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# When Text Mining Meets WTO's Trade Policy Review: The Cases of South Korea, Japan, and China

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Among the key institutional pillars of the World Trade Organization (WTO), the Dispute Settlement Mechanism (DSM) has attracted the lion's share of scholarly attention in contemporary research relating to the trade organization. Yet this study notes that the other institutional ballast of the WTO, namely the Trade Policy Review Mechanism (TPRM), has remained the least studied, despite its significance as a safeguard against protectionism. The main reason for the lack of attention by trade scholars is the semantic complexity of review reports. In an effort to navigate through the *complex, subtle, and often ambivalent text*, this study uses information extraction (IE) techniques for both a horizontal and vertical analysis of TPR reports. A total of 18 TPR reports on the three representative trading states in East Asia—South Korea, China, and Japan—have been analyzed by the Rapid Automation Keyword Extraction (RAKE) and TextRank algorithms. The findings of this study show *important* policy patterns and their changes.

***Keywords: World Trade Organization (WTO), Trade Policy Review Mechanism (TPRM), information extraction (IE), Rapid Automatic Keyword Extraction (RAKE), TextRank***

## 1. INTRODUCTION

The World Trade Organization (WTO) has played a pivotal role in maintaining and stimulating the momentum of trade liberalization since its establishment in 1995 as the successor of the General Agreement on Tariffs and Trade (GATT). Over the past 25 plus years, the dollar value of world trade has nearly quadrupled, while the real volume of world trade has increased threefold. It is no wonder that the WTO's 164 members account for 98% of world trade. Most importantly, the trade organization has created an interrelated and complementary rule system that helps the international trade community to fight against the tide of protectionism (Goldstein, Rivers, and Tomz, 2007; WTO, 2019, 2020a).

Among the varieties of institutional innovations that have led 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), the WTO's Trade Policy Review Mechanism (TPRM) is especially designed to raise awareness of members' trade policies and practices and to promote accountability and transparency. Unlike other institutional mechanisms that focus on the conformity of members' particular activities in relation to WTO norms and rules, individual TPR reports address the full range of the trade-related policies and practices of each WTO member (Laird, 1999). TPR reports thus provide a rich and insightful archive of valuable data and narratives for the international trade community. The TPRM has played an integral role in monitoring the trade regime, generating specific

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information that members need, supporting domestic capacity for surveillance, and improving peer-review and peer-pressure procedures. Periodic reviews under the TPR mechanism have served as a reminder of policy commitments and as a lock-in mechanism for members. In a world of growing protectionism, TPRM's given mandate of increasing transparency has become ever more important (Francois, 2001; Elsig, 2010; Ghosh, 2010).

This study begins with the observation that the TPRM remains underestimated despite its potential as an important mechanism that can not only reflect but also refract the characteristics of each member's trade policy. Strengthening the TPRM could be an important step toward saving the WTO, which has faced formidable challenges in recent years. In particular, the importance of trade policy transparency cannot be overstated during a time when the Covid-19 pandemic has nearly paralyzed the entire global economy and thus tempted many countries to raise trade barriers. TPRM contributes to the multilateral trading system by allowing member states to recognize and evaluate each other and by providing greater transparency and a better understanding of national trade policies and practices. Moreover, the WTO's emphasis on the TPRM's authority to monitor domestic transparency in trade decision-making areas can also help the Dispute Settlement Mechanism (DSM) interpret and apply transparency-related obligations in WTO agreements (Francois, 2001; Chaisse and Chakraborty, 2007; Ala'i, 2008; Trommer, 2017).

With subtle naming-and-shaming purposes, however, TPR reports are particularly known for their nuanced handling of special trade concerns, thus making it difficult to read between the lines. Such a characteristic has certainly barred researchers from paying due scholarly attention to the TPRM in contrast to the other institutional pillar of the WTO, which is the DSM. Existing literature on the TPRM only offers a snapshot by focusing on either one country or one particular area within a country no more than a few time zones away, while the academic literature is largely descriptive rather than analytical (Kimura, 2008; Zahrnt, 2009; Luo and Zhang, 2010; Zhang, 2017; Okafor and Teo, 2019; Yu and Chan, 2019).

This study attempts to bridge the gap in the literature by using text mining techniques for both a horizontal and vertical analysis of TPR reports.[1] Text mining techniques can contribute to the literature by helping researchers quickly grasp meaningful information from a large amount of text. With their promise to achieve more effective meaning mining, keyword extraction algorithms have also received a great deal of attention as an effective way of acquiring useful information from unstructured text (Rose et al., 2010). As one of the first attempts to apply text mining techniques to this particular problem domain, this study lays the foundation for future research and studies.

The remainder of this study unfolds in three sections. Section 2 discusses data and methodology. A total of 18 TPR reports on the three representative trading states in East Asia—South Korea, China, and Japan—are analyzed. This study utilizes the Rapid Automation Keyword Extraction (RAKE) and TextRank algorithms, both of which are designed to navigate through complex, subtle, and often ambivalent bodies of text. The former is specialized in extracting key phrases from each document, while the latter extracts summary text.

Section 3 presents the key phrases extracted by RAKE and summary sentences drawn

[1] Text mining refers to the process of mining meaningful patterns or knowledge in an unstructured set of text (Fayyad, 1996). It also refers to a group of techniques employed to identify trends and produce knowledge from data (Francis and Flynn, 2006).

from TextRank.[2] The results identify fundamental characteristics and parameters that govern the trade objectives, policies, and practices of each country. They also reveal the challenges and opportunities that each country brings to the multilateral trading system. (1) Aside from persistent government involvement in the economy, South Korea's barriers to rice and rice products have been the most serious source of concern. (2) Some stubborn barriers to trade in goods and services notwithstanding, Japan's effort to implement structural reforms has been highly regarded by the WTO TPRM. (3) Since its entry into the WTO in 2001, China has been regularly reminded of the negative impact of wide and deep intervention by state institutions on global trade, but to no avail. Section 4 summarizes the key findings and draws policy implications.

## 2. DATA AND METHODOLOGY

The GATT (1947) mandated an original version of the TPRM in 1989 to periodically review all members' trade policies and practices and to monitor their transparency in accordance with the Memorandum of Understanding on Notification, Consultation, Dispute Settlement, and Surveillance concluded at the Tokyo Round in 1979. Transparency builds trust and makes members feel that they are working together toward the common goal of substantially reducing tariffs and other trade barriers and eliminating preferences on a reciprocal and mutually advantageous basis. By embedding transparency into the GATT culture, the original TPRM intended to encourage members to be more engaged and committed to the vision of the GATT. The GATT's transparency obligations were narrow and limited, however (Mavroidis, 1992).

The WTO further strengthened the GATT TPRM so that all members comply with the rules, disciplines, and commitments agreed under the multilateral trade agreement (Kuenzel, 2019). For each review, two documents are prepared: a policy statement with a report submitted by the member government and a report studied independently by the WTO Secretariat. These two documents are then discussed by the WTO's General Council, serving as the Trade Policy Review Body (TPRB). Examinations and evaluations are carried out against the background of the wider economic and developmental needs, policies and objectives of the Member concerned, as well as of its external environment (WTO, 2020b).

All 164 WTO members are subject to periodic review under the WTO TPRM. The review intervals are determined by the impact of individual members on the functioning of the WTO, defined in terms of their share of world trade. The first four trading entities thus identified—as of 2020, the United States, the European Union, Japan, and China—are subject to review every two years. Members ranked between the 5th and 20th, such as South Korea, India, and Brazil, are subject to review every four years. Other members are reviewed every six years (WTO, 2020b).

The volume of TPR documents has expanded over the past 25 years. As of February 2021, the WTO's TPRM had conducted 404 reviews. Typically, each country's individual report ranges from 100 to 200 pages in length. The total length of the TPR archive of country reports is over 450,000 pages. As the volume increases, it is becoming increasingly difficult

[2] Five key phrases are reported in each country section below. Key sentences are set to be summarized in 200 words for each review period of each country. The summary reports are available upon request.

to analyze the documents. That is why most studies on TPRs have been limited to one country for only a small number of review periods (Kimura, 2008; Zahrnt, 2009; Luo and Zhang, 2010; Zhang, 2017; Okafor and Teo, 2019; Yu and Chan, 2019).

Using text mining techniques, this study attempts to overcome such a barrier and critically examines the voluminous body of TPR reports. Text mining is a field that "automatically extracts previously unknown and useful information from unstructured textual data by means of natural language processing (NLP) (Qiua et al., 2019). Until recently, extracting key phrases was a complex task often leading to poor performance. As text embedding technology advances, however, more sophisticated algorithms have become available for a wide variety of fields.[3]

In the field of trade and trade-related issue areas, there is no reliable training data that can be used for supervised machine learning. As a result, this study uses two unsupervised machine learning techniques—RAKE and TextRank—in order to navigate through the lengthy, complex, subtle, and often ambivalent textual data documented in TPR reports. Both the RAKE and TextRank algorithms are known as unsupervised, domain-independent, and corpus-independent methods for extracting keywords and sentences. RAKE is applied to find salient keywords as an extreme summary of the corresponding document, and TextRank is used to find important contextual clues regarding how the document is meant to be interpreted. Although both key phrase extraction and text summarization are available with TextRank, this study uses RAKE for the purpose of key phrase extraction, as the latter offers better and more efficient results (Baruni, 2020).

To briefly explain, RAKE first extracts candidate keywords without stop words and then analyzes the frequency of co-occurrence within a candidate keyword pool. It then splits textual data into arrays of words and constructs *word frequency* (deg(w)) and *co-occurrence* (freq(w)) matrixes that assign a score to each keyword. Finally, a ratio of the degree-to-frequency score for each candidate keyword is computed by deg(w)/freq(w). Each key phrase score is the total score for each keyword (Rose et al., 2010; Jindal and Kaur, 2020). Using Fox's stop words list, this study chooses three-word key phrases and reports the top-five key phrases for each TPR report.[4]

As with RAKE, TextRank is an unsupervised key phrase extraction algorithm. In addition, TextRank has been developed for unsupervised text summarization. It assigns relevance

[3] Information extraction method can be divided into two categories: statistics-based model and machine learning. In a nutshell, there is no clear-cut boundary between the two, but here we attempt to highlight the key differences. Statistics-based frequency distribution offers one of the simplest ways of extracting useful knowledge from a lengthy body of text by counting the number of occurrences. Its usefulness notwithstanding, however, frequency alone cannot determine the real—as opposed to nominal—significance of extracted information. More sophisticated statistical methods thus conduct hypothesis testing and parameter estimation. A machine learning approach takes a different step by involving a machine learning algorithm, where there is a training data that it can learn from. Although the objective is the same, machine learning does not need any prior assumptions to know the relationship between words or variables. Supervised learning is the most common branch of machine learning. To put simply, it works by training an algorithm from a set of data where the output labels are already known. As will be discussed shortly, unsupervised learning method is used when there are no reliable training data or labels that can be used for supervised learning.

[4] Two stop words lists—the SmartStoplist and the FoxStoplist—are built into the RAKE algorithm library. The FoxStoplist contains 421 high-frequency stop words such as a, any, and at.

scores to sentences using a PageRank algorithm.[5] It first splits a document into sentences (vertex) and then calculates the similarity score between sentences by counting the number of co-occurrence words. Formally, given two sentences S*i* and $S_j$, with a sentence being represented by the set of $N_i$ words that appear in the sentence, $S_i = W_1^i, W_2^i, \cdots\cdots, W_n^i$. The similarity function for $S_i$ and $S_j$ can be defined as follows (Brin and Page, 1998; Mihalcea and Tarau, 2004).

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

A ranking of the sentences is then produced according to the scores. Finally, the most significant sentences are selected and presented in the same order as they appear in the document, which constitutes the summary (Barrios et. al, 2016).

## 3. EXTRACTION RESULTS AND THEIR INTERPRETATIONS

As noted above, the TPR review intervals are different from each other. At the time of writing of this study in February 2021, a total of 25 TPRs had been conducted for the three Northeastern Asian countries: six for South Korea in 1996, 2000, 2004, 2008, 2012, and 2016; 12 for Japan in 1995, 1998, 2000, 2002, 2004, 2006, 2009, 2011, 2013, 2015, 2017, and 2020; and seven for China in 2006, 2008, 2010, 2012, 2014, 2016, and 2018. For the following analysis, six TPRs have been drawn from each country in order to match the sample size.

### 3.1 South Korea

As in other countries both rich and poor in the world, the agricultural sector in South Korea remained heavily protected at the beginning of the WTO. The rice sector has been particularly immune to tremendous structural change thanks to the unusually high level of protection (Cho and Park, 2014; Maeng, 2019). The share of agriculture, forestry, and fisheries in South Korea's total employment decreased continuously from 17.9% in 1990 to 8.1% in 2004 to 3.9% in 2018 (Ministry of Employment and Labor, 2020). The three sectors' share in South Korea's gross domestic product (GDP) constantly decreased from 4% in 2003 to 2.1% in 2010 to 1.6% in 2019. Nevertheless, the share of rice in the three sectors increased from 14.3% to 16% during the same period (Statistics Korea, 2020). The rice sector has indeed reflected and refracted South Korea's political and economic landscape. In 2019, the share of rice farming in South Korea's farming households was around 50%. Although its share of the population has declined from 80% in the early 1990s, its political and symbolic influence has not (Choi and Kim, 2011; Lee, 2020).

The extraction results from both RAKE and TextRank indicate that the WTO TPRM has

[5] PageRank is a method for computing a ranking for every web page based on the graph of the web. PageRank helps search engines and users quickly make sense of the vast heterogeneity of the World Wide Web (Brin and Page, 1998). The basic concept of PageRank is that the ranking of a web page depends on the importance of the web page suggested by other web pages in terms of page links (Kim, et al., 2013).

found the out-of-quota tariff rates on rice imports to be highly problematic.[6] According to RAKE, the phrase "out-of-quota rates" appears at the top of the extracted list of key phrases from 2008 to 2016.[7] TextRank summaries of 2008 and 2012 TPRs also confirm the point: "The consistently large unfilled share of tariff quotas on some items, even with relatively low in-quota tariffs, suggests that their administration and allocation may, *inter alia*, be restricting imports." TPRs on South Korea have thus repeatedly called for reductions of trade barriers and reforms of the price supporting system in the agricultural sector. As the 2016 TPR notes, "at the border, tariffs continue to be the main instrument supporting domestic prices, particularly on rice" even after a 20-year moratorium on the tariffication of rice imports, during which South Korea allowed minimum market access opportunities of 1-4% of its domestic consumption (Lim and Blandford, 2009).

**Table 1.** 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 |

[6] During the final stage of Uruguay Round negotiations (1986-1994), the South Korean government successfully negotiated to receive special treatment for rice and rice products on the condition that it was obliged to import a minimum amount of rice that would gradually increase until the grace period ended in 2004. The South Korean government made a deal with the WTO and key rice exporter countries to extend the tariff-rate quota (TRQ) formula for an additional 10 years until 2014 (Koo and Choi, 2019: 281-281). As a two-tiered tariff regime, a TRQ offers an institutional compromise between import quotas and tariffs to regulate (politically sensitive) imports. In its essence, a TRQ regime permits 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). Unlike a traditional quota, a TRQ does not limit the quantity of imports. However, imports would be effectively restricted if the out-of-quota rate were set at a prohibitive level (Gorter and Kliauga, 2006; Lim and Blandford, 2009).

[7] The 2008 TPR report notes that South Korea's tariff rate is well over 100% on many non-quota items and that it is as high as 887.4 % on some agricultural products.

The peer-pressure mechanism was finally effective when the South Korean government announced its plan for the termination of special treatment on rice and rice products and its intention to subject them to ordinary import tariffs as of 1 January 2015. It took five years for the South Korean government to reach deals with five rice exporters—the US, China, Australia, Thailand, and Vietnam—on the terms and conditions of its rice imports. The WTO completed the certification process in January 2020 and allowed South Korea to keep a 513% tariff on imported rice in 2020 (Kim, 2019; WTO Agreement on Agriculture, Attachment to Annex 5, 2020c). However, this should by no means be seen as a full resolution of South Korea's agricultural trade issues.

In the meantime, state-owned enterprises (SOEs) have emerged as key players in global trade. This new development has been controversial with the rise of state capitalism. Despite the positive role of SOEs in providing public goods for the domestic economy, the privileges that they enjoy have produced negative externalities that hamper competition and undermine efficiency.[8] The WTO has thus attempted to address the problem of indirect subsidies by SOEs, as well as by central and local governments, but to no avail. The WTO rules fall short of what is required to reduce the privileges and unfair advantages that SOEs have in their operations. Furthermore, the WTO's subsidy rules cannot regulate the subsidies provided by SOEs to private companies unless the SOEs are demonstrated to be public entities (The Economist, 2012; Chafuen, 2019; Lee, 2019).

Against this backdrop, the South Korean economy's heavy reliance on public and semi-state-owned enterprises has been problematic. The TextRank summary notes 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 results echo the point: ranked in either second or third place, SOEs appear in all six TPRs under analysis (see Table 1).

In contrast to its critical assessment of South Korea's agricultural protectionism and the dubious practices of SOEs, the TPRM highly regards South Korea's achievements in non-tariff barriers in other sectors as well as in the intellectual property rights (IPRs) regime. In fact, South Korea has not received much criticism in manufacturing industries, and its reform effort in the IPRs regime has been noted as one of its strengths. As the 2016 TPR notes: "The simple average applied most-favored nation (MFN) tariff rate was 11.3% on imports of manufacturing products, and the rate was 6.3% on manufacturing excluding food processing products; both are much lower than the rates for agricultural products." Also, the 2016 TPR considers it to be a positive point that South Korea has tried hard to remove technical barriers to trade. An example is the decreasing number of items subject to minimum shelf-life requirements, about which many countries, including Japan, complained in the second half of

[8] According to a study by the Organization for Economic Co-operation and Development (OECD), SOEs in 37 member countries are valued at over USD 2 trillion and on average account for less than 3% of their GDP, but "are highly concentrated in strategic sectors on which large parts of the private economy depend. Half of SOEs by value operate in the network industries (telecoms, electricity and gas, transportation and postal services)" (https://www.oecd.org/corporate/oecd-dataset-size-composition-soe-sectors.htm). Another OECD study in 2017 found that among 40 countries there were about 2,500 SOEs, while China alone had over 50,000 (Chafuen, 2019).

the 1990s. Moreover, according to the RAKE results, transparency of information disclosure and the strengthening of IPRs by the South Korean government have been consistently ranked as strong points.

### 3.2 Japan

Since its admission to the GATT in 1955, Japan has benefited from the free and open international trading system. It also substantially removed tariff barriers to trade throughout the 1970s and 1980s (Itoh, 1994). Until the 1990s, however, Tokyo suffered from a reputation of being unfriendly to foreign competition, as manifested by its notorious non-tariff barriers (Pempel, 1998). In the wake of the 1997-1998 financial crisis, Japan began its attempt to play an active role in the global trading system, departing from its passive and reactive position. The signing of the first Asian-only trade agreement with Singapore in 2001 and the trans-Pacific agreement with Mexico in 2003 were landmarks of Japan's new trade policy and strategy (Park, 2007; Solis, 2009; Koo, 2018). Yet the road to a global trade leadership position was a bumpy one due to domestic resistance and protectionist inertia. Aside from the ruling Liberal Democratic Party's unholy ties with uncompetitive business interests, the severe governmental politics among the four major ministries, including the Ministry of Finance, the Ministry of Foreign Affairs, the Ministry of the Economy, Trade, and Industry, and the Ministry of Agriculture, Forestry, and Fisheries, led to a bureaucratic stalemate by the mid-2000s, especially on the agricultural front. For the Japanese trade leadership, the conclusion of the Korea–US free trade agreement (FTA) in 2007 was a wakeup call. Fear of exclusion from the US market prompted Japan to resume its initiative to build regional economic alliances such as ASEAN+6 and the East Asia Summit. Its new trade strategy and global leadership culminated in the successful conclusion of the Trans-Pacific Partnership (TPP) negotiations in 2015 and in the conclusion of the Comprehensive and Progressive TPP (CPTPP) negotiations in 2018, which rescued the TPP that had never entered into force due to the withdrawal of the US (Terada, 2010, 2019).

Against this background, both RAKE and TextRank show the evolution of the WTO's evaluation of Japan's trade policy and practices. On the whole, the WTO's TPRs have expressed concerns about Japan's tariff barriers to agricultural and livestock products. According to RAKE, "non-ad valorem duties" ranked at the top of the list of key phrases from 2000 to 2013. Non-ad valorem tariffs are not expressed as a percentage of the price or value. They can be specific, compound, mixed, or some other form. TPR reports consistently criticized Japan's non-ad valorem duties involving specific rates, particularly for agricultural products. Other things being equal, ad valorem tariffs can be less transparent than non-ad valorem ones. But in Japan the latter was implemented in a less transparent manner, possibly distorting the price mechanism and the domestic pattern of production. For instance, the ad valorem equivalents (AVEs) of non-ad valorem duties ranged from 40.1% to a whopping 983.7% in 2000.[9]

Another characteristic feature of Japan's tariff policy revealed by RAKE is the "HS 9-digit level" in relation to the GATT's Generalized System of Preferences (GSP). The key phrase appears in the top-five list three times in a row in 2009, 2013, and 2017. According

[9] Specifically, the problem is the calculation of AVEs of special duties that require harmonization of trade and customs data and its integration process, which is practically impossible (Bouët et al., 2005).

**Table 2.** 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 |
| 1998 | intellectual property rights | non-manufacturing sector | intra-industry trade | demand-supply adjustment | foreign direct investment |

to the 2017 TPR report, for instance, Japan applies preferential tariff rates to 138 developing countries and five territories under the GSP, while the poorest developing countries (47 in 2016) are subject to additional preferences. However, it is pointed out that some HS 9-digit products, such as rice and meat, on the priority tariff list have been excluded at the expense of developing countries.

However, Japan has been adaptive to and respectful of TPR reviews and recommendations to the extent that its TPR reports have less of a tendency to repeat the same key phrases than those for South Korea and China. For instance, "non-tariff border measures" such as import prohibitions, import licensing, and quantitative restrictions were ranked second in the 2000 and 2004 lists but have disappeared from the top-five list since 2009. Even the usual suspect—namely non-ad valorem duties—disappeared from the 2017 top-five list of key phrases. The 2017 TPR report notes that the simple average rate for all the AVEs supplied is 32.7%, while the highest rate is 389%, a much lower rate than before (see Table 2). In addition, the TextRank summary results indicate that Japan has made diligent efforts to promote market opening by eliminating the restrictions imposed on foreign capital investment as well as other non-tariff barriers. For instance, the 2004 TextRank summary notes that revisions to the Securities and Exchange Law have allowed foreign securities companies to engage in direct transactions with Japanese stock exchanges, while the 2009 summary indicates that Japan has continued to promote structural reforms for a "fully opened market to the international community".

Another notable point in Japan's trade policy trend is the TPP. The term was ranked first in the 2017 RAKE list. It is well documented that Japan played a pivotal role in reviving the TPP with 11 negotiating members but without the US. Despite the tenacious resistance of agricultural interests, Japan has liberalized many of its agricultural products. Of the 929 items whose tariffs had not been lifted by Japan's previous FTAs, 834 were agricultural, forestry, or fishery products. Under the CPTPP, about 30% of these heavily protected agricultural products are now tariff-free (Terada, 2019).

### 3.3 China

Since joining the WTO in 2001, China has achieved significant growth in trade in goods and services (Choi, 2014). Problems and conflicts have emerged that are related to China's unfair trade policies and practices. As noted in the South Korean section above, China has become the primary driver of the rise of state capitalism as a challenge to the free and open international trading system. Through various measures, including implicit and explicit restrictions against potential foreign competition, special tax exceptions, and direct and indirect subsidies, Chinese governments, both central and local, have helped Chinese SOEs to strengthen their competitiveness and expand their global influence (Lai, 2004; Yu, 2014).[10] As a result, foreign companies have experienced disadvantages in the form of restricted access to strategic industries in China, while facing the predatory penetration of Chinese exports in their home markets. Many foreign observers have thus expressed their concerns that the level playing field has been violated (Mavroidis and Sapir, 2021). A representative example of a policy favorable to the monopolistic status of Chinese SOEs is the Anti-Competition Law of China. The WTO's TPRM has repeatedly noted that, even under anti-competition laws, Chinese SOEs that are legally granted exclusive production and sales rights are exceptionally protected from legitimate business competition.

The extraction results from both RAKE and TextRank indicate that the WTO TPRM has repeatedly found the "excessive government intervention" in market activities to be very problematic in China. According to RAKE, state-owned enterprises and other state-owned organizations appear in the top-five list of key phrases in all six TPR reports under analysis. For instance, the 2010 TPR notes that their monopolistic status is giving these SOEs a competitive advantage over private entities and that the benefits enjoyed by SOEs continue to increase. It is also noted that SOEs hold significant market shares in certain strategic areas of the economy and that shadow banking has emerged as an important source of funding for the beneficiary sectors of the government's stimulus package in the form of infrastructure projects and other fiscal measures since the 2007-2008 global financial crisis.

China's SOE problems are parallel to the problems of the anti-competition law. Instead of promoting and protecting competition, the Chinese government has implemented the regulations in a discriminatory manner in favor of SOEs (Kim, 2014; Lee, 2015). The RAKE results show that the phrase "anti-unfair competition law" regularly appears in the top-five list of key phrases, indicating its restrictive nature for "foreign-owned enterprises", a phrase which also appears in the top-five list of all the TRP reports under analysis.

In the meantime, the TextRank summaries reveal that the food safety law has been strengthened by imposing strict punishments for violations of laws and regulations. Under the enhanced regulations, Chinese consumers are better protected from unsafe and unhealthy food products produced by Chinese firms. At the same time, new food safety regulations can serve as disguised protectionism against foreign suppliers. The 2016 TPR report, for instance, notes 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

[10] There were 27 SOEs in the Fortune Global 500 (FG500) in 2000, and this number increased to 102 in 2017, accounting for one-fifth of FG500 corporations. In 2017, the revenues of FG500 SOEs reached a total of USD 6.1 trillion, amounting to 22% of the total revenue of all FG500 corporations. Chinese SOEs represent a significant portion of FG500 SOEs. In 2000, there were 27 FG500 SOEs, nine of which were from China; in 2017, 75 of the 102 FG500 SOEs were from China (Lin et al., 2020).

**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 |

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 of safety regulations.

It is clear that what China has contributed to global free trade should not be underestimated. For the past two decades, China has opened its huge domestic market to foreign exporters and investors. It has also been a source of productive innovation and change, therefore enhancing the global standard of living. According to the RAKE results, key phrases containing the word "foreign" appear in the top-five list for all the years under analysis, suggesting that the opening of foreign investment is on the rise. The lower investment and import restrictions required of Beijing as a condition of its WTO membership stimulated multinational companies to rush into the vast Chinese market (Davis, 2018). China has become the world's manufacturing hub, and Chinese imports of primary and intermediate goods have soared. The 2018 TPR report, for instance, notes that foreign investment in the exploration and development of oil of all types is encouraged. It also underscores the fact that the number of foreign investment opportunities is expected to increase, especially in transportation for the gas and telecommunication sectors.

The analysis above depicts China as a double-edged sword for the world trade system. China is far from a free trader. Growing concerns over the unfair trade practices of SOEs are focused on China, prompting a variety of bilateral discussions coupled with multilateral efforts to effectively govern Chinese SOEs within the WTO rules. At the same time, China has become the center of global trade since its admission to the WTO 20 years ago. No significant reforms would be possible without the participation of China. In fact, China has complied with all WTO rules that are clearly established. For some commentators, China is not the cause of the WTO problems; rather, it is an outcome of the problems (Zhang and Li, 2014). It remains to be seen whether or not and to what extent the peer-pressure mechanism will lead to "belling the Chinese dragon".

## 4. CONCLUSION AND FUTURE WORK

As one of the WTO's most important institutional pillars, the TPRM has provided a rich and insightful archive of valuable data and narratives for the international trade community. However, it has attracted little academic attention because TPR reports are complex and nuanced in both semantic and political terms. Existing literature on the TPRM only offers a snapshot by focusing on either one country or one particular area within a country no more than a few time zones away. This study attempted to bridge the gap in the literature by using two unsupervised machine learning techniques: RAKE and TextRank.

As an experiment, this study focused on three Northeastern Asian countries: South Korea, China, and Japan. The three countries share the characteristics of the most dynamic trading states in the world. As the second largest economy, China became the largest exporting country worldwide with an export value of about USD 2 trillion (Statista, 2020). As highly trade-dependent countries, Japan and South Korea were the third and 10th largest economies in real USD terms as of 2019. The combined value of exports from South Korea, Japan, and China reached about 26% of the G20 total as of 2019 (OECD, 2020). Given their positions and significance in international trade, analyzing the trends of their trade and trade-related policies from a comparative and chronological perspective is much overdue. For a comparative analysis, a total of 18 TPR reports were drawn from these countries.

The extraction results from South Korea's TPR reports show that "out-of-quota tariff rates" on rice imports have been one of the most contentious issues within the WTO. After two decades of peer pressure, South Korea finally decided to terminate its special treatment of rice and rice products in January 2015. Of course, this does not mean that South Korea's agricultural trade issues have been fully settled. Nevertheless, the tariffication of rice and rice product imports indicates that the transparency mechanism under the TPRM has worked for South Korea. The RAKE and TextRank results also illustrate another problem of South Korea's trade policy: its heavy reliance on public and semi-state-owned enterprises. In fact, South Korea's public sector could be a financial time bomb unless its debts are carefully managed.

For Japan, RAKE and TextRank show that the WTO's TPRM has repeatedly taken note of Japan's tariff barriers to agricultural and livestock products as potential and existing problems. The TPR reports have consistently criticized Japan's non-ad valorem duties involving specific rates, particularly for agricultural products. Another feature of Japan's tariff policy revealed by RAKE is the "HS 9-digit level" in relation to the GATT's GSP. In short, the Japanese ways of applying preferential tariff rates to some developing countries under the GSP were not transparent and straightforward. These concerns notwithstanding, Japan has turned out to be the most adaptive country to the extent that its TPR reports have less of a tendency to repeat the same key phrases than those for South Korea and China. Another notable point in Japan's trade policy trend is the TPP. It is remarkable that Japan has liberalized many of its agricultural products under the TPP in spite of the tenacious resistance of agricultural interests.

Finally, the WTO's TPRM has expressed various concerns about China's trade policy and practices, especially about the problem of indirect subsidies by SOEs. It is certain that China's dubious and often self-serving trade policies and practices should be monitored carefully to ensure that they are not threatening the international trading system. At the same time, however, the WTO rules themselves fall short of what is required to reduce the privileges and unfair advantages that SOEs have in their operations. WTO's TPRM has

repeatedly noted that Chinese SOEs are exceptionally protected from legitimate business competition. Instead of promoting and protecting competition, the Chinese government has implicitly discriminated against foreign companies in favor of SOEs. It should be noted, however, that China has become the center of global trade since its admission to the WTO in 2001. This means that no significant reforms would be realized without the participation of China. It remains to be seen whether and to what extent the peer-pressure mechanism will lead to the taming of China.

This study is one of the first attempts to apply text mining techniques to the international trade domain and showed how to quickly grasp meaningful information from a large amount of text. While the new analytical tools have allowed us to navigate through lengthy, subtle, and often ambivalent TPR reports, there is a limitation in not being able to fully control the rhetorically repeated expressions that can disguise the true characteristics of each country's trade policy and practice. For the international research community, the next goal is to develop an adaptive supervised machine learning on a collection of reliable training labels which can be created and improved by a collective effort of international trade experts.

To conclude, the findings of this study indicate that periodic reviews under the TPRM have served as a reminder of policy commitments and as a lock-in mechanism for WTO members. In a world of growing protectionism, TPRM's given mandate of increasing transparency has become ever more important. However, the naming-and-shaming mechanism built into the TPRM cannot be fully effective unless the normative and administrative capacity of the WTO continues to be strengthened and accelerated.

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## REFERENCES

Ala'i, Padideh. 2008. "From the Periphery to the Center? The Evolving WTO Jurisprudence on Transparency and Good Governance." *Journal of International Economic Law* 11(4): 779-802.

Barrios, Federico, Federico L'opez, Luis Argerich, and Rosa Wachenchauzer. 2016. "Variations of the Similarity Function of TextRank for Automated Summarization." *The Computing Research Repository*(CoRR) arxiv:1602.03606.

Baruni, J.S. and J.G.R. Sathiaseelan. 2020. "Keyphrase Extraction from Document Using RAKE and TextRank Algorithms." *International Journal of Computer Science and Mobile Computing* 9(9): 83-93.

Bouët, Antoine, Yvan Decreux, Lionel Fontagné, Sébastien Jean, and David Laborde. 2005. "A Consistent, Ad-valorem Equivalent Measure of Applied Protection Across the World: The Macmap-Hs6 Database." *CEPII Working Paper* No. 2004-22.

Chafuen, Alejandro. 2019. "Trade by State Owned Companies: Global But Is It Fair?" *Forbes.* October 31. Accessed February 26, 2021.

Chaisse, Julien and Debashis Chakraborty. 2007. "Implementing WTO Rules Through Negotiations and Sanctions: The Role of Trade Policy Review Mechanism and Dispute Settlement System." *University of Pennsylvania Journal of International Economic Law* 28(1): 153-186.

Cho, Sung-Je and Hyun-Hee Park. 2014. "Changes of Rice Import Policy in Korean Agriculture Market." *The Journal of Korea Research Society for Customs* 15(3): 109-

133 (In Korean).
Choi, Heung Suk and Eunmi Kim. 2011. "Policy Dilemma in Rice Market Opening." *Korean Public Administration Quarterly* 23(3): 907-929 (In Korean).
Choi, Won-Ick. 2014. "The Analysis of the Effect of China's Entry into WTO on China's GDP." *Korea Trade Review* 39(2): 245-267 (In Korean).
Davis, Bob. 2018. "When the World Opened the Gates of China." *The Wall Street Journal*. Accessed February 26, 2021. https://www.wsj.com/articles/when-the-world-opened-the-gates-of-china-1532701482
Elsig, Manfred. 2010. "The World Trade Organization at Work: Performance in a Member-driven Milieu." *The Review of International Organizations* 5(3): 345-363.
Francois, Joseph F. 2001. "Trade Policy Transparency and Investor Confidence: Some Implications for an Effective Trade Policy Review Mechanism." *Review of International Economics* 9(2): 303-316.
Ghosh, Arunabha. 2010. "Developing Countries in the WTO Trade Policy Review Mechanism." *World Trade Review* 9(3): 419-455.
Goldstein, Judith L., Douglas Rivers, and Michael Tomz. 2007. "Institutions in International Relations: Understanding the Effects of the GATT and the WTO on World Trade." *International Organization* 61(1): 37-67.
Gorter, Harry and Erika Kliauga. 2005. "Reducing Tariffs versus Expanding Tariff Rate Quotas." In *Agricultural Trade Reform and the Doha Development Agenda*, edited by Kym Anderson and Martin Will, 117-160. Washington, D.C.: World Bank.
Itoh, Mayumi. 1994. "Kome Kaikoku and Japanese Internationalization." *Asian Survey* 34(11): 991-1001.
Jindal, Shubhra Goyal and Arvinder Kaur. 2020. "Automatic Keyword and Sentence-Based Text Summarization for Software Bug Reports." *IEEE Access* 8: 65352-65370.
Kim, Joon-Ho. 2014. "A Study on Industrial Policy-Influenced Characteristics in Chinese Anti-Monopoly Law." *Dong-A Law Review* (65): 529-550 (In Korean).
Kim, Kwangtae. 2019. "WTO to Allow S. Korea to Keep Current Tariff Rate on Imported Rice." *Yonhap News.* November 19. Accessed February 26, 2021. https://en.yna.co.kr/view/AEN20191119006700320 (In Korean).
Kim, Youngsam, Munhyong Kim, Andrew Cattle, Julia Otmakhova, Suzi Park, and Hyopil Shin. 2013. "Applying Graph-based Keyword Extraction to Document Retrieval." *Proceedings of the Sixth International Joint Conference on Natural Language Processing*, Nagoya, Japan, 14-18 October: 864-868.
Kimura, Fukunari. 2008. "Demystify Protectionism: The WTO Trade Policy Review of Japan." *The World Economy* 31(11): 1383-1392.
Koo, Min Gyo. 2018. "Book Reviews: Japan and East Asian Integration: Trade and Domestic Politics." *International Relations of the Asia-Pacific* 18(3): 477-480.
Koo, Min Gyo and Byungsun Choi. 2019. *The Political Economy and Law of International Trade: Between Free Trade Ideals and Mercantilist Bias.* Seoul: Pakyoungsa (In Korean).
Kuenzel, David J. 2019. "Do Trade Flows Respond to Nudges? Evidence from the WTO's Trade Policy Review Mechanism." *Review of International Economics* 27(3): 735-764.
Lai, Hongyi. 2004. *Emerging Features of China's Private Economy (II).* Singapore: East Asian Institute, National University of Singapore.
Laird, Sam. 1999. "The WTO's Trade Policy Review Mechanism–from through the Looking

Glass." *The World Economy* 22(6): 741-764.
Lee, Byungsung. 2020. "Less Consumption and Less Income Than Expected, 50 Percent of Farmers 'Sit Down'." *The Korean Farmer's Newspaper.* June 5. Accessed February 26, 2021. http://www.agrinet.co.kr/news/articleView.html?idxno=177412 (In Korean).
Lee, Jamin. 2015. "State Responsibility and Government-Affiliated Entities in International Economic Law." *Journal of World Trade* 49(1): 117-152
Lee, Jamin. 2019. "Trade Agreements' New Frontier: Regulation of State-Owned Enterprises and Outstanding Systemic Challenges." *Asian Journal of WTO & International Health Law and Policy* 14(1): 33-76.
Lin, Karen Jingrong, Xiaoyan Lu, Junsheng Zhang, and Ying Zheng. 2020. "State-Owned Enterprises in China: A Review of 40 Years of Research and Practice." *China Journal of Accounting Research* 13(1): 31-55.
Lim, Songsoo and David Blandford. 2009. "Korea's Tariff Rate Quota System: Impact of the Doha Development Agenda Proposals." *Journal of Korea Trade* 13(2): 1-19.
Luo, Changyuan and Jun Zhang. 2010. "China Trade Policy Review: A Political Economy Approach." *The World Economy* 33(11): 1390-1413.
Maeng, Cheol Kyu. 2019. "A Study on the Korean Government's Policy Transition from Rice Quota to Rice Tariffication under WTO Agricultural Agreements." *The Journal of Korea Research Society for Customs* 20(4): 227-245 (In Korean).
Mavroidis, Petros C. 1992. "Surveillance Schemes: The GATT's New Trade Policy Review Mechanism." *Michigan Journal of International Law* 13(2): 374-414.
Mavroidis, Petros C. and Andre Sapir. 2021. *China and the WTO: Why Multilateralism Still Matters.* Princeton: Princeton University Press.
Mihalcea, Rada and Paul Tarau. 2004. "Textrank: Bringing Order into Texts." *Proceedings of the 2004 Conference on Empirical Methods in Natural Language Processing*: 404-411.
Ministry of Employment and Labor. 2020. "Employment and Labor Indicators." Accessed February 26, 2021. http://eboard.moel.go.kr/indicator/detail?menu_idx=2#
Organization for Economic Cooperation and Development (OECD). 2020. "Trade in Goods: Exports, Billion US dollars" Accessed February 26, 2021. https://data.oecd.org/trade/trade-in-goods.htm#indicator-chart
Okafor, L. Emeka and Wing Leong Teo. 2019. "2018 WTO Trade Policy Review of Malaysia." *The World Economy* 42(12): 3447-3463.
Page, Lawrence, Sergey Brin, Rajeev Motwani, and Terry Winograd. 1998. "The PageRank Citation Ranking: Bringing Order to the Web." *Technical Report*. Stanford InfoLab.
Park, Chang-Gun. 2007. "Japan's FTA Strategies towards East Asia: Multi-complex Regionalism." *The Korean Journal of International Studies* 47(4): 141-168.
Pempel, T. J. 1998. *Regime Shift: Comparative Dynamics of the Japanese Political Economy*. Ithaca: Cornell University Press.
Qiu, Qinjun, Zhong Xie, Liang Wu, and Wenjia Li. 2019. "Geoscience Keyphrase Extraction Algorithm Using Enhanced Word Embedding." *Expert Systems with Applications* 125: 157-169.
Rose, Stuart, Dave Engel, Nick Cramer, and Wendy Cowley. 2010. "Automatic Keyword Extraction from Individual Documents." In *Text Mining: Applications and Theory,* edited by Michael W. Berry and Jacob Kogan, 1-20. New Jersey: John Wiley & Sons, Ltd.
Solis, Mireya. 2009. "Japan's Competitive FTA Strategy: Commercial Opportunity versus

Political Rivalry." In *Competitive Regionalism,* edited by Mireya Solis, Barbara Stallings, and Saori N. Katada, 198-215. London: Palgrave Macmillan.

Statista, 2020. "Distribution of the Workforce Across Economic Sectors in China 2019," Accessed February 26, 2021. https://www.statista.com/statistics/270327/distribution-of-the-workforce-across-economic-sectors-in-china

Statistics KOREA Government Official Work Conference. 2020. "Percentage of Agricultural Production and Value Added to GDP." Accessed February 26, 2021. http://www.index.go.kr/potal/main/EachDtlPageDetail.do?idx_cd=2744

Terada, Takashi. 2010. "The Origins of ASEAN+ 6 and Japan's Initiatives: China's Rise and the Agent–Structure Analysis." *The Pacific Review* 23(1): 71-92.

Terada, Takashi. 2019. "Japan and TPP/TPP-11: Opening Black Box of Domestic Political Alignment for Proactive Economic Diplomacy in Face of 'Trump Shock'." *The Pacific Review* 32(6): 1041-1069.

The Economist. 2012. "The Rise of State Capitalism." January 21, Accessed February 26, 2021. https://www.economist.com/leaders/2012/01/21/the-rise-of-state-capitalism

Trommer, Silke. 2017. "The WTO in an Era of Preferential Trade Agreements: Thick and Thin Institutions in Global Trade Governance." *World Trade Review* 16(3): 501-526.

World Trade Organization (WTO). 2019. "Marrakesh Milestone: 25th Anniversary of the WTO's Founding Agreements." Accessed February 26, 2021 https://www.wto.org/english/news_e/news19_e/hist_15apr19_e.htm

World Trade Organization (WTO). 2020a. "The WTO's 25 Years of Achievement and Challenges." Accessed February 26, 2021 https://www.wto.org/english/news_e/news20_e/dgra_01jan20_e.htm

World Trade Organization (WTO). 2020b. "Trade Policy Review Mechanism (TPRM)." Accessed February 26, 2021. https://www.wto.org/english/docs_e/legal_e/29-tprm_e.htm

World Trade Organization (WTO). 2020c. "Attachment to Annex 5 of the Agreement on Agriculture." Accessed February 26, 2021 https://www.wto.org/english/res_e/publications_e/ai17_e/agriculture_ann5_oth.pdf

Yu, Eden S. H. and Kenneth S. Chan. 2019. "Evaluation of the Trade Policy Review for Hong Kong China." *The World Economy* 42(12): 3478-3487.

Yu, Hong. 2014. "The Ascendency of State-Owned Enterprises in China: Development, Controversy and Problems." *Journal of Contemporary China* 23(85): 161-182.

Zahrnt, Valentin. 2009. "The WTO's Trade Policy Review Mechanism: How to Create Political Will for Liberalization?" *ECIPE Working Paper* No. 11/2009.

Zhang, Xufei. 2017. "Trade Policy Review for China: The World's Top Exporter with 'New Normal' Economic Growth." *The World Economy* 40(11): 2491-2499.

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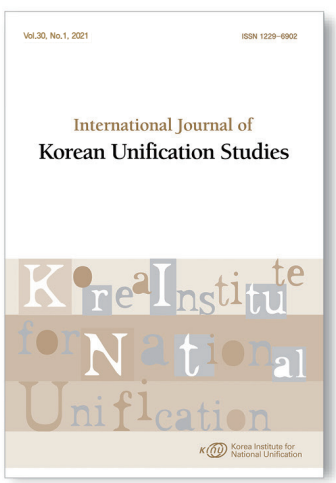


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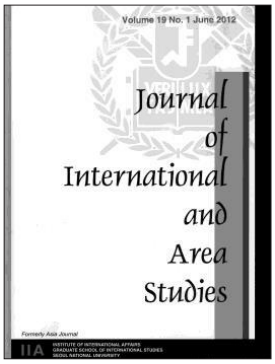


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