking and innovative move in its trade policy history. In the past, it was defensive of such coalitions. Global governance agreements, remarks, positions of major trade partners, and domestic voices strongly pressured Japan. As a result, Japan is now actively participating in the international trade market with new trade policies and leadership. Recently, Japan also approved 15 countries to participate in RCEP, the largest free trade agreements, accounting for 30 percent of the world's trade volume.

5.2. Korea's Trade Issue: Moratorium on Rice Tarrification

5.2.2 Background of the Issue: Moratorium on Rice Tarrification

The most concerning trade issue in South Korea's TPR found via text mining is the issue of rice tariffication. Since 2008, terms connected to rice tariffication have been extracted as major phrases and sentences to support this. South Korea's State-Owned Enterprises (SOE) and intellectual property rights issues arose as well, but the TPR reports emphasize the problem of South Korea's rice tariff the most. As a result, this study on Korea's case focuses on the state's rice tariff.

South Korea's agriculture industry, like that of other countries regardless of their wealth, was excessively protected when joining the WTO. Because of the exceptionally high degree of protection, the rice industry has been relatively unaffected by massive structural change (Cho and Park, 2014; Maeng, 2019).

Korea's history of rice tariffication dates to the Uruguay Round. Entering the 1980s, agricultural products emerged as a major issue in international trade as agricultural products are oversupplied globally caused by growing agricultural subsidies. During the Uruguay Round, the eighth meeting of the GATT, the agricultural sector was set to lift tariffs on all agricultural products and the special treatment of Korean rice was reflected in Annex to the Agreement (Annex V Section B and Attachment to Section B1). First, the main contents of the annex were suspension of tariff for the next ten years and completing negotiations on the tariff grace period extension in the tenth year ofthe implementation period. Second, it allowed minimum market access[5] in a way that any agricultural product should be imported more than a certain amount even during the grace period for tariffication.

Tariff Rate Quotas (TRQ) is one of the dual tariff system that imposes low tariffs on certain goods that are in-quota and high tariffs when they are out-of-quota to prevent excessive importation. (Choi, 2014). The TRQ was introduced to achieve 'a degree of market openness', primarily on sensitive agricultural items like rice in WTO agreements (Tangermann, 1996). It was adopted during the 2004 renegotiation and the report on it had been published in 2008. Thus, the text-mining on the report constantly extracted terms 'in-quota tariff' and 'out-of-quota tariff.' Potential termination of minimum market access, Korea would extend the rice tariff moratorium for ten years from 2004 to 2014 through renegotiation. Thus, South Korea was obliged to convert rice tariff under the WTO Agricultural Agreement from 2015.

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[5] Korea seems to have embraced some of the pressure to open the rice market during the agricultural negotiations, starting at 1 percent (51,307 tons) in the beginning of the implementation period, increasing 0.25 percent annually from 2 percent to 4 percent in the fifth year (Maeng, 2019).

5.2.2   Peer Pressure on Rice Tariffication

1)   Formation of Peer Pressure

1.   Opinion of surroundings (domestic public or national administrations)

2014, last year off the tariff grace period obtained at the Uruguay Round agreement, South Korea had faced unwanted opening of the rice market if renegotiation failed. The United States, China, Thailand, Australia, India, Pakistan, Argentina, Egypt, and Canada showed interest in entering the Korean rice market. Overall, the pressure from other countries were tough, insisting open rice market. Korea had to negotiate with certain countries several times.[⑥]

According to the report (park et al. 2009) by the Food and Rural Affairs of the Ministry of Agriculture, overall, Korea successfully negotiated a moratorium on tariffication until 2014, but with a post-five-year multilateral interim inspection clause. Agreed terms include a gradual increase[⑦] of minimum market access volume and a country-specific quota system to allocate rice amounts to certain countries based on import records from 2001 to 2003. Moreover, the mandatory importation of rice was added during 2004 negotiations, but it only included 'rice for processing.' Trade partners strongly wanted to export 'rice for meals' to Korea and settled the proportion for the market from 10 percent in 2005 to 30 percent in 2014 (Kim, 2019).

At the end of the moratorium period, South Korea has finally announced that it

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[⑥] The first round of negotiations began in May 2004, with the United States nine times and China eight times (MAFRA, 2004).
[⑦] It is going to be increased from 225,575 tons (4.40% of 1988- 1990) in 2005 to 408,700 tons (7.96%) in 2014.

would finalize the tariff rate at 513 percent in 2015. However, five major rice exporters (US, China, Australia, Thailand, and Vietnam) raised issues with Korean rice tariff calculation and TRQ operation methods; the verification began in 2015 (Jung, 2016). According to the Ministry of Agriculture, Food and Rural Affairs (MARFA, 2019), the five nations have publicly challenged the high tariff rate of 513 percent and the basis of calculation. They called for verification and reduction of tariff rate to 200-300 percent. The nations wanted their Country Specific Quota (CSQ) to be allocated properly according to TRQ operations if the tariff rate would remain unreduced. In particular, trade partners except Vietnam asked for a stable allocation of their exports even after the tariff to prevent such cases where Vietnam takes 90 percent of the quota as a result of competitive bids (Kim, 2019).

When rice tariff related news was reported in Korea during 2004 and 2014, farmer groups fiercely resisted saying that tariffication will eventually lead to full opening of the market. 2014, just before confirming the tariff, about 4,000 farmers protested at the city hall (Yoo, 2014). According to the groups, having quotas is a gigantic waste of money because it makes Korea import from countries with expensive rice prices. They wanted budgets to be used on domestic agricultural policies. In addition, importing rice at a 'normal price' is also a waste factor. Given that the price difference between 'rice for meal' and 'rice for processing' is usually between 10 to15 percent in China and Thailand but up to 27 percent in the U.S., they expressed concern over exporters like the U.S. might gradually increase the export ratio.[8]

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[8] As of January 2021, rice prices in rice exporters were tallied at $850 per ton in the United States and $529 per ton in Thailand (Yoo. 2021). Regardless of the item, if the figure is replaced with 132,000 tons of U.S. quotas, it will be worth $112.46 million, but if the same amount is bought from Thailand, it will be converted to $69.99 million. There is a difference of 42.47 million dollars, but Korea has to import more U.S. rice due to the quota system

2. censorship and comparison

Korean government successfully maintained the tariff rate but instead accepted the quota system. The quota had to automatically dissipate following the 2015 tariff conversion for it was a device in return for a moratorium in the 2004 renegotiation on rice trade. However, South Korea has been under considerable pressure from its major counterparts to consider maintaining quota for each country to prevent tariff cuts. Rice for meals importation was also inevitably allowed. The MAFRA explained, "if only imported rice is supplied for processing while most of domestic rice is distributed for rice, some of the imported rice may be introduced for rice, as it may violate the principle of national treatment." (MAFRA, 2019). From 1995 to 2004, The international community criticized South Korea for violating international norms by importing TRQ rice only for processing purposes (Kim, 2019). This pressure from the international community led Korea to scrutinize itself.

2) Change of Action

The peer-pressure process was activated for the first time when the South Korean government declared its decision to end preferential treatment for rice and rice products on January 1, 2015, and to subject them to standard import duties. It took the government five years to establish agreements on the terms and circumstances of its rice imports with five rice exporters: the U.S., Thailand, China, Australia, and Vietnam. The WTO completed the certification procedure in January 2020, allowing South Korea to maintain a 513 percent tariff on imported rice in 2020. (Kim, 2019; WTO Agreement on Agriculture, Attachment to Annex 5,

2020c).

Since then, countries have criticized the high tariff rate of 513 percent. Korea's verification of tariffication in January 2021 ended with the victory of peer pressure. January 2021, South Korea completed consultations[9] with its major trade partners and announced that it would apply a tariff rate of 513 percent on rice-related items while maintaining a TRQ of 408,700 tons (5 percent tariff rate) just as before the tariff was imposed (MAFRA, 2021). Although failed to lower the tariff rate, trade partners successfully pressured Korea and placed a quota system.

According to the comprehensive analysis, Korea seems to be compliant with the peer pressure of neighboring countries, including TPRM. It is noteworthy that no external forces have been involved during Korea's tariffication negotiations. Also, it is reasonable to speculate that South Korea could no longer delay the tariffication in 2015 because it already had delayed it for a long time. There was even a domestic pressure on the moratorium because farmers and agricultural organizations strongly opposed the tariffication (Lee, 2014). But South Korea has apparently succumbed to naming and shaming. Social criticisms include TPRM's recommendation on Korea's high tariff rate issue and demands from major trade partners. As a member of the WTO, South Korea withdrew its moratorium on tariffs despite strong domestic opposition because it was not free from peer pressure. However, this can never be considered a complete resolution to Korea's agricultural trade issues. The confirmed tariff rate of 513 percent is far higher than the OECD average (TPR on Korea, 2012). If this fact does not change, TPRM's pressure will continue no matter how far the tariff verification is completed and

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[9] In the end, China, the United States, Vietnam, Thailand, and Australia obtained the share of 388,700 tons of TRQ 408,700 tons. China obtained 157,195 tons, followed by the United States with 132,304 tons, Vietnam with 55,112 tons, Thailand with 28,494 tons, and Australia with 15,595 tons. (MAFRA.2021).

how deals are negotiated with major countries.

5.3 China's Trade Issue: The Government's Market Intervention via SOEs

As a result of text mining, State-owned Enterprises (SOEs) problem topped among China's trade issues. The key phrase is listed for the entire year. The core lies in the government's excessive intervention in the market. Thus, the case study attempts to focus on the Chinese government's intervention in relation to its SOEs.

5.3.1 Trade Issue: SOE

SOEs continually take an extremely large share of the Chinese economy.[10] SOEs also have an outsized influence in China's stock and bond markets. Listed SOEs account for 40 percent of Chinese company market capitalization and have raised more than 90 billion dollars from investors since 2015 (Borst, 2021).

The primary objective of Chinese SOEs was to aid the government to achieve production and distribution goals. The government had a key role in resource planning, coordination, and allocation and SOEs had limited autonomy in determining production volume, staff modification, or spending excess profits. Product prices were not utilized as a vital signal to a company's production decisions, but rather used by the government to interchange resources between

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[10] In 2000, the Fortune Global 500 (FG500) had 27 SOEs, which had grown to 102 in 2017, accounting for one-fifth of the FG500 enterprises. The FG500 SOEs generated USD 6.1 trillion in revenue in 2017, accounting for 22% of the FG500 enterprises' total revenue. (Lin et al., 2020).

economic sectors. The exchange happened particularly in the industrial sector to achieve ambitious industrialization ambitions (Naughton, 2007: 60). This led to a shortage of market-based incentives. Furthermore, the multi-functionality of SOEs led to low efficiency, causing the chronic problem of supply scarcity during the planned economy.

However, SOEs[⑪] still account for an unusually high percentage of the China's stock and bond markets. Listed SOEs account for 40 percent of the market capitalization of Chinese enterprises and have raised more than 90 billion dollars from a number of investors since 2015 (Borst, 2021). Furthermore, according to China's TPR, the government continued to deploy money to stabilize the market, and several well-known private enterprises received huge reliefs from state-linked investors. State-owned financial institutions are often overseen by the Central Huijin Investment Co., Ltd (Huijin), a Chinese government-owned investment firm. In addition, the Ministry of Finance (MOF) controls several firms subject to central administrative institutions, financial businesses, and SOEs with financial links to the MOF (Zhang, 2019).

5.3.2 Peer pressure on SOE

1) Formation of Peer Pressure

1. Opinion of surroundings (domestic public or national administrations)

[⑪] Central industrial SOEs supervised by the central SASAC; local industrial SOEs monitored by local SASACs; financial institutions administered by Central Huijin Investment Co., Ltd (Huijin); and entities monitored by the Ministry of Finance are the four types of SOEs in China (MOF). The State-owned Assets Supervision and Administration Commission of the State Council (SASAC), a special commission directly under the Governing Council, is in charge of central and local industrial SOEs.

The world has consistently challenged the Chinese government's disproportionate allocation of SOE power. Chinese government, both central and local, assisted Chinese SOEs to strengthen competitiveness and expand global influence through a variety of measures, including implicit and explicit restrictions against potential foreign competition, special tax exemptions, and direct and indirect subsidies (Lai, 2004; Yu, 2014). As a result, international firms have faced disadvantages such as limited access to certain industries in China or predatory penetration of Chinese goods in their markets. As a result, several international observers objected to the broken market (Mavroidis and Sapir, 2021).

The European Union reviewed the proposed joint venture between France's Electricte de France (EDF) and the China General Nuclear Power Corporation (CGN) and ruled that the CGN was subordinate to China's State-owned Assets Supervision and Administration Commission (SASAC). Thus, it empowered the EU to decide whether the deal should be cleared. The merger was concluded inappropriate as the EU Commission considered not only CGN's own revenue but all Chinese energy SOEs' profits (Price, 2016). China's attempt to expand its influence via SOEs is a great example showing why it intervenes with the market and exempts SOEs from competitive laws.

Several publicly available comments show that the United States aspired to take the lead in the international development of SOE disciplines. According to the Office of the United States Trade Representative, the U.S. is "pursuing trailblazing rules to ensure that private sector businesses and workers can compete on equal terms with SOEs, particularly when such SOEs receive significant government support to engage in commercial activity" (USTR, 2015). Likewise, Joe Biden, current president of the United States, explicitly urged the U.S. to form new

regulations on the SOE issue (Palmer, 2011). These political statements unquestionably reflect America's determination to establish new global standards for SOEs. Following these pronouncements, the U.S. played a critical role in the TPP to start discussions on SOE disciplines (Sylvestre and Marcoux, 2016). In addition, TPRM and other major export partners have pressured China by speaking publicly on the SOEs and including them in discussions when making the agreement.

2. Censorship and comparison

China's censorship only briefly glistened. China started a SOE reform in the 1990s and early 2000s. SOEs began to resemble a company rather than a government agency, using a contemporary governance structure to enhance efficiency and profitability. During this time, private firms played an important role in economic production, investment, and employment. In many crucial areas of the economy, the Chinese government appeared ready enough to enable the private sector to supplant SOEs (Wang, 2004; Yu, 2019). However, recently, Xi Jinping's power consolidation is strengthening the role of SOE (CGTN, 2020). Xi said that SOEs play a special role in providing public services within the economy, stabilizing the economy during periods of volatility, and supporting government industrial policies and other initiatives to regain China's status in the past.

2) Change of Action

Expectations for a major SOE reform have gradually faded away. Rather, the government has created new organizations, including the National Asset Management Committee, to centralize control over large SOEs. Furthermore, the

lack of transparency in SOEs contributed to an increasing distrust on the government's intentions both inside and outside China.

The Chinese Anti-Competition Law is an example of a regulation that promotes the monopolistic position of Chinese SOEs. The TPRM has consistently stated that, even under anti-competition legislation, Chinese SOEs legally own exclusive production and sales rights and they are shielded from genuine commercial competition. China's competition law is "relevant to monopolistic acts" within the People's Republic of China (PRC) or damages its competition (Fox, 2008; Owen et al., 2017). According to Article 7 of the legislation, though the law does not fully exclude SOEs, the leading SOEs belong to the strategic sector, which is almost immune to Anti-Money Laundering (AML) restriction and can continue under state control to "defend consumer interests and encourage technological advancement."[12] Although China privatized majority of its enterprises, critical areas such as telecommunications, finance, electricity, oil, railroads, aircraft, and more remain under government control. These SOEs are not subject to market regulation and are heavily subsidized by the state bank. China ostensibly represents itself as if it has an established framework to sustain a market economy, but its contents connect to the SOEs' discriminatory status and detail data are not available. The SOE-related complaints will not go away unless competition openness is assured.

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[12] Industries under the control of the state-owned economy, industries that only operate and sell in accordance with the law, and so on, shall be safeguarded by the state and legally run the workplace. The government monitors and controls the pricing of products. In addition, these firms and activities provide services to defend consumer interests and support technical growth. The above-mentioned business should act in good faith, in accordance with the law, autonomously, and under public oversight, and shall not jeopardize the interests of customers in a dominating or proprietary trading position.

Chapter 6. Conclusion and Implications

TPRM, one of the most essential institutional parts of the WTO, has preserved crucial data and narratives that are rich and informative to the worldwide trade community. It has served as a mechanism of peer pressure to check each nations' trade policies. TPR reports, on the other hand, have received minimal scholarly attention for their complexity and subtlety in both semantic and political dimensions. Existing TPRM literature only gives snapshots of a single nation or narrow locations few time zones apart. This study intended to fill the vacuum by employing two unsupervised machine learning approaches, RAKE and TextRank, and intended to determine the existence and effects of peer pressure on the outcomes through case studies.

The experiment focuses on three Northeast Asian nations. Japan, Korea, and China are one of the world's most active trade nations. Japan and South Korea are the third and tenth largest economies in terms of real GDP in 2019 as nations with considerable trade dependency. As of 2019, Korea, Japan, and China contribute for around 26 percent of overall G20 exports (OECD, 2020). China, the world's second biggest economy, has overtaken the United States as the world's greatest exporter, with an estimated $2 trillion in exports (Stata, 2020).

Given their position and importance in international trade, they should have already analyzed the trends in trade-related policies from a comparative and solidarity perspective. A total of 18 TPR reports from these countries were included in the comparison study.

In Japan, the results of RAKE and TextRank were drawn from a variety of

issues. The TPRM and several countries influenced and pressured Japan. The analysis shows that Japan is most adaptable to peer pressures. It has the least tendency to repeat the same key phrases compared to that of Korea and China. The text-mining results revealed that the Japanese-style method of applying preferential tariffs to certain developing countries under the GSP was not transparent nor simple, but only showed that tariff barriers on agricultural and livestock were breaking down. However, the most notable point in Japan's trade policy flow is the TPP. Although it has previously been a very passive country when opening trade markets, Japan has liberalized many agricultural products under the TPP despite persistent resistance from domestic agricultural interests. The keynote of the global free trade agreement, including the Korea-U.S. FTA, played a major role initiating Japan's leadership in the TPP and CPTPP.   Japan was under economic and political pressure, and it was able to bring the CPTPP to a successful end despite the U.S.'s exit. This is a resounding win for peer pressure.

The results of RAKE and TextRank in South Korea's TPR report also show its high dependence on public and private companies, another problem in South Korea's trade policies. Korea's public sector can be a financial time bomb if it mismanages its debts. However, the most controversial issue within the WTO domain is the "out-of-quota tariff rate" on rice imports. In January 2015, South Korea finally agreed to end special treatment of rice and rice products after 20 years of peer pressure. It did not fully resolve Korea's agricultural trade problem. The peer pressure mechanism does not seem to be as influential as in Japan. Nevertheless, the tariffication on rice and rice imports indicates that peer pressure mechanisms under TPRM played a role in Korea.

Finally, the WTO's TPRM raised concerns regarding China's trade policies

and practices, including the problem of indirect subsidies to SOEs. It wanted to scrutinize China's ambiguous and self-sufficient trade policies and practices to secure the international trade system. At the same time, however, WTO regulations failed to reduce the privileges and unfair benefits that SOEs get. The WTO's TPRM reiterated that the Chinese SOE is excessively protected from legitimate business competition. Instead of protecting and promoting competition, the Chinese government has indirectly discriminated foreign corporates. The peer pressure mechanism has not worked very well on China. Among the three countries, China's approach to its SOEs has not changed despite strong peer pressures from partners such as the EU and the United States. However, China has become the center of world trade since joining the WTO in 2001, which means that such reforms probably would not be realized without China's active participation. It remains unanswered whether the peer pressure mechanism tame China and how long it will continue.

This study is the first attempt to apply text-mining techniques to the international trade domain with case studies. The techniques have shown its efficiency on grasping meaningful information from large amounts of text. New analytical techniques have enabled this study to investigate extensive, complex, and ambiguous TPR reports. However, there are technological limitations in their capacity to entirely regulate rhetorical representations that might have underlying character on each country's trade policies and practices. Therefore, a case study is conducted to complement this. In subsequent studies, I hope that the research will proceed with a tool that can more accurately identify text.

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Abstract

보호주의 압력이 커지는 시대 속에서 국제사회는 여전히 거대한 도전에 직면해 있지만, WTO는 국제 무역 시스템의 중심으로서 세계 경제의 확대와 안정에 상당한 기여를 했다. 본 연구는 WTO의 핵심 제도적 축 가운데, 무역 정책 검토 메커니즘(TPRM)이 WTO의 또 다른 제도적 축인 분쟁 해결 메커니즘(DSM)에 비해 보호무역주의에 대항할 수 있는 보호 수단이라는 중요성에도 불구하고 가장 적게 연구되어 왔다는 점에 주목한다. TPRM은 물리적인 제재가 아닌 사회적 비판을 핵심으로 하는 메커니즘인 peer pressure를 기반으로 국제사회가 무역 정책과 관행에 대해 책임과 투명성을 높이는 데 도움을 줄 수 있다. 그럼에도 학술적 관심이 부족한 주된 이유는 검토 보고서의 미묘한 기술과 방대한 양의 택스트에 있다.

기존 한계를 뛰어넘고자, 본 연구는 1단계에서 정보 추출(IE) 기법을 사용하여 TPR을 분석했다. RAKE(Rapid Automation Keyword 추출) 및 TextRank 알고리즘을 이용하여 동아시아의 3대 교역국(한국, 중국, 일본)에 대한 총 18건의 TPR 보고서를 분석했으며, 이를 바탕으로 3국의 주요 통상 이슈를 추출하였다. 해당 이슈에 대한 심층적 이해와 풍부한 해석을 위해 2단계에서는 peer pressure 형성 단계에 따라 사례분석을 진행했다. 연구 결과는 일본, 한국, 중국의 주요 통상정책 패턴과 TPR의 영향, 그리고 그 과정에서 발생한 peer pressure의 형태 및 결과를 심층적으로 보여주며, 국제 무역 사회에 새로운 방향성을 제시하고자 한다.