



Non-Tariff Measures in Australia, China, India, Japan, New Zealand and the Republic of Korea: Preliminary Findings





Non-Tariff Measures in Australia, China, India, Japan, New Zealand and the Republic of Korea: Preliminary Findings



2020, United Nations Conference on Trade and Development.

The findings, interpretations and conclusions expressed herein are those of the authors and do not necessarily reflect the views of the United Nations or its officials or Member States.

The designations employed and the presentation of material on any map in this work do not imply the expression of any opinion whatsoever on the part of the United Nations concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries.

This document has not been formally edited.

UNCTAD/DITC/TAB/INF/2020/6

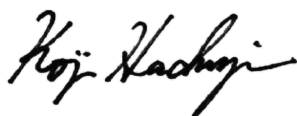
FOREWORD

Non-Tariff Measures (NTMs) are the new frontier for regional integration and market access, as tariffs have been continuously decreasing. NTMs are at the border and behind-the-border requirements. It is not news that these are relevant, probably more so than tariffs, in determining trade patterns, and flow magnitude and direction. Still, they often go unseen and do not receive appropriate attention. Negotiations among countries for deep integration through trade agreements often include NTMs as a key area, and often negotiations in this area are among the hardest. This shows the crucial importance of NTMs, including all the policy areas that fall within this definition.

UNCTAD is leading the work to create and build a global NTM database. UNCTAD TRAINS database serves the development needs of countries that demand information, especially centralized information, on regulatory aspects that affect trade. This database gathers all types of NTM in a single place and organizes the information in a way that it makes it easy to compare the regulatory patterns across countries. This database is a comprehensive map of NTMs applied at the time of data collection in each country. TRAINS NTM database now covers NTMs data for more than 85 per cent of world trade, and more than 100 countries. This valuable endeavour is only possible with the contribution and collaboration of several partners, and support of governments. In Asia the joint work is led by ERIA and UNCTAD.

This report presents the NTM data for countries initially included in the RCEP (Regional Comprehensive Economic Partnership) countries negotiations. These data contribute to a global NTM database. Data collection was done with consistent methodology across all countries. This work was possible through the joint work of Economic Research Institute for the Association of Southeast Asian Nations and East Asia (ERIA) and UNCTAD in the area of NTMs. The institutional partnership has proved fruitful and effective.

This report highlights the results of the first-time data collection work in RCEP, apart from the Association of Southeast Asian Nations (ASEAN), which has been presented in other reports (ERIA and UNCTAD, 2016 and 2019). In policy contexts, ERIA and UNCTAD's efforts in advocating NTMs issues have been well received by ASEAN Member States. NTM data for ASEAN member states have been handed over to national governments at the 51st ASEAN Economic Minister's Meeting in September 2019. These data are the key inputs for National Trade Portals and National Trade Repositories.



Koji Hachiyama
Chief Operating Officer
Economic Research Institute
for ASEAN and East Asia (ERIA)



Pamela Coke Hamilton
Director
Division on International Trade and Commodities
United Nations Conference on Trade and Development

ACKNOWLEDGEMENTS

This report was prepared in close collaboration between Economic Research Institute for ASEAN and East Asia (ERIA) and the United Nations Conference on Trade and Development (UNCTAD). The Data on NTMs for the RCEP countries are the result of hard work and great efforts of the different national teams.

The editors of this document are Denise Penello Rial and Muhammad Rizqy Anandhika. Country chapters were written by the following authors: Australia, Ernawati Munadi; People's Republic of China, Mingcong Li and Miaojie Yu; Republic of India, Rael Sarmeen; Japan, Kaoru Nabeshima and Ayako Obashi; the Republic of Korea, Korea Institute for International Economic Policy; and New Zealand, Mike Webb and Anna Strutt. The authors also led the teams that performed the data collection in their respective countries. Other data collectors for individual chapters are China: Xiaomin Cui, Shuai Guo, and Mengying Yu. Japan: Sho Haneda, Naohiko Ijiri, Yui Iwasaki, Toru Nagase, Lika Sasaki, Shyamala Sethuram, and Akihiro Yogata. India: Shyamala Sethuram.

The core team in developing the NTM Database also includes colleagues from ERIA – Muhammad Rizqy Anandhika, Gracia Hadiwidjaja, and Lurong Chen, and from UNCTAD – Chi Le Ngo, Seul Lee and Ming Cong Li. This core team offered constant guidance and support in supervising the data collection process to ensure comprehensiveness and consistency of data, making sure the principles set by UNCTAD for data quality were followed and data was up to standard. Valuable comments and assistance have been received from Santiago Fernandez de Cordoba, Narmin Khalilova, Denise Penello Rial, Fabien Dumesnil, Maxim Gubarev, Samuel Munyaneza, and Ralf Peters, from UNCTAD, and Miftahudin and Alvaro Grille who assisted with the key task of assigning the correct product codes to each NTM.

Editing was offered by Fadriani Trianingsih, Rachmadea Aisyah, Stefan Wesiak and Tiffany Chezum. Desktop publishing and cover were prepared by Jenifer Tacardon-Mercado. UNCTAD also provided team workshops and training.

We are grateful for advice from Shujiro Urata, Lili Yan Ing, Pamela Coke Hamilton, and Ralf Peters; and strong support from the ERIA management, particularly Koji Hachiyama and Taizo Hara. We would also like to extend our appreciation to all RCEP countries and government officials, who significantly contributed to the success of this project. They worked with us towards having more transparent NTMs and a better understanding of them, to design better NTMs and better implement them, and to move towards better trade and investment policy and regulations.

Financial support was provided by ERIA and RCEP Governments for Data Collection and Report, and UNCTAD-World bank through the Top25 project for one country.

This publication has been produced jointly with the Economic Research Institute for ASEAN and East Asia (ERIA).



CONTENTS

FOREWORD	iii
ACKNOWLEDGEMENTS	iv
CHAPTER 1	
1. Introduction	1
2. The general economic context of RCEP countries	3
3. The trade integration in the context of RCEP	3
4. General quantitative results for RCEP countries	5
5. Incidence measures in RCEP countries	8
6. Insights stemming from the data analyzed	12
CHAPTER 2	
NON-TARIFF MEASURES IN AUSTRALIA	15
(Ernawati Munadi)	
1. Introduction	15
2. Comprehensiveness of Australia's non-tariff measure regulations	16
3. Government agencies issuing non-tariff measures	16
4. Types of non-tariff measures imposed by Australia	18
5. Tariff lines covered by non-tariff measures	20
6. Policy recommendations	21
References	22
CHAPTER 3	
NON-TARIFF MEASURES IN CHINA	23
(Mingcong Li and Miaojie Yu)	
1. Introduction	23
2. China's legal system	24
3. Non-tariff measures data collection	25
4. Non-tariff measures data summary	26
5. Products affected by non-tariff measures	31
6. Conclusion and policy recommendations	32
References	34
CHAPTER 4	
NON-TARIFF MEASURES IN INDIA	35
(Rael Sarmeen)	
1. Introduction	35
2. The legal framework for India	36
3. Approach to obtain legal comprehensiveness	36
4. Issuing institutions	37
5. Classification of non-tariff measures by type and issuing institution	37

6.	Non-tariff measure by affected products	39
7.	Main findings	42
8.	Policy recommendations	42
	References.....	43

CHAPTER 5

NON-TARIFF MEASURES IN JAPAN

(Kaoru Nabeshima and Ayako Obashi)

1.	Introduction.....	45
2.	Types and scopes of legal documents	46
3.	Summary of non-tariff measures and main findings	47
4.	Policy recommendations.....	52
a.	Recommendations for the Government of Japan	52
b.	Recommendations for gathering non-tariff measure data	53
	References.....	54

CHAPTER 6

NON-TARIFF MEASURES IN NEW ZEALAND

(Mike Webb and Anna Strutt)

1.	Introduction.....	55
2.	New Zealand's legal system	56
3.	Data collection and update	56
a.	Initial data collection process.....	57
b.	Data update	57
4.	Summary of non-tariff measures and main findings	60
5.	Policy recommendations.....	64
	References.....	65

CHAPTER 7

NON-TARIFF MEASURES IN THE REPUBLIC OF KOREA.....

(Korea Institute for International Economic Policy)

1.	Introduction.....	67
2.	Data construction.....	68
4.	Overview of non-tariff measures	68
5.	Policy recommendations	73
	References.....	74

LIST OF TABLES, FIGURES AND BOXES

Table 1. Selected economic indicators for RCEP countries	4
Table 2. Agreements signed by RCEP countries	5
Table 3. Chapters in the RCEP agreement	6
Table 4. Number of measures and affected products in RCEP countries	7
Table 5. Percentage share of NTM by chapter of the classification, within country	7
Figure 1. Tariff Rate in 2017 (MFN, simple average and Applied rate, weighted average).....	3
Figure 2. Incidence measures for RCEP countries	9
Figure 3. Incidence measures by broad sectors	9
Figure 4. Incidence measures, by chapter	10
Figure 5. Frequency index and prevalence score, by chapter end country	11
Figure 6. Incidence by sector and by type of NTM and broad sector	12
Non-Tariff Measures in Australia	
Table 1. Comprehensiveness of Australian non-tariff measures.....	16
Table 2. NTM-related regulations by regulatory agency	17
Table 3. Number of non-tariff measures by issuing institution	17
Table 4. Types of non-tariff measures imposed by Australia, by chapter	18
Table 5. Types of non-tariff measures imposed by Australia, by NTM code	19
Table 6. Multiple non-tariff measures applied to each product group, in numbers	20
Figure 1. Incidence of non-tariff measures by product as a percentage of total tariff lines, (%).....	20
Figure 2. Multiple non-tariff measures, share within product groups	21
Non-Tariff Measures in China	
Table 1. Hierarchy of the sources of law in China.....	24
Table 2. Statistical overview	26
Table 3. Issuing institutions.....	28
Table 4. Non-tariff measures by type (Chapter)	30
Table 5. Most commonly applied non-tariff measures in China, 2016.....	31
Table 6. Multiple unilateral non-tariff measures, share within product groups	32
Table 7. Multiple bilateral non-tariff measures, share within product groups	33
Non-Tariff Measures in India	
Table 1. Comprehensiveness of the non-tariff measures collection and review exercise for India.....	36
Table 2. Proportion of non-tariff measures by issuing ministries and institutions.....	37
Table 3. Classification of non-tariff measures by type.....	38
Table 4. Proportion of non-tariff measures types by issuing ministries and institutions	39
Table 5. Multiple non-tariff measures applied to each product group, in numbers	40
Table 6 a). Distribution of non-tariff measure types on the basis of harmonized system codes for India. Number of products affected in each group	41
Table 6 b). Distribution of non-tariff measure types on the basis of harmonized system codes for India. % of total tariff line affected in each group	41
Figure 1. Multiple non-tariff measures, share within product groups	40
Non-Tariff Measures in Japan	
Table 1. Categories of Japanese laws and regulations	47
Table 2. Comprehensiveness of collected non-tariff measures data	48

Table 3. Non-tariff measures by type	49
Table 4. Non-tariff measures by issuing institution	50
Table 5. Multiple non-tariff measures applied to each product group, in numbers	51
Table 6. Number of coded measures per national tariff line, by product group	52
Figure 1. Multiple of non-tariff measures applied to each product group, share within group	51
Non-Tariff Measures in New Zealand	
Table 1. Acts that provide scope for new regulations	58
Table 2. Comprehensiveness of collected non-tariff measure data	60
Table 3. Non-tariff measures by issuing institutions	60
Table 4. Non-tariff measures by type	61
Table 5. Most common non-tariff measures (in Chapters A–C), (%)	62
Figure 1. Incidence of non-tariff measures by product as a percentage of total tariff line	63
Figure 2. Frequency of multiple non-tariff measures (in Chapters A, B, and C)	64
Box. Joint food standards and Australia New Zealand economic integration	59
Non-Tariff Measures in the Republic of Korea	
Table 1. Definitions	68
Table 2. Categories of law of the Republic of Korea	69
Table 3. Data comprehensiveness	69
Table 4. Non-tariff measures by institutions	70
Table 5. Types of non-tariff measures, by chapter	71
Table 6. Most commonly applied non-tariff measures	71
Table 7. Multiple non-tariff measures applied to each product group, in numbers	72
Figure 1. Multiple non-tariff measures, share within product groups	72



1. INTRODUCTION

This report presents details of the non-tariff measures (NTMs) found to be applied in all the countries initially included in the Regional Comprehensive Economic Partnership (RCEP) negotiations: Australia, China, India, Japan, the Republic of Korea, and New Zealand. Results show that every country applies thousands of NTMs, each of them affecting usually more than a hundred products (at tariff line disaggregation level). Most of the NTMs fall in the Sanitary or Phytosanitary (SPS) or Technical Barriers to Trade (TBT) categories. This is also a pattern observed in the TRAINS global NTM database for other countries outside this region.

NTMs are defined as policy measures, other than customs tariffs, that can potentially have an economic effect on international trade in goods, changing quantities traded, or prices or both (UNCTAD, 2019). This definition was presented by the MAST group, a multi-agency group (FAO, IMF, ITC, OECD, UNCTAD, UNIDO, World Bank and WTO) led by UNCTAD and supporting transparency in trade. This group also worked on establishing the International Classification of NTMs, which was updated in 2019. The NTMs include both technical regulations that set characteristics on the product itself or on the production processes, such as SPS or TBT, but also non-technical measures such as licenses and quotas, or price affecting measures, as well as financial or exchange rate regulations.

The NTMs classification is divided in chapters named with letters A to I, for import NTMs. These are technical and non-technical conditions or requirements to be met for importing. The export measures are contained in the last chapter, named with letter P. Import and export NTMs group, respectively, conditions for import and for export.¹

The concept of NTMs is neutral and does not imply a negative impact on trade nor any legal judgement. The fact that a regulation that is in place is registered as an NTM does not mean that the requirement is considered a barrier to trade. It cannot be stressed enough

¹ It is to be noted that the country chapters in this report present the information using NTM International Classification version M3, issued in 2012. At the date of the publication of this report the version currently used is M4, finally published in 2019. This report presents the original data using the classification version in which data were collected, i.e.M3. Nevertheless, UNCTAD converted all data collected before 2019 to the most updated classification version, M4, and is currently shared in M4 through the current dissemination portals. Main differences are found in chapters B and E, as well as P.

that NTMs are needed for safe consumption and care for the environment, among other legitimate purposes. This has been discussed multiple times in various other publications on the matter. Moreover, what companies and consumers need today is 'good' NTMs, i.e. regulations that are intended to address policy objectives such as food safety, shield against pest spreading, protection of the environment, or minimum quality for consumer safety, but that do not hinder trade more than what would be necessary. Policy design and policy implementation need to ensure minimum possible cost. The design of Good Regulatory Practices is the ultimate objective of the NTMs work program.

The first step to achieve this is to map NTMs, which is also called transparency. This is done by publishing all regulations that are in force in a single user-friendly online portal. This NTM database not only is comprehensive, meaning that all NTMs in place would be found there, but also that the methodology for distinguishing and registering NTM requirements would be the same across countries. The methodology used is the same for all countries, which in practice means that the information provided for each country is essentially the same and thus certain comparison is possible.² The Guidelines to collect data on official non-tariff measures (UNCTAD, 2020) describes in detail the principles used to accomplish this task. Another UNCTAD publication explains the NTM data collection approach, and also the NTM data dissemination tools used so far (UNCTAD, 2018). In the coming months it is expected that TRAINS Online application will be made available to the public for data consultation (check this link for updates <https://trains.unctad.org/>).³

This report presents results for each country in a separate chapter, all of which are written following the same structure; all country chapters present the same tables. A team of researchers and data collectors was assigned for every country, each working under a similar structure. They report

not only on the results of the data, but also on the particularities of the legal framework in their countries.

The same data collection process was followed by each team, and the analysis carried out in a similar manner. The final data is incorporated in the global NTM database and publicly available. First, the data collectors looked out for the regulations related to trade in each country, i.e. the legal texts that contain NTMs. For the analysis presented here, each team counted how many regulations they found. Second, data collectors went through every regulation to identify all the independent requirements for import and for export, these are the NTMs. Every chapter also reports how many NTMs were found, sorted by type and by issuing ministry or government department. The last step is to associate each NTM with the list of product codes that each NTM affect; some NTMs are broader and affect many products while others have narrower regulatory scope and affect one or very few products. In each chapter, a table presents the share of products that have one measure, two measures, and three or more measures. It is often the case that most products have three or more measures applying simultaneously as a requirement for import or export.

Indeed, a notable feature of this NTM database is that all mapped NTM legal requirements are associated with all the individual tariff line codes for the products it targets. No other database sheds light on all NTMs at the same time, and also signals which individual product codes are affected. It is a source of immense value not only for traders that look up the NTMs affecting their traded products, but also for regulators wanting to know all simultaneous regulations in force for various economic sectors of regulatory interest.

² There remain some unavoidable differences in the style of issuing legislation, and also the sources available for official legislation in each country. See details in the publication references above.

³ or the NTM hub in UNCTAD available at <https://unctad.org/en/Pages/DITC/Trade-Analysis/Non-Tariff-Measures.aspx>.

2. THE GENERAL ECONOMIC CONTEXT OF RCEP COUNTRIES

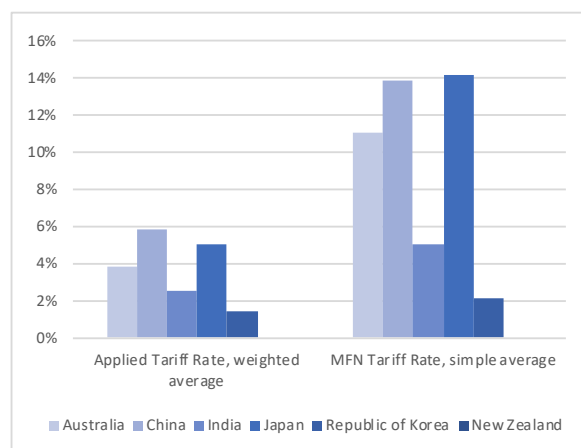
RCEP countries have a significant economic contribution globally. Based on 2018 data, they account for 29% of world's GDP. China and India had 6.6% and 6.8% growth rate in 2018, respectively, both accounting for 19% of world's GDP and 36% of global population.⁴ Together with developing ASEAN countries, both China and India provide a large market as well as an important investment destination for the continuous economic growth for the other countries within RCEP region. On the other hand, developed countries in the region such as Japan, the Republic of Korea, Australia and New Zealand also contribute on investment, more affordable services and technological transfer to developing countries in the region. Such complementarity is a major characteristic of the RCEP region. The COVID-19 pandemic impact should be on trade in this region, but trade is expected to remain an important aspect of growth in this region.

In terms of global trade, RCEP countries have contributed for 23% of global export and 21% of global imports in 2018. In most cases, the top five trading partners for RCEP countries within the same region, including ASEAN countries. Other important trade partners are the United States of America, the United Arab Emirates, Saudi Arabia, Germany and Iraq.

The level of Most Favoured Nation (MFN) rates is different for developed and developing countries. The former have relatively low MFN tariffs (Australia: 2.5%, Japan: 5%, New Zealand: 2%) while the developing countries are about 10 percentage points higher (China: 11%, India 13.8%, the Republic of Korea : 14.1%). However, the gap is narrower for trade-weighted average tariffs. Values are 3.8%, 5.8% and 5% for China, India, and the Republic of Korea, respectively, while Japan is 5% and both Australia and New Zealand are below 1%. This shows that both developed and developing countries have done progress in liberalizing the trade with their main partners.

⁴ This information is also presented in Table 1. Sources: UNCTADStat, World Development Indicators, ITC.

Figure 1
Tariff rate in 2017 (MFN, simple average and applied rate, weighted average)



MFN = Most favoured nation

Source: World Development Indicators, World Bank.

3. THE TRADE INTEGRATION IN THE CONTEXT OF RCEP

The RCEP integration aims to address the 'spaghetti bowl' issues coming from proliferating and crisscrossing FTA and RTAs between ASEAN and its partners (see Bhagwati, 1995). The WTO Regional Trade Agreement Database indicates that from 302 RTAs enforced and notified to WTO, 21 of them involve these 6 countries. All the six countries have open economies; each country has more than 10 FTAs/RTAs, ranging from 12 (New Zealand) to 18 (the Republic of Korea).⁵ A richer information about the countries' integration each other can be seen in table 2.

The efforts to streamline NTMs in the region so far include only some countries at a time. First, Australia and New Zealand are the most trade intensive alliance within the region. Australia and New Zealand share the same SPS standards, unified their customs nomenclatures (see box in New Zealand chapter). While sharing similar national institutional schemes, political will from both parties is important for continuous integration. Other existing bilateral agreements, e.g. India-Japan, China-New Zealand, the Republic of Korea-Australia, while serving both parties' interests, could turn to be a challenge if RCEP requires

⁵ Regional Trade Agreements Database, WTO.

Table 1
Selected economic indicators for RCEP countries

	Australia	China	India	Japan	New Zealand	The Republic of Korea
GDP	US\$ 1,439 Billion	US\$ 13,605 Billion	US\$ 2,745 Billion	US\$ 4,983 Billion	US\$ 204 Billion	US\$ 1,619 Billion
GDP per capita	US\$ 57,830	US\$ 9,530	US\$ 2,030	US\$ 39,178	US\$ 43,127	US\$ 31,657
GDP Growth	2.8%	6.6%	7.41%	0.8%	2.8%	2.7%
Population	24.9 Million	1427.6 Million	1352.6 Million	127.2 Million	4.7 Million	51.2 Million
Average tariff rate	2.5%	11.0%	13.8%	5.0%	2.1%	14.1%
# of FTA & RTA in force	13	15	16	17	12	18
Total EXPORT of Goods	US\$ 257 Billion (17.9% of GDP)	US\$ 2486 Billion (18.3% of GDP)	US\$ 324.8 Billion (11.8% of GDP)	US\$ 738 Billion (14.8% of GDP)	US\$ 39.7 Billion (19.5% of GDP)	US\$ 604 Billion (37.3% of GDP)
Top 5 EXPORT DESTINATIONS	China, Japan, The Republic of Korea, India, the United States of America	the United States of America, Hong Kong (China), Japan, The Republic of Korea, Viet Nam	the United States of America, the United Arab Emirates, China, Hong Kong (China), Singapore	China, the United States of America, the Republic of Korea, Taiwan Province of China, Hong Kong (China)	China, Australia, the United States of America, Japan, The Republic of Korea	China, the United States of America, Viet Nam, Hong Kong (China), Japan
Top 5 export products	Fuels, ores, precious metals, meat, chemicals	Electronics, machinery, furniture, plastics, automotive	Fuels, precious metals, machinery, automotive, organic chemicals	Automotive, machinery, electronics, other commodities, precision tools	Dairy, meat, wood, fruits, beverages	Electronics, machinery, automotive, fuels, plastics
Total Import of Goods	US\$ 235 Billion (16.3% of GDP)	US\$ 2135 Billion (15.7% of GDP)	US\$ 514 Billion (18.7% of GDP)	US\$ 748 Billion (15% of GDP)	US\$ 43.8 Billion (21.5% of GDP)	US\$ 535 Billion (33% of GDP)
Top 5 import origins	China, the United States of America, Japan, Germany, Thailand	The Republic of Korea, Japan, Taiwan Province of China the United States of America, Germany	China, the United States of America, Saudi Arabia, the United Arab Emirates, Iraq	China, the United States of America, Australia, Saudi Arabia, the Republic of Korea Rep.	China, Australia, the United States of America, Japan, Germany	China, the United States of America, Japan, Saudi Arabia Germany
Top 5 import products	Machinery, Fuels, Automotive, Electronics, Precision tools	Electronics, fuels, machinery, ores, precision tools	Fuels, precious metals, electronics, machinery, organic chemicals	Fuels, electronics, machinery, precision tools, pharmaceuticals	Automotive, machinery, fuels, electronics, plastics	Fuels, electronics, machinery, precision tools, automotive

Note: All data is 2018 figures, except for average tariff rate and # of Free Trade Agreement (FTA) and Regional Trade Agreement (RTA) in force. Average tariff rate uses 2007 figures. FTA and RTA in force uses 2019 figures.

Source: UNCTADStat, World Development Indicators, ITC.

Table 2
Agreements signed by RCEP countries

	Australia	China	India	Japan	New Zealand	The Republic of Korea	ASEAN	RoW
Australia								
China	Australia – China							
India		APTA						
Japan	CPTPP, Japan-Australia	India-Japan						
New Zealand	CPTPP, ANZCERTA, SPARTECA	China-New Zealand				the Republic of Korea-New Zealand		
The Republic of Korea	the Republic of Korea - Australia	APTA, China - the Republic of Korea	APTA, GSTP, the Republic of Korea - India					
ASEAN	ASEAN – Australia – New Zealand	ASEAN - China	ASEAN - India	ASEAN - Japan	ASEAN - Australia – New Zealand	ASEAN - the Republic of Korea	AFTA	
RoW	6	11	12	13	7	11	0	281

Note: AFTA: ASEAN Free Trade Area, GSTP: Global System of Trade Preferences among Developing Countries, CPTPP: Comprehensive and Progressive Agreement for Trans-Pacific Partnership, ANZCERTA: Australia - New Zealand Closer Economic Relations Trade Agreement, SPARTECA: South Pacific Regional Trade and Economic Cooperation Agreement, RoW: Rest of the World. ASEAN consists of 10 ASEAN Member States. Any individual ASEAN Member States' FTA with these 6 countries is not accounted under 'ASEAN' row.

Source: RTA Database, WTO.

equal treatment, because of the various level of liberalisation across parties.

RCEP negotiations kicked-off for its first round at 2013. Since then, the ASEAN-led negotiation completed its 28 rounds in September 2019 in Da Nang, Viet Nam. Despite full contents being confidential, the chapters as mentioned in Joint Leaders' Statement show that major NTM provisions are included in Chapter V (SPS), Chapter VI (TBT), Chapter IV (Customs Procedures), and also in Chapter III (RoO), XI (Intellectual Property), XIII (Competition), XVI (Government Procurement), while other chapters may also include NTMs.

The ERIA-UNCTAD NTM Database for RCEP countries is a complementary repository for the region in mapping the NTMs in ASEAN +6 countries. The uniform methodology for data collection and classification ensure the database can be compared with ASEAN NTM Database.

4. GENERAL QUANTITATIVE RESULTS FOR RCEP COUNTRIES

This section presents a summary of quantitative results from the NTM data collected in RCEP countries. The year of data collection is 2016 for most countries, and some for 2017 or 2018. More details specific to each country are provided in each chapter.

As stated above, each country puts in place thousands of NTMs. Each NTM in this context is a separate regulatory requirement, independently of the number of products that it may affect. Some NTMs will be broad, affecting all or almost all products, while others may be specific in targeting only very few products codes. This is shown in Table 4. For example, China may have more than

Table 3
Chapters in the RCEP agreement

Chapter	Description
I	Initial Provisions and General Definitions
II	Trade in Goods
III	Rules of Origin, including Annex on Product Specific Rules
IV	Customs Procedures and Trade Facilitation
V	Sanitary and Phytosanitary Measures
VI	Standards, Technical Regulations and Conformity Assessment Procedures
VII	Trade Remedies
VIII	Trade in Services, including Annexes on Financial Services, Telecommunication Services, and Professional Services
IX	Movement of Natural Persons
X	Investment
XI	Intellectual Property
XII	Electronic Commerce
XIII	Competition
XIV	Small and Medium Enterprises
XV	Economic and Technical Cooperation
XVI	Government Procurement
XVII	General Provisions and Exceptions
XVIII	Institutional Provisions
XIX	Dispute Settlement
XX	Final Provisions

Source: Joint Leaders' Statement on The Regional Comprehensive Economic Partnership, 4 November 2019.

7000 NTMs but many of them affect just only one product. This is a remarkable advantage of this methodology to collect NTMs, as the HS product codes are associated to each NTM requirement.

The second line on the same Table complements the above information by showing the average number of products that each NTM is affecting in each country. India and New Zealand are the ones that appear to have more regulations targeted to fewer products. Each NTM affects around 50 products on average. Data for the Republic of Korea suggested that its regulations are on average broader, each NTM affects almost 200 products on average.

Sometimes, one requirement (NTM) is targeted to only one single specific product. Though this is not shown in the table, data suggest that China has the largest number of NTMs that affect only 1 single product; it has more than two thousand NTMs with this characteristic. On the

other extreme there could be one NTM that affects simultaneously all existing products. These are called 'horizontal measures', which are individual requirements that have an impact on all products, for example a requirement to register as an importer as a pre-condition to import any kind of product. Australia has 16 of these requirements, China 7, New Zealand 5, Japan 3, India 2, and the Republic of Korea none. The third and fourth line in same Table shows this information and also the number of tariff line codes affected by each of these horizontal measures. The figure is the maximum number of products in the original dataset.⁶

Table 5 presents the information in table 4 disaggregated by chapter of the classification, and expressed in percentage share. Clearly, most of the

⁶ This table was prepared dropping those information lines that duplicate the same set of products for each NTM code in the classification, so only one horizontal measure was kept for each NTM code.

NTMs fall either in chapter A or B (SPS and TBT, respectively). On average for these countries, one third of their own measures are SPS, and almost half are TBT. Export measures in chapter P are also numerous; they represent 14% of the measures for each country, on average.

This information must be taken with care. In terms of economic impact, or at least, impact on trade, data presented in this way may not be informative, and could even be misleading. For example, a country may have 2 measures on products X and Y, while another country may have only one measure that affects jointly the same products X and Y. The result is that businesses will have to face that NTM when trading products X or Y. The fact that the requirements for these products are regulated together or separate may not affect them *a priori*. This also implies that a country that aims to liberalize its regulatory framework, does

not necessarily need to cut down the number of regulations. Valuable regulations necessary to protect the population and/or the environment may be lost. The liberalization within the NTM area is achieved through an assessment and following Good Regulatory Practices (GRP), and through mutual recognition and harmonization whenever possible and deemed effective and efficient.

On the other hand, this information is useful and practical for those government officials that would like to review the regulatory framework in their countries, so as to streamline. The database also provides full reference to the legal text from which the NTM stems, and also the department, directorate or ministry responsible for the NTM. For example, it may be necessary to consult with Ministry of Health and Ministry of Agriculture when reviewing NTM for food products.

Table 4
Number of measures and affected products in RCEP countries

	Australia	China	India	Japan	New Zealand	Republic of Korea
Total number of coded NTMs (independently of number of products affected by each)	1708	7174	4549	1277	3085	1917
Average number of affected products by each NTM (HS lines, national tariff lines)	140.1	132.5	50.9	134.3	44.9	182.7
Number of horizontal measures	16	7	2	3	5	0
Number of affected products by each horizontal NTM (HS lines, national tariff lines)	6184	13130	11483	9321	7517	

Source: authors' calculation, based on country reports.

Table 5
Percentage share of NTM by chapter of the classification, within country

Column1	A	B	C	E	F	G	H	I	P	total
Australia	16.0%	49.1%	0.2%	5.8%	4.0%				24.9%	100%
China	22.9%	55.8%	1.6%	4.3%	0.7%	0.1%	0.3%	0.1%	14.2%	100%
India	50.8%	32.0%	1.0%	4.3%	0.9%	0.1%	0.4%		10.4%	100%
Japan	20.8%	51.1%	2.5%	6.6%	3.5%	0.2%	0.2%		15.1%	100%
New Zealand	50.8%	44.8%	0.9%	1.3%	0.2%				2.0%	100%
Republic of Korea	36.6%	37.6%	1.4%	4.9%	3.7%	0.1%			15.9%	100%

Source: authors' calculation, based on country reports.

Note: A=Sanitary and Phytosanitary (SPS); B=Technical Barriers to Trade (TBT); C=Pre-shipment inspection; D=Contingent trade-protective measures; E=Non-automatic licensing, quotas, prohibition and quantity control; F=Price control; G=Finance measures; H=Measures affecting competition; I=Trade-related investment measures; P=Export-related measures

5. INCIDENCE MEASURES IN RCEP COUNTRIES

So far, the tables show the number of requirements, type, number of products that each of those affect. Nevertheless, the impact on trade may be better assessed when the analysis starts, not from the regulations but from the products traded. Since the database offers information on the list of products affected, it is possible to assess incidence and prevalence of the NTMs on products traded. Statistical incidence measures may compare sectors in the economy to see which is more regulated, or see if a large or small share of the imported products do not have an NTM at all.

Three statistical indicators are proposed: Frequency Index, Coverage Ratio and Prevalence Score. (See full explanation in UNCTAD, 2019).⁷ The results suggest that and NTMs are quite prevalent. The large majority of the imported products, about 80% of them face at least one NTM. This is usually called Frequency Index. At the same time, almost 90% of imported value is affected by trade measures, of any type, according to the Coverage Ratio. The last indicator proposed measures how many NTMs are falling on each traded product, on average. The result is that there are more than 7 different measures on each traded product, on average. These results are computed using the NTMs on imports for all countries put together. It is also to be noted that NTM on exports also have quite high incidence. Frequency Index is 68%, Coverage Ratio is 81%, and Prevalence Score is 2.7, i.e. every exported product needs to comply with almost three different requirements from home country, even before leaving the country.

Figure 2 presents the incidence of NTMs on the traded products through the three indicators proposed (Frequency Index, Coverage Ratio and

⁷ Frequency Index is the share of products that are affected by any NTM, compared to the share of those that have no NTM. Coverage Ratio is trade weighted, it compares the value of imported products that have at least one NTM and the value of imports that is not regulated by any NTM. Prevalence Score is the average number of all the NTMs in force, some products have just one or two NTMs, but some other products are highly regulated and face multiple different NTMs. The Prevalence Score presents a simple average by country (number of NTMs on average on every product).

Prevalence Score).⁸ For every country the incidence on products is above 60%, and for some countries is close to 100%. It is also common that Coverage Ratio is higher than Frequency Index, suggesting that countries tend to regulate more those products that have higher global import value. As a result, affected trade value is quite high, around or above 80%.

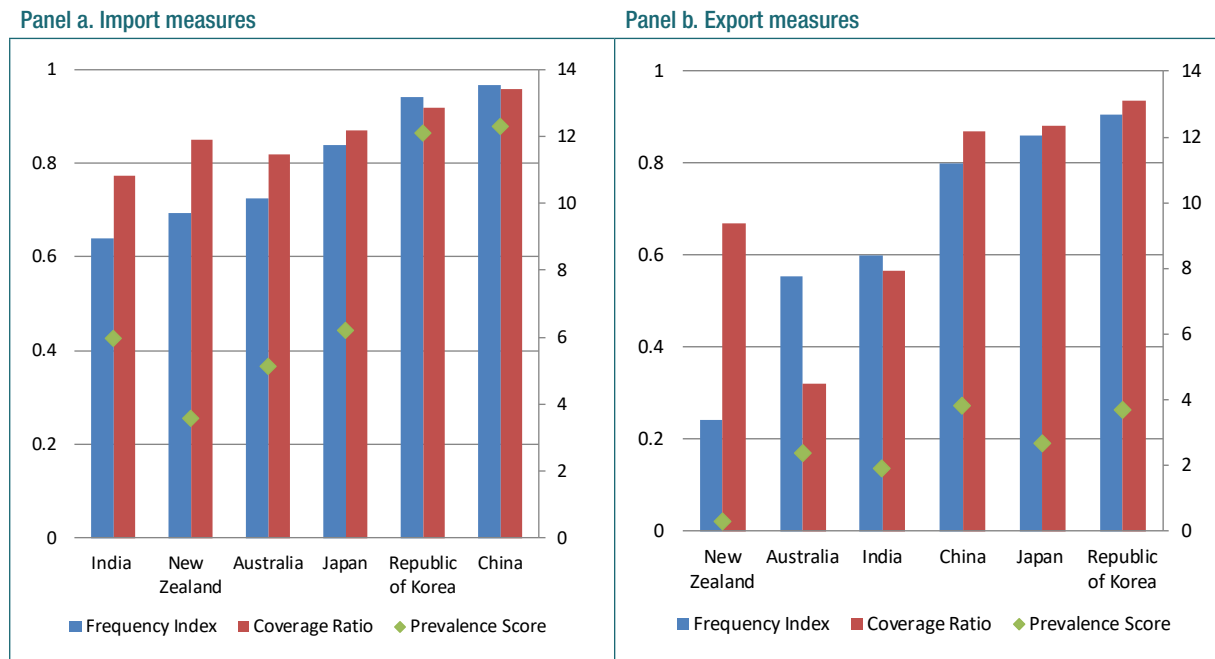
Export measures are also prevalent. These are the requirements that the country imposes on its own exports. For China, Japan and the Republic of Korea at least 80% of their exports have to comply with local regulations. New Zealand has a low number of products that are affected by export NTMs, but those measures concentrate on products that represent high value in the export basket, so that more than 60% of their exports face NTMs.

Export NTMs are those required by the exporting country itself, not by its trading partner. This shows that sometimes companies have to devote efforts and associated cost to comply with the requirements of their own national governments before they engage in complying with requirements in other markets.

Data in figure 3 aggregates all countries but distinguishes between broad sectors of the economy. An important pattern appears, that is consistent with what appears for other countries in the world: it is difficult to find an agriculture product that is not affected by an NTM. This sector is also affected by the highest number of NTMs, i.e. not only most agriculture products are affected by NTMs (FI and CR represented by bars measured in the left axis), but also each of them faces simultaneously more NTMs than other sectors (PS represented by dots measured in the right axis). Manufacturers and Natural Resources also have high incidence of NTMs, but each product has to face around 5 measures instead of more than 20.

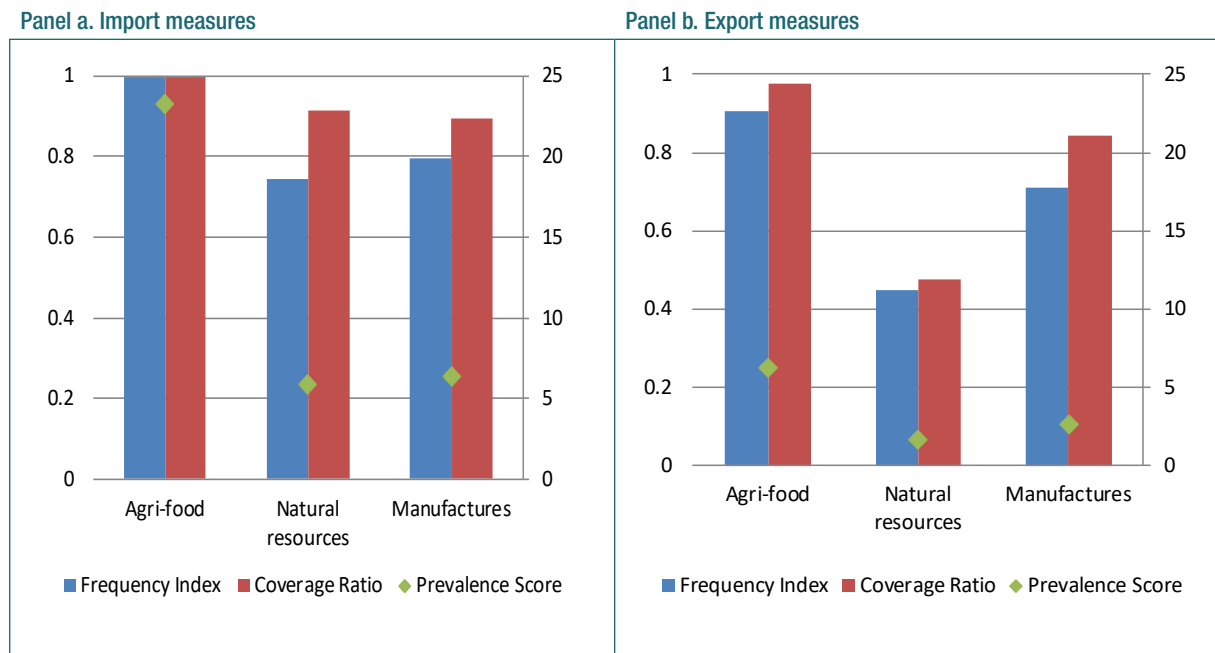
⁸ This calculation was done not including the horizontal measures, and considering only the products within the national import basket, i.e. the imported products only. But they do include all those measures that affect the products under a partial coverage basis. These concepts are described in detail in UNCTAD recent publications, for further reference on method of computation of the indicators.

Figure 2
Incidence measures for RCEP countries



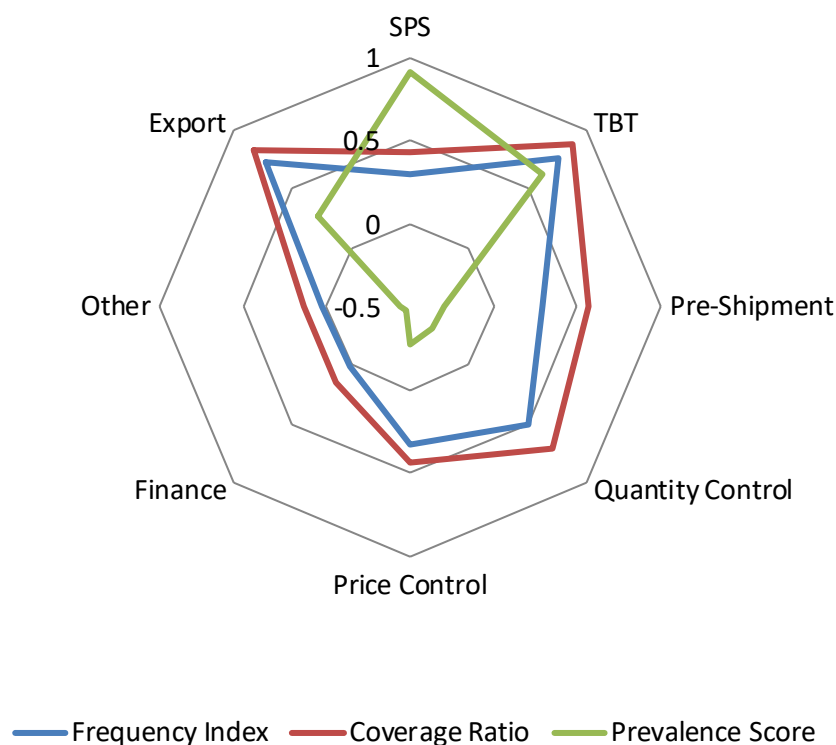
Source: authors' calculation based on collected data.

Figure 3
Incidence measures by broad sectors



Source: authors' calculation based on collected data.

Figure 4
Incidence measures, by chapter



Source: authors' calculation based on collected data.

Incidence on exports is also highest for agriculture, but prevalence score is much lower. There are only very few measures affecting exports. These few measures affect almost all agricultural products and more than 60% of manufactures.

Figure 4 disaggregates information by type of measure for all countries combined, i.e. by chapter of the NTM classification. The radar figure shows that Coverage Ratio is normally higher than Frequency Index, as the ring for this indicator is consistently in the exterior of the radar.

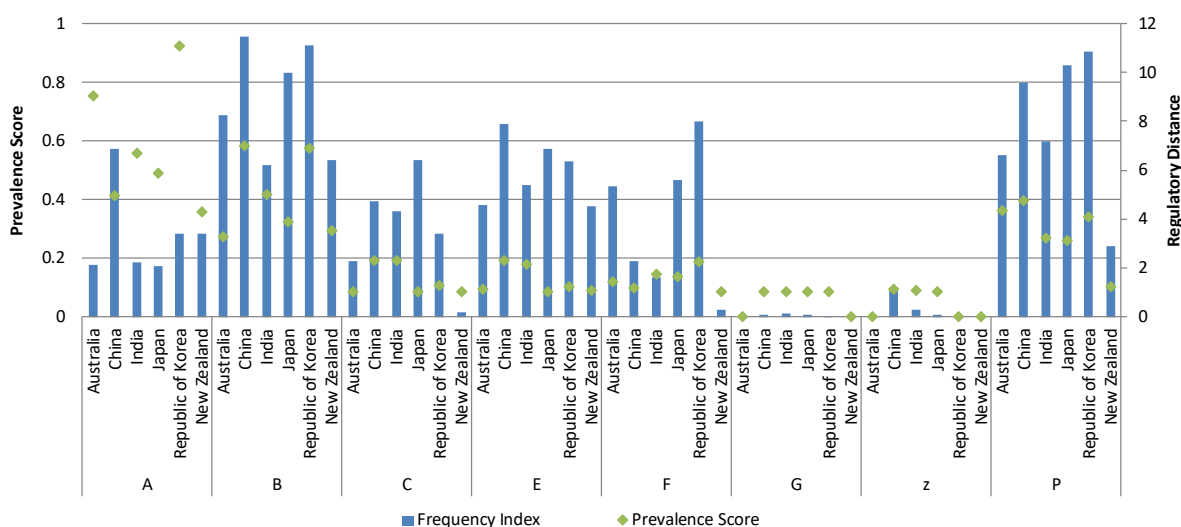
Incidence measures are high for TBT (chapter B), licenses and other quantity control measures (chapter E), and also export measures (chapter P). The green ring is the normalized value of Prevalence Score. It is high for TBT, but is the highest for SPS.

In the global database of NTM that UNCTAD holds, it appears that the most common type of measure is TBT. For these countries, technical measures in chapter B (TBT) are as common as export measures.

On the other hand, in line with what appears for other countries in other regions, the number of SPS is outstandingly higher than for the rest of the chapters. It could be difficult to export agriculture and food products just because of the number of requirements that these products need to meet to be able to be accepted in the import markets. Food safety is a major concern for all countries.⁹

⁹ These calculations use the M4 version of the classification, which was agreed and published during the time the data was processed. This is why the original country chapters use the previous version, M3. one of the main differences between the two is that, because of the criteria for chapter selection, more measures were moved from chapter B to

Figure 5
Frequency index and prevalence score, by chapter end country



Source: authors' calculation based on collected data.

Figure 5 shows two of the indicators, Frequency Index and Prevalence Score, disaggregating information by country, and by chapter. Chapter B, TBT measures, are highly used by almost all countries, especially China, Japan and the Republic of Korea. The same countries also have the highest values for export measures.

Quantity measures in chapter E (including licences and those measures that do not have conformity assessment associated), are also relevant for all countries.¹⁰

Prevalence score has relatively higher values for Technical NTMs, especially SPS and TBT,

chapter E, meaning that they are no longer considered to be TBT, but quantitative measures, such as licenses or quotas that are not associated with conformity assessment. M full version fully follows WTO principles for the classification of measures.

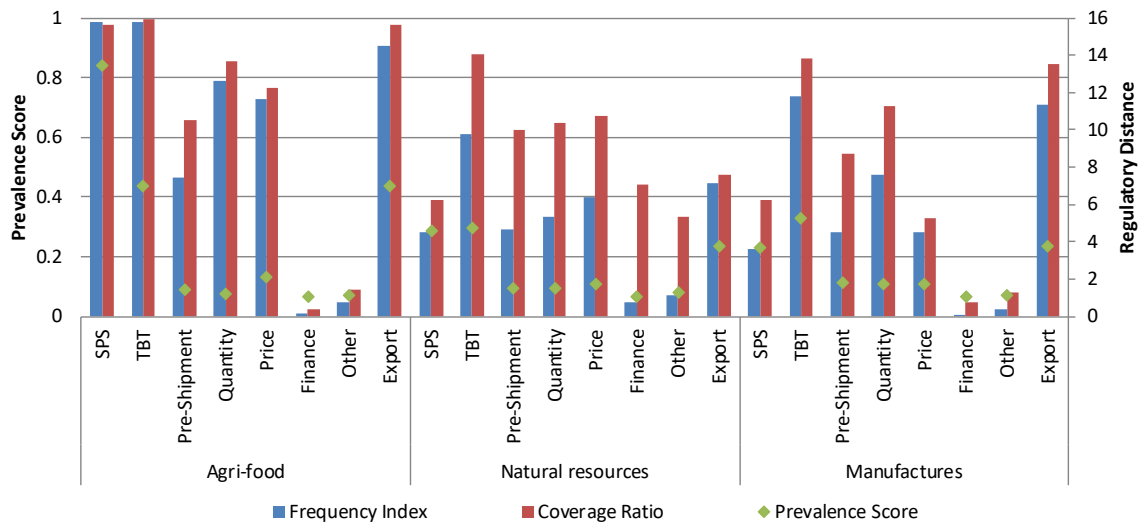
¹⁰ Calculation of the indices was done using the data converted to the latest NTM classification version, which is denominated M4. The data collection process in RCEP countries was done before the NTM classification was updated, so data collectors use M3 in their chapter report, which was the classification used for their original data collection process, before the conversion to the newest classification version was made to the global database available in TRAINS. Changes from M3 to M4 may involve reclassification of certain measures between chapters B and E. There are also changes within chapter P.

compared to Non-Technical NTMs. Three out of four imported products face a technical NTM, while only one in two face Non-Technical NTMs.

Figure 6 shows again the three indicators. Frequency Index, Coverage Ratio (left axis) and Prevalence Score (right axis). For all countries combined, it is possible to see patterns for regulation of different sectors. Agri-food products are highly regulated by SPS and TBT type of measures, as well as export NTMs, but not so much with Finance measures. In particular, these products have on average 13 different SPS measures. Each product in this group faces on average almost 7 TBT requirements and 7 export measures. Prevalence score has the highest values for agri-food products. This is broadly in line with global trends (UNCTAD and the World Bank, 2018).

Conversely, manufacturing products face 3.6 SPS and more than 5 TBT on every product, and 3.7 export measures. Manufactures are in general more regulated by TBT, but also by Licenses in chapter E, and price NTMs, apart from Export measures. There are also some SPS applying on a few manufactures as well. Natural resources and energy products follow a similar pattern to manufactures, only that licences and quotas are more relevant than other types.

Figure 6
Incidence by sector and by type of NTM and broad sector



Source: authors' calculation.

6. INSIGHTS STEMMING FROM THE DATA ANALYZED

The NTMs of RCEP countries are now included in the global TRAINS database. This one-point dataset open for consultation by all makes NTMs in the world more transparent. The data user may check very easily the amount and nature of NTMs in any particular market for any product.

This report overviews the application of NTMs in RCEP countries. Various government department issue regulations that affect trade, even in those cases where their main intention is not trade related. Therefore, NTMs is an area in which all government departments need expertise. Their policy actions may have consequences in the economy beyond their initial intentions.

The report also shows incidence measures. These are statistics that may be used to describe how countries use NTMs as policies. Results show that the large majority of products are regulated in all countries. Even after dropping all horizontal measures, the rate of coverage of products in trade is high.

Most products face multiple NTMs at the same time. Data from all countries presented in this

report show how this is a reality that companies must face. Often, each NTM affects more than a hundred different products, and so some of these NTMs overlap the products covered by other measures. Agriculture and food products are particularly affected in scope and in depth, as this group also shows the highest number of NTMs on any single product.

Export measures are not to be neglected in the analysis. These are the ones that companies need to fulfill to comply with requirements of their home country, even before their products leave their country. They are prevalent for the countries included in this report. Overall, more than 80% of exports need to comply with at least one export NTM. Full data is contained in the database.

The multiplicity and diversity of NTMs calls for coordination among ministries and regulating departments to ensure that there is coherence among the different requirements, and that unnecessary burdens are avoided, not only in design of the regulations but also in their implementation. These NTM data can be used as a starting point to review the effectiveness and efficiency of the NTM affecting key sectors in the economy, to ensure minimal costs to trade and maximal NTM alignment with main trade partners.

The high incidence described above is not necessarily bad. There are important non-trade related policy objectives that need to be attained. They are typically in areas such as food safety, health and consumer protection, environment preservation, and others. In fact, a country with few measures could even reflect regulatory framework gaps. What is key is the quality of the design and implementation of the NTM. This is globally referred to as Good Regulatory Practices (GRP). Those NTMs that do not follow GRP, for example because they are badly designed or poorly implemented, may become an unnecessary burden to the economy.

Last but not least, the TRAINS database can be used as the main source of information for a Trade Portal or Trade Repository. The methodology of data collection ensures that all measures would be included, and thus comprehensive analysis is feasible, as well as comparison across countries. The importance of transparency in NTMs is the value of availability of information, to which TRAINS global database contributes. Now, thanks to a joint effort of all RCEP countries together with ERIA and UNCTAD, RCEP countries are also contributing to this global database, and may benefit from it.

REFERENCES

- Bhagwati, J (1995). *US Trade Policy: The Infatuation with FTAs*, Columbia University Discussion Paper Series No. 726.
- ERIA and UNCTAD (2016). *Non-Tariff Measures in ASEAN*, ERIA. Research Project FY2015 No.01, ISBN: 978-602-8660-89-1.
- ERIA and UNCTAD (2019). *Non-Tariff Measure in ASEAN- An Update*, ISBN: 978-602-5460-19-7.
- UNCTAD (2010). *Non-tariff Measures: Evidence from Selected Developing Countries and Future Research Agenda* (United Nations publication, New York and Geneva), p. 99.
- UNCTAD and the World Bank (2018). *The Unseen Impact of Non-Tariff Measures: Insights from a new database*, UNCTAD/DITC/TAB/2018/2.
- UNCTAD (2018). *UNCTAD TRAINS: The Global Database on Non-Tariff Measures User Guide* (2017, Version 2), UNCTAD/DITC/TAB/2017/3, New York and Geneva.
- UNCTAD (2019). *International Classification of Non-Tariff Measures 2019 Version*, UNCTAD/DITC/TAB/2019/5, Geneva.
- UNCTAD (2019). *Computing non-tariff measures indicators: analysis with UNCTAD TRAINS Data*, UNCTAD Research Paper No. 41, UNCTAD/SER.RP/2019/13.
- UNCTAD (2020). *Guidelines to collect data on official non-tariff measures*, UNCTAD/DITC/TAB/2019/8.



NON-TARIFF MEASURES IN AUSTRALIA: AN OVERVIEW¹¹

Ernawati Munadi¹²

1. INTRODUCTION

The NTM data collection process undertaken for Australia revealed that there are 1,897 NTMs in place in 2016. Each NTM requirement can be counted as an independent legal requirement irrespective of the number of products that they each affect. Of all of the NTMs imposed in Australia, 54.6 per cent are technical barriers to trade (TBT) and 24.6 per cent are export-related measures.

The exact impact of NTMs on trade flows is often not very well understood. Unlike tariffs, data on NTMs are not merely numbers, and the relevant information is often hidden in legal and regulatory documents (UNCTAD, 2013). Collecting data on NTMs is a matter of collecting information embedded in those regulations.

However, Australia has taken steps towards improving transparency of information. The centralised regulation source (available at <https://www.legislation.gov.au/>) has significantly improved the accessibility of information in Australia. The user-friendly web portal makes it easy to identify acts that are in force, as well as all related or associated implementing regulations. The website also provides a 'consolidated' version of the regulations. This feature

¹¹ The author is grateful to Indah Rahayu. Special thanks are also given to Ayu Sinta Saputri from the Ministry of Trade of Indonesia, Lili Yan Ing of the Economic Research Institute for ASEAN and East Asia (ERIA), and the United Nations Conference on Trade and Development (UNCTAD) team for their comments during the data compilation. Project funding from ERIA is gratefully acknowledged.

¹² Wijaya Kusuma University, Surabaya, Indonesia.

is very helpful for analyzing these regulations, but also for traders, and thus enhances development.

Efforts to collect NTM data began in the 1990s with UNCTAD's Trade Analysis Information System database (Nicita and Gourdon, 2013). However, these efforts were not consistently updated until a new approach to data collection was initiated following the Multi-Agency Support Team discussions in 2006–2012. NTM data collection is led by UNCTAD and often implemented through collaboration with other agencies, such as the World Bank. Furthermore, UNCTAD collaborated with the Economic Research Institute of ASEAN and East Asia in 2014 to focus on collecting NTM data from Association of Southeast Asian Nations (ASEAN) members (later expanded to ASEAN+6 members, which include Australia).

This chapter presents the results of this collection of NTM data in Australia. It highlights several important findings, from the government agencies responsible for issuing NTM-related regulation to the type of NTMs imposed by Australia, among other things. The last section of the chapter presents policy recommendations.

2. COMPREHENSIVENESS OF AUSTRALIA'S NON-TARIFF MEASURE REGULATIONS

Table 1 depicts the comprehensiveness of NTM data collection in Australia. Comprehensive NTM data collection ensures that all regulations affecting trade directly or indirectly are included in the dataset.

Information on Australia's NTMs has been collected from 504 NTM-related regulations (or legal texts), from 12 different government agencies. As shown in Table 1, there are 1,897 coded NTMs (or independent legal requirements within a legal text), affecting 6,184 Harmonized System lines at national tariff lines level. This accounts for 100% of all tariff lines in Australia.

According to the Ministry of Foreign Affairs of Japan (2018), the implementation of NTMs in Australia, including import licensing procedures, is fully consistent with the WTO Agreement. Standards

and technical regulations are implemented in accordance with international obligations.

Table 1
Comprehensiveness of Australian non-tariff measures

Number	Comprehensiveness	Number
1	Total NTM-related regulations (acts, ordinances, etc.)	504
2	Total NTMs reported to the World Trade Organization	-
3	Total number of coded NTMs (each legal requirement)	1,897
4	Total affected products (Harmonized System lines, national tariff lines)	
	(i) Total number of affected products	6,184
	(ii) Affected products as a share of total products	100%
5	Total number of issuing institutions	12

NTM = non-tariff measure.

Source: Author's calculation based on the data collected.

3. GOVERNMENT AGENCIES ISSUING NON-TARIFF MEASURES

Australia has a centralised information source for regulations. Information on regulations related to NTMs in Australia is publicly available at www.legislation.gov.au.

As in many other countries, NTM regulations in Australia are designed and implemented by many different government agencies. At the Commonwealth level, Food Standards of Australia and New Zealand is responsible for mandatory food standards in both Australia and New Zealand. The Therapeutic Goods Administration, under the Australian Government Department of Health, is responsible for developing standards for pharmaceuticals and therapeutic goods. The Department of Transport and Regional Services is responsible for developing national standards for vehicle safety and emission requirements. The Consumer Affairs Division of the Department of the Treasury develops mandatory Commonwealth safety and information standards for selected consumer products. According to the 1992 Commonwealth/State Agreement on Mutual Recognition, a product that conforms with the

requirements of at least one state or territory (i.e. legally saleable) can be sold throughout Australia.

The data collection process took account of the issuing departments in government. Table 2 records the number of legal texts, or “regulations”. Each of these regulations may have more than one measure. The Department of infrastructure, Transport, Cities, and Regional Development issued the highest number of regulations (24%), followed by the Department of Health (22%), Department of Agriculture (16%), Department of Treasury (more than 12%), Department of Communication and the Arts (10%), and Department of Environment and Energy (9%) (Table 2).

Table 2
NTM-related regulations by regulatory agency

Number	Regulatory Agency	Number of NTM-related regulations	(%)
1	Department of Agriculture	81	16.07
2	Department of Home Affairs	8	1.59
3	Department of Communications and the Arts	48	9.52
4	Department of Health	112	22.22
5	Department of Treasury	61	12.10
6	Department of Foreign Affairs and Trade	19	3.77
7	Attorney-General's Department	2	0.40
8	Standards Australia/ Standards New Zealand Committee	8	1.59
9	Department of Defense	2	0.40
10	Department of Environment and Energy	43	8.53
11	Department of Infrastructure, Transport, Cities and Regional Development	119	23.61
12	Industry, Innovation and Science	1	0.20
	Total	504	100.00

NTM = non-tariff measure.

Source: Author's calculation based on the data collected.

Table 3
Number of non-tariff measures by issuing institution

Number	Regulatory Agency	Number of NTMs	(%)
1	Department of Agriculture	673	35.48
2	Department of Home Affairs	135	7.12
3	Department of Communications and the Arts	114	6.01
4	Department of Health	308	16.24
5	Department of Treasury	157	8.28
6	Department of Foreign Affairs and Trade	42	2.21
7	Attorney-General's Department	20	1.05
8	Standards Australia/ Standards New Zealand Committee	6	0.32
9	Department of Defense	6	0.32
10	Department of Environment and Energy	150	7.91
11	Department of Infrastructure, Transport, Cities and Regional Development	285	15.02
12	Industry, Innovation and Science	1	0.05
	Total	1,897	100.00

NTM = non-tariff measure.

Source: Author's calculation based on the data collected.

Table 3 shows the number of NTMs by regulatory agency (several NTMs may be contained in one regulation or legal text). The Department of Agriculture is responsible for issuing the most NTMs (35%). Its main tasks are to protect Australian customers and the environment while developing and implementing policies and programmes to ensure that Australia's agriculture, fishery, food, and forestry industries remain competitive, profitable, and sustainable, while supporting the sustainable and productive management and use of rivers and water resources. The Department of Health ranks second, with 16 per cent of the total 1,897 NTMs.

4. TYPES OF NON-TARIFF MEASURES IMPOSED BY AUSTRALIA

Like other developed countries, Australia has well-developed regulations, including NTM-related regulations. Australia strictly imposes NTMs on imports to protect its society, in accordance with the WTO Agreement, for reasons of human health, hygiene and sanitation, protection of animal and plant life, environmental conservation, and essential security, in compliance with domestic legislative and policy requirements (including revenue objectives) and international commitments (Ministry of Foreign Affairs of Japan, 2016).

Table 4 outlines the types of NTMs imposed by Australia. The table reports 1,897 occurrences

of NTMs in Australia. Of these, import-related NTMs account for more than 75 per cent, while the remaining NTMs are export-related. Australia's import NTMs are mostly technical measures, referring to technical regulations and procedures for assessing conformity with technical regulations and standards, including measures covered by the Sanitary and Phytosanitary (SPS) Agreement (chapter A), and TBTs (chapter B). Technical measures (i.e. chapters A, B, C, and some in P) account for 93 per cent of import NTMs, or 70 per cent of total NTMs, leaving only 7 per cent for non-technical measures.

As shown in Table 4, the most common type of NTM in Australia is TBTs, which account for 55 per cent of the total, followed by export measures (25%), and SPS measures (15%). The non-technical measures include price control measures

Table 4
Types of non-tariff measures imposed by Australia, by chapter

	Type of NTMs	Number of coded NTMs	Percentage of total NTMs (%)	Number of affected products (national tariff lines)	(%)
A	Sanitary and phytosanitary measures	292	15.39	6,184	100
B	Technical barriers to trade	1,035	54.56	6,184	100
C	Pre-shipment inspection and other formalities	6	0.32	6,184	100
D	Contingent trade-protective measures	0	0.00		
E	Non-automatic licensing, quotas, prohibitions and quantity control measures other than for sanitary and phytosanitary measures or technical barrier to trade reasons	18	0.95	185	2.99
F	Price control measures including additional taxes and charges	77	4.06	6,184	100
G	Finance measures	0	0.00		
H	Measures affecting competition	0	0.00		
I	Trade-related investment measures	0	0.00		
J	Distribution restrictions	0	0.00		
K	Restrictions on post-sale services	0	0.00		
L	Subsidies (excluding export subsidies under P7)	0	0.00		
M	Government procurement restrictions	0	0.00		
N	Intellectual property	1	0.05	43	0.70
O	Rules of origin	0	0.00		
P	Export-related measures	468	24.67	6,184	100
		1,897	100.00	6,184	100

NTM = non-tariff measure.

Source: Author's calculation based on the data collected.

including additional taxes and charges (4%), and non-automatic licensing, quotas, prohibitions, and quantity control measures other than for SPS or TBT reasons (1%). Table 4 reveals that the use of SPS, TBT, pre-shipment inspection, price control, and export-related measures is highly prevalent in Australia, as some of those measures are applied to all Australian tariff lines (called Horizontal NTM).

There are 78 different types of NTMs, based on the most disaggregated level of the UNCTAD Multi-Agency Support Team 2012 Classification. With respect to imports, the most common types

of NTMs are product standard requirements for TBT reasons (B7), testing (B82), and labelling requirements (B31). There are 288 occurrences of product standard requirements, 213 occurrences of testing requirements, and 163 occurrences of labelling requirements. With respect to exports, the most common types of NTMs are licensing or permit requirements to export (P13) (131 occurrences), export technical measures not elsewhere specified (P69) (125 occurrences), and export taxes and charges (P5) (107 occurrences). This information is presented in Table 5.

Table 5
Types of non-tariff measures imposed by Australia, by NTM code

No.	Type of NTM	Total	No.	Type of NTM	Total	No.	Type of NTM	Total
1	A11	1	28	B11	24	52	C3	4
2	A14	25	29	B14	79	53	C9	2
3	A15	1	30	B15	7	54	E112	6
4	A19	5	31	B19	8	55	E231	1
5	A21	10	21	B21	16	56	E321	1
6	A22	32	33	B22	14	57	E322	8
7	A31	21	34	B31	163	58	E329	2
8	A32	2	35	B32	39	59	F3	1
9	A33	15	36	B33	33	60	F31	1
10	A41	1	37	B41	7	61	F39	2
11	A51	6	38	B42	4	62	F4	1
12	A59	20	39	B49	6	63	F61	15
13	A61	6	40	B6	9	64	F65	1
14	A62	4	41	B7	288	65	F69	1
15	A63	31	42	B81	33	66	F72	6
16	A69	25	43	B82	213	67	F73	46
17	A81	2	44	B83	18	68	F79	3
18	A82	7	45	B84	30	69	N	1
19	A83	30	46	B85	29	70	P11	21
20	A84	6	47	B851	1	71	P12	15
21	A85	6	48	B852	1	72	P13	131
22	A851	5	49	B859	3	73	P14	13
23	A852	1	50	B89	7	74	P5	107
24	A859	2	51	B9	3	75	P61	22
25	A86	1				76	P62	32
26	A89	23				77	P69	125
27	A9	4				78	P9	2
Total	1897							

NTM = non-tariff measure.

Source: Author's calculation based on the data collected.

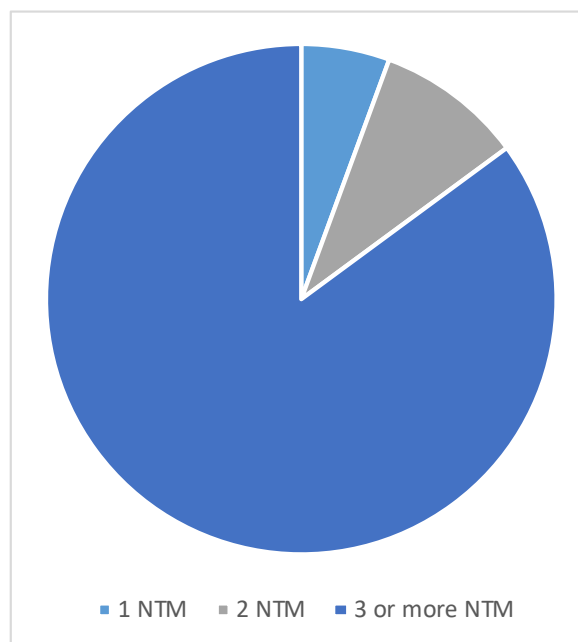
5. TARIFF LINES COVERED BY NON-TARIFF MEASURES

The imposition of NTMs in Australia, as for other countries, is characterised by the simultaneous application of different measures to the same product (multiple NTMs), as presented in Figures 1 and 2.

Figure 1 reveals that 4 per cent of the 6,184 NTM-affected tariff lines in Australia are subject to one NTM, 8 per cent are subject to two NTMs, and 88 per cent are subject to three or more NTMs.

Table 6 presents the number of tariff lines subject to one, two, and three or more NTMs, organised by product group. Some product groups such as machinery/electrical, animals and animal products, and textile products are mostly affected by three or more NTMs. Another product group subject to a large number of NTMs is food products, with 89 per cent of food product tariff lines subject to three or more NTMs. This is not surprising as Australia is a developed country, and it has been observed that the average unit value of a country's

Figure 1
Incidence of non-tariff measures by product as a percentage of total tariff lines, (%)



NTM = non-tariff measure.

Source: Author's calculation based on the data collected.

Table 6

Multiple non-tariff measures applied to each product group, in numbers

	Product	One NTM	Two NTMs	Three or more NTMs
01–05	Animals and animal products	7	16	316
06–15	Vegetable products	16	66	281
16–24	Foodstuffs	13	20	254
25–27	Mineral products	27	40	131
28–38	Chemical and allied industries	41	80	751
39–40	Plastics/rubbers	6	18	214
41–43	Raw hides, skins, leather, and furs	3	8	81
44–49	Wood and wood products	17	32	377
50–63	Textiles	28	54	829
64–67	Footwear/headgear	7	6	47
68–71	Stone/glass	12	38	164
72–83	Metals	35	54	494
84–85	Machinery/electrical	5	18	930
86–89	Transportation	10	14	214
90–99	Miscellaneous	23	38	349
	Total tariff lines	250	502	5,432

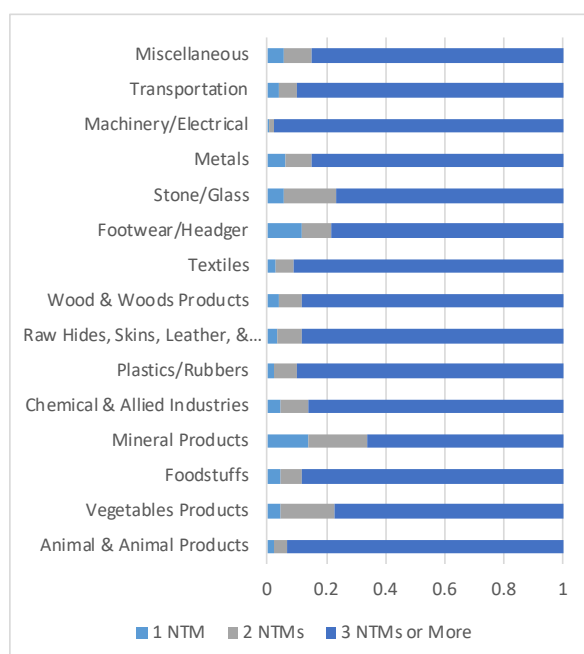
NTM = non-tariff measure.

Source: Author's calculation based on the data collected.

imports tends to rise with its level of income. Thus, consumers naturally tend to switch to higher quality and safer products when their incomes rise (Ing et al., 2016). According to Jouanjean, Maur, and Shepherd (2012), food products are the source of numerous foodborne illnesses (due to pathogens, toxins, and chemicals). All food products must be unadulterated (not bear or contain any poisonous or deleterious substances), be fit for consumption, and not be contaminated or decaying, to be allowed for consumption.

Figure 2 presents the same information, but in shares within each product group. For example, in the animals and animal products group, almost 93.2 per cent of the tariff lines are affected by three or more NTMs. Only 2.1 per cent of animals and animal products are subject to one NTM and 4.7 per cent are subject to two NTMs. Of the machinery/electrical product tariff lines, 98 per cent are subject to three or more NTMs, leaving only 2 per cent subject to one or two NTMs. The same can be seen with textile products where 91 per cent of tariff lines are subject to three or more NTMs.

Figure 2
Multiple non-tariff measures, share within product groups



NTM = non-tariff measure.

Source: Author's calculation based on the newly constructed non-tariff measures database.

6. POLICY RECOMMENDATIONS

Australia is making good progress towards improving transparency. A centralised, user-friendly regulation web portal has significantly boosted the accessibility of information and made it easy to identify acts that are in force, as well as providing a 'consolidated' version of regulations. This helps traders, and thus enhances development. NTM-related regulations in Australia are the responsibility of 12 government agencies. The Department of Agriculture is responsible for issuing the largest share. The 1,897 coded NTMs stem from 504 NTM-related regulations identified in Australia. Of these, 75 per cent are import measures and 25 per cent are export measures.

Our findings show that cases of multiple NTMs are common in Australia. The large majority of the 6,184 existing tariff lines are subject to three or more NTMs. Only a minimum per cent of tariff lines are subject to one or two NTMs. Machinery/electrical, animals and animal products, and textiles are the most highly regulated product groups.

Some policy recommendations are as follows:

Undertake a regular review of existing policies and regulations to identify policies and regulations that negatively impact customers, and are not achieving the government's objectives. Such a review is also important for improving market access, particularly for developing countries.

Increase the amount of information available to traders regarding NTMs, as such mechanisms are lacking for NTMs other than SPS measures. Comprehensive information on SPS measures in Australia can be accessed at <https://bicon.agriculture.gov.au/BiconWeb4.0>, but such a source does not exist for other types of NTMs.

REFERENCES

- Integrated Trade Intelligence Portal i-TIP. UNCTAD. Available at <https://trains.unctad.org/forms/APECproject.aspx> (accessed 2 February 2019).
- Jouanjean MA, Maur JC and Shepherd B (2012). Reputation Matters: Spillover Effects in the Enforcement of US SPS Measures. In: Cadot O and Malouche M, eds. *Non-Tariff Measures—A Fresh Look at Trade Policy’s New Frontier*. Washington, DC. World Bank.
- Ministry of Foreign Affairs of Japan (2018). Available at <https://www.mofa.go.jp/region/asia-paci/australia/study0504/index.html> (accessed 2 February 2019).
- Ing LY, Cadot O, Anandhita MR and Urata S (2016). Non-Tariff Measures in ASEAN—A Simple Proposal. In: Ing LY, Fernandez de Cordoba S and Cadot O. eds. *Non-Tariff Measures in ASEAN*. Economic Research Institute for ASEAN and East Asia and the United Nations Conference on Trade and Development.
- World Trade Organization (2012). *Trade and Public Policies: A Closer Look at Non-Tariff Measures in the 21st Century*. World Trade Report 2012. Geneva: World Trade Organization.
- Nicita A and Gourdon J (2013). A Preliminary Analysis on Newly Collected Data on Non-Tariff Measures. UNCTAD Policy Issues in International Trade and Commodities Study Series, 53. New York and Geneva.
- UNCTAD (2013). *Non-Tariff Measures to Trade: Economic and Policy Issues for Developing Countries*. Developing Countries in International Trade Studies. New York, Geneva: United Nations.
-



NON-TARIFF MEASURES IN CHINA

Mingcong Li and Miaojie Yu¹³

1. INTRODUCTION

Since China's reform and opening up in 1978, its total exports and imports have grown dramatically. China is becoming a global manufacturing base and processing hub, and is playing a key role in global value chains. Unilateral decisions over the years and the country's accession to the World Trade Organization (WTO) in 2001 have contributed substantially to reduce tariff rates. The sample mean of China's applied tariff declined from 39.71 per cent in 1992 (United Nations Conference on Trade and Development [UNCTAD] Trade Analysis and Information System) to 8.13 per cent in 2011, and could go down even further due to the establishment of bilateral and regional free trade agreements. However, as the nation becomes wealthier, it is becoming increasingly important to protect public health, safety, and the environment while maintaining economic development. Therefore, more non-tariff measures (NTMs) are being used, obliging exporting and importing firms to comply with a wide range of requirements including technical regulations, product standards, and customs procedures. NTMs are becoming more important than ever as they affect and sometimes hamper the flow of international trade.

Despite the growing importance of NTMs in regulating trade, the exact impact of NTMs on trade flows needs to be assessed by economic analysis in each case. As a major trading nation, China could face a sizeable impact from such measures. Furthermore, easy and systematic access to NTM information is essential for traders and policy makers. Thus,

¹³ The initial data collection effort was also assisted by Xiaomin Cui, Shuai Guo, and Mengying Yu, with constant guidance and support from Chi Le Ngo, Santiago Fernandez de Cordoba, Denise Penello Rial, Fabien Dumesnil, and Ralf Peters from the United Nations Conference on Trade and Development, as well as Rizqy Anandhika and Lili Yan Ing from the Economic Research Institute for ASEAN and East Asia.

a comprehensive and internationally comparable database of NTMs is important. Under the initiative of UNCTAD and the Economic Research Institute for ASEAN and East Asia, the authors have identified and collected all currently enforced NTMs in China, drawing on information from official legal sources and using the UNCTAD International Classification of NTMs and methodological guidelines. This chapter provides a brief overview of the diverse types of NTMs that exist in China based on national laws and regulations. Specifically, it highlights China's legal architecture, the main institutions that issue legal documents on NTMs, and the different types of NTMs applied to various sectors. The NTM collection process involved reviewing all government agencies to obtain comprehensive, complete, and comparable data, using a standardised methodological approach to ensure transparency with respect to the use of NTMs in China.

2. CHINA'S LEGAL SYSTEM

China's legal system is primarily based on a civil law model. Its distinctive legislative structure does not involve checks and balances whereby the legislation, administration, and court operate independently to restrain one another. China's President and the Premier of the State Council are both drawn from the National People's Congress (NPC). The President, following the decision of the NPC, issues laws and ratifies treaties and international agreements concluded with foreign states. The Premier does not have the power to approve or reject laws issued by the NPC.

Four different levels of legislation coexist in China. The first level, the Constitution, which can only be amended by the NPC. The second level consists of laws. The NPC is responsible for enacting and amending fundamental laws such as those concerning criminal offences, civil affairs, and state organs. The NPC Standing Committee enacts and amends all other laws not enacted by the NPC.

The third level of legislation consists of administrative regulations formulated by the State Council, which is the highest organ of state administration and is officially responsible for implementing policies formulated and passed by the NPC.

The fourth level consists of administrative rules (or department rules). The ministries and commissions of the State Council, the People's Bank of China, the State Audit Administration, and other organs endowed with administrative functions directly under the State Council may formulate administrative rules. These are a part of the central legislative process, and enforce the laws or administrative regulations of the State Council. The State Council has the right to withdraw or amend these rules if they are deemed unsuitable. The hierarchy of the sources of law in China is summarised in Table 1.

Table 1
Hierarchy of the sources of law in China

Statutory Law	Description
Constitution	The highest law in China, which can only be amended by the National People's Congress.
Laws	Promulgated by the National People's Congress and its Standing Committee.
Administrative regulations	Promulgated by the State Council.
Local regulations	Promulgated by local People's Congresses and their Standing Committee.
Administrative rules	Local rules are promulgated by the local government.
Local rules Department rules	Department rules are promulgated by the ministries and commissions under the State Council.

Note: For this data collection exercise, only central government-level laws and regulations were collected; provincial-level data including local regulations and local rules were not collected, as local regulations and rules must not contradict national law.

Source: Author's summary.

Within China's unified and multi-level legislative system, laws promulgated at different levels do not share the same hierarchy. The Constitution has the highest legal validity, and no other laws or regulations promulgated at the central or local level may violate the Constitution. Administrative regulations and rules must not contradict or go against laws passed by the NPC, and local regulations or rules must not go against national laws or administrative regulations. The NPC has the power to withdraw or abolish administrative regulations, rules, and local regulations if they contravene the national law.¹⁴ In practice, a single law is implemented through one or more administrative regulations and administrative rules.

3. NON-TARIFF MEASURES DATA COLLECTION

One of the primary concerns in the collection of NTM data is ensuring the legal comprehensiveness of the country's laws and regulations related to NTMs. In some countries this information is available at a centralised location, where a single official source contains all laws, regulations, acts, and decrees. In other countries, information must be obtained from decentralised sources, such as different ministries, institutions, or government agencies.

China has no single centralised source where laws and regulations related to NTMs are made available to public. Most trade-related regulations are only published by their respective issuing and implementing ministries, departments, or agencies. According to the Guidelines to Collect Data on Official Non-Tariff Measures, only legal documents that are official and mandatory, currently applied,

detailed and specific, and potentially affecting trade are collected (UNCTAD, 2014). Thus, on this basis, all implementation regulations addressing 'higher' level laws on trade-related issues have been gathered.

Most regulations concerning the implementation of NTMs in China take the form of administrative rules (or department rules), which are enacted and implemented by ministries and government bodies under the auspices of the State Council. Occasionally, in the absence of specific implementation guidelines in the form of administrative regulations or laws, NTMs are collected directly from these 'higher' level sources.

This study collected legal documents published through December 2016. To ensure the comprehensiveness of the collected data, all websites containing trade-related laws and regulations of the respective ministries or departments and government agencies under the State Council were thoroughly checked. Of these ministries, departments, and government agencies, we selected 75 that could potentially issue regulations on NTMs; further scrutiny revealed that only 29 agencies (see Table 2) were relevant, having issued at least one regulation related to NTMs.

With respect to the 29 relevant agencies identified, the authors thoroughly checked each regulation published on the agency's official website, collected relevant regulations, and translated the identified NTMs from the regulations into a database format.

Our approach to data collection can be summarised in the following steps:

- i. identify official sources of regulations (from decentralised sources);
- ii. collect trade-related legal documents from the identified sources;
- iii. identify NTMs contained in the legal documents and classify them based on UNCTAD's 2012 Classification of Non-Tariff Measures (UNCTAD, 2013a);

¹⁴ The People's Congresses of provinces, autonomous regions, and municipalities directly under the central government may form local laws and regulations based on their own local political, economic, and cultural conditions. These laws and regulations take effect after they are approved by the NPC Standing Committee. Some laws and regulations of autonomous regions may not be completely in line with the Constitution or national laws; however, when formulating their laws and regulations, as a practice of regional autonomy, the regional legislative organisation must abide by the Constitution and the Law of the People's Republic of China on Legislation, and report to the Standing Committee of the NPC for approval.

- iv. check the text of all collected regulations and legal documents to identify NTMs, then collate the identified information in a database format, including such information as NTM type and affected products; and
- v. crosscheck all collected regulations with the China Foreign Trade and Economic Cooperation Gazette¹⁵ issued by the Ministry of Commerce, and review the following international conventions¹⁶ that China has ratified: the Montreal Protocol, Chemical Weapons Convention, Basel Convention, Rotterdam Convention, Stockholm Convention, Kimberley Process, Convention on International Trade in Endangered Species of Wild Fauna and Flora, Single Convention on Narcotic Drugs, Convention on Psychotropic Substances, and Convention Against Illicit Traffic in Narcotic Drugs and Psychotropic Substances.

4. NON-TARIFF MEASURES DATA SUMMARY

Table 2 provides a statistical overview of the comprehensiveness of the NTM data collection efforts. In total, 2,517 NTM-related regulations administered by 29 ministries or departments were collected, including 1,448 mandatory standards. In total, we identified 7,332 NTMs coded for China, affecting 100 per cent of the total national tariff lines.

The WTO National Notification Authority for the Sanitary and Phyto-Sanitary Agreement is based in the Ministry of Commerce, and an official enquiry point was established in the General Administration

¹⁵ China's trade-related laws, regulations, and rules (including drafts published for comments) are meant to be published in the China Foreign Trade and Economic Cooperation Gazette. However, in practice, after crosschecking and comparison only a small portion of trade-related legal documents are actually published in the Gazette. Moreover, much of the published information is also outdated.

¹⁶ The Civil Law of China states that if any international treaty (or agreement) concluded by China contains provisions differing from national law, the provisions of the international treaty shall prevail, unless China has made reservations on such provisions.

of Quality Supervision, Inspection and Quarantine (AQSIQ) to coordinate the notifications, enquiries, and comments domestically. As of the end of 2016, China had submitted 1,195 notifications (both regular and emergency notifications) regarding SPS issues to the WTO (WTO, Sanitary and Phyto-Sanitary Information Management System).

Table 2
Statistical overview

Comprehensiveness Indicator	Number
Total number of coded regulations	2,517
Total number of coded regulations reported to the World Trade Organization	a
Total number of coded non-tariff measures	7,332
Total affected products (Harmonized System [HS] lines, national tariff lines)	
Total number of affected products	13,130
Affected products as a share of total products	100%
Total number of issuing institutions	29

Notes:

a By the end of 2016, there were 1,195 notifications to the World Trade Organization for sanitary and phytosanitary measures and 1,174 notifications for technical barriers to trade, which are accounted not on single or unique regulation basis. Affected products are counted based on each unique affected product. Products are often affected by more than one measure; in this case, the same HS line is counted as a single product (i.e. although HS 2817 is affected by five non-tariff measures, it will be counted as a single affected product).

Source: Authors' calculation based on data collected.

China has adopted the 2014 Harmonized Commodity Description and Coding System (HS) classification with HS-10 digit, which at the time of data collection was the latest version of the HS in China. There are 13,130 tariff lines in total, and all products in China are affected by NTMs.

The official enquiry point for the WTO's Technical Barriers to Trade Agreement is the Standardization Administration of the People's Republic of China (SAC), a vice-ministerial agency administered under AQSIQ. The SAC collects all TBT notifications from other member countries from the WTO website and forwards the comments to the WTO secretariat. As of the end of 2016, China had submitted 1,174 regular notifications and 44 revisions to the WTO (WTO, Technical Barriers to Trade Information Management System).

However, the number of notifications submitted to the WTO is not comparable with the number of regulations collected based on UNCTAD's NTM data collection methodology. First, notifications submitted to the WTO often take form of measures as opposed to regulations. Under UNCTAD's guidelines, a regulation is a legal document officially issued by a government in the form of a law, decree, or directive. An official regulation often contains one or more NTMs. A measure, on the other hand, is a 'mandatory trade control requirement enacted by an official regulation'. Second, UNCTAD only collects regulations that are currently in effect, whereas WTO notifications are subject to commenting by other member states before entry into force. Hence, in reality, not all notifications submitted to the WTO will be enforced by the notifying country in the end. Third, for WTO notifications, the same measure is often included in several notifications. For instance, Notifications G/SPS/N/CHN/86 and G/SPS/N/CHN/88 specify different maximum limits of pesticide residue for apples and pears, and both measures come from the same regulation—Administrative Regulations of the People's Republic of China on Pesticides, 1997; 2001. According to UNCTAD's data collection methodology, both notifications account for one regulation and one measure enacted under this regulation (tolerance limits for residues of or contamination by certain substances). Thus, having more or fewer WTO notifications compared to UNCTAD's collected NTM data does not indicate whether China is active or inactive in reporting to the WTO, as the two are not exactly comparable.

Table 3 lists China's regulatory and enforcement agencies for NTMs. There are 29 regulatory agencies responsible for issuing and enforcing NTM-related regulations. About 90 per cent of NTMs are issued by the top six of these agencies, which are responsible for issuing regulations mainly focusing on ensuring food safety, human and animal health, product quality and safety, and protecting the environment. Of these six top agencies, the SAC and AQSIQ predominantly administer regulations related to SPS and TBT measures. NTMs collected from the SAC account for 48.69 per cent of all NTMs, and those collected from AQSIQ account for 28.28 per cent.

The SAC is the Chinese national standards body, and is authorised by the State Council to issue mandatory standards¹⁷ in China. The agency plays a key role in drafting and amending national standardisation laws and regulations. There are currently two main legal documents governing standardisation in China: the Standardization Law of the People's Republic of China (2017)¹⁸ and the Regulation for the Implementation of the Standardization Law of the People's Republic of China. The SAC is responsible for issuing mandatory standards with respect to agriculture, food products, and industrial products. Most of the identified NTMs from the SAC are related to the quality and performance, testing, inspection, or certification requirements of machinery, electronics, medical devices, and agricultural products.

The SAC is also the national representative of the International Organization for Standardization (ISO), International Electrotechnical Commission (IEC), and other international and regional standards organisations. China is actively following good international practices such as ISO and IEC standards in preparing its own national standards. Of the 1,448 mandatory standards¹⁹ identified as related to NTMs, 555 (about 38%) are directly adopted from the ISO, IEC, and standards set out by other international organisations. China is increasingly making an effort to streamline its national standards with international best practices and seeking international cooperation in the standardisation process. In particular, under its new Standardization Law, China intends to provide

¹⁷ In China, standards are categorised as national, industry, local, association, and enterprise standards. National standards include both mandatory and voluntary standards. Both industry and local standards are voluntary standards. Mandatory standards must be applied, while the use of voluntary standards is encouraged. According to the NTM data collection guidelines, only mandatory standards are considered NTMs.

¹⁸ China's Standardization Law was revised in 2017. The goal of this revision was to streamline and consolidate mandatory standards and deepen cooperation in the region (especially with key partner countries along the Belt and Road). Under the new Standardization Law, China seeks to participate more actively in international standardisation efforts under the umbrella International Organization for Standardization (ISO) and International Electrotechnical Commission (IEC).

¹⁹ All mandatory standards are publicly and freely accessible on the SAC website: <http://www.sac.gov.cn/>.

Table 3
Issuing institutions

No.	Issuing Institution	Number of NTMs	% of total number of NTMs
1	Standardization Administration of the People's Republic of China	3,565	48.69%
2	General Administration of Quality Supervision, Inspection and Quarantine	2,071	28.28%
3	Ministry of Commerce	342	4.67%
4	Ministry of Agriculture	341	4.66%
5	General Administration of Customs	274	3.74%
6	China Food and Drug Administration	222	3.03%
7	Ministry of Environment Protection	127	1.73%
8	Ministry of Industry and Information Technology	71	0.97%
9	National Forestry and Grassland Administration	62	0.85%
10	Legislative Affairs Office of the State Council P.R.C	59	0.81%
11	National Health and Family Planning Commission of the People's Republic of China	49	0.67%
12	China Tobacco	22	0.30%
13	Ministry of Culture	20	0.27%
14	The Standing Committee of the National People's Congress	16	0.22%
15	Ministry of Land and Resources	13	0.18%
16	Ministry of Finance	12	0.16%
17	State Administration of Press, Publication, Radio, Film and Television	11	0.15%
18	National Development and Reform Commission	9	0.12%
19	Ministry of Science and Technology	8	0.11%
20	State Administration of Taxation	8	0.11%
21	People's Bank of China	7	0.10%
22	Ministry of Foreign Affairs	6	0.08%
23	State Administration of Science, Technology and Industry for National Defence	4	0.05%
24	State Administration of Industry and Commerce	4	0.05%
25	State Administration of Work Safety	3	0.04%
26	National Administration for the Protection of State Secrets	2	0.03%
27	State Cryptography Administration Office of Security Commercial Code Administration	2	0.03%
28	State Administration of Cultural Heritage	1	0.01%
29	Ministry of Transport of the People's Republic of China	1	0.01%
	Total	7,332	100.00%

Note: Some regulations are issued by more than one ministry or department. For the purposes of calculation, jointly issued regulations are only counted once for the actual implementation agency, which is normally mentioned in the regulation text.

Source: Authors' calculation based on data collected.

more opportunities to foster trade and economic and social development by reducing restrictions.

The top SPS measures issuing agency, AQSIQ,²⁰ is a ministerial, administrative organ directly under the State Council responsible for drafting laws and regulations on quality supervision, inspection, and quarantine. It is also in charge of implementing and announcing rules relating to national quality, metrology, commodity inspection, entry–exit health quarantine, entry–exit animal and plant quarantine, import–export food safety, certification and accreditation, standardisation, and administrative law enforcement. There are currently 445 applied NTM-related regulations registered with AQSIQ, including 2,071 identified NTMs. Of these, only 646 apply unilaterally to all countries around the world. The remaining 1,425 measures (about 69%) are applied bilaterally or plurilaterally to a specific group of countries. Specifically, 896 (around 63%) measures that are bilaterally or plurilaterally applied by AQSIQ were in fact implemented after 2010. This shows that China is increasingly moving from a unilateral relationship with other countries (i.e. applying the same measure to all countries) towards a bilateral relationship.

It is also worth noting that a significant number of NTM-related regulations are issued jointly by more than one institution (typically two to five institutions). In fact, of the 2,517 collected regulations, 2,159 (around 85.7%) are jointly issued by two or more ministries, departments, or institutions. This is explained in Article 72 of the Legislation Law of China, which stipulates that when certain matters involve the power and function of more than two departments under the State Council, the departments shall refer to the State Council when making administrative rules or regulations, or to the relevant ministries or departments in the case of joint efforts. When differences between administrative rules exist with respect to the same matter and the applicable provision cannot be decided, the State Council shall make a ruling (Legislation Law of the People's Republic of China, 2015).

Table 4 shows the distribution of NTMs across the 16 chapters of the 2012 Classification of Non-Tariff Measures. No product in China is free from the impact of NTMs. Four NTMs apply horizontally to all products. One is the value-added tax requirement (F71) on all imported products from all countries. The other three measures are export technical measures that apply to all exported products to Ethiopia where the products have a value above US\$2,000.

Table 4 shows that the most commonly identified NTMs in China are TBTs (for imports), which account for 59.47 per cent of all NTMs affecting nearly all tariff lines (99.98%). They are followed by SPS measures (for imports), which account for 22.53 per cent of all NTMs.

Of the TBTs, 81.7 per cent originated from mandatory product standards, and the remaining 19.3 per cent came from regulations concerning other TBT areas such as environmental protection, national security, and the protection of human and animal health. At a more disaggregated level, six of the 10 most commonly applied NTMs are TBTs (see Table 5). The most applied measure is the product quality and performance requirement (B7), which accounts for 18.15 per cent of all NTMs. This shows China's strong focus on improving the quality and safety of imported products.

SPS measures are the second largest group of NTMs, accounting for 22.53 per cent of all NTMs. As shown in Table 5, the most frequently applied SPS measure is related to quarantine (A86), and accounts for 11.9 per cent of all issued SPS measures. This is followed by a temporary geographic prohibition requirement for SPS reasons (A11), which accounts for 10.7 per cent of all SPS measures.

Overall, chapters A, B, and P contain the most commonly applied NTMs in China, accounting for 95.9 per cent of total NTMs. The most common non-technical measures in China are non-automatic licensing, quotas, prohibitions and quality control measures other than for SPS or TBT reasons (Chapter E), which represent 10.77 per cent of all NTMs; and price control measures including additional taxes and charges (Chapter F), which represent 5.56 per cent.

²⁰ The AQSIQ website is available in English at <http://english.aqsiq.gov.cn/>.

Table 4
Non-tariff measures by type (Chapter)

Code	NTMs by type (Chapter)	No. of NTMs (in total)	Percentage of total NTMs (%)	No. of affected products (national tariff lines)	Percentage of national tariff lines (%)	No. of NTMs that apply bilaterally (to certain countries)	Percentage of bilateral NTMs (%)
A	Sanitary and phytosanitary measures	1,652	22.53%	7,536	57.40%	1,091	66.04%
B	Technical barriers to trade	4,360	59.47%	13,128	99.98%	113	2.59%
C	Pre-shipment inspection and other formalities	116	1.58%	5,381	40.98%	45	38.79%
D	Contingent trade protective measures*	/	/	/	/	/	/
E	Non-automatic licensing, quotas, prohibitions, and quantity control measures other than sanitary and phytosanitary measures or technical barriers to trade reasons	65	0.89%	3,733	28.43%	7	10.77%
F	Price control measures including additional taxes and charges	54	0.74%	13,130	100.00%	3	5.56%
G	Finance measures	6	0.08%	88	0.67%	0	0.00%
H	Measures affecting competition	27	0.37%	698	5.32%	0	0.00%
I	Trade-related investment measures	4	0.05%	633	4.82%	0	0.00%
J	Distribution restrictions*	/	/	/	/	/	/
K	Restriction on post-sales services*	/	/	/	/	/	/
L	Subsidies (excluding export subsidies under P7)*	/	/	/	/	/	/
M	Government procurement restrictions*	/	/	/	/	/	/
N	Intellectual property*	/	/	/	/	/	/
O	Rules of origin*	/	/	/	/	/	/
P	Export-related measures	1,048	14.29%	13,130	100%	342	32.63%
Total coded NTMs		7,332	100%	/	/	1,601	100.00%

NTM = non-tariff measure.

Note: * The 2012 Classification of Non-Tariff Measures has been used for data collection. The scope of data collection is limited to chapters A, B, C, E, F, G, H, I, and P.

Source: Authors' calculation based on data collected.

Table 5
Most commonly applied non-tariff measures in China, 2016

No.	NTM code	Description	No. of NTMs	% of NTMs
1	B7	Product quality or performance requirement	1,331	18.15%
2	B31	Labelling requirements	1,075	14.66%
3	B33	Packaging requirements	376	5.13%
4	P69	Export technical measures, not elsewhere specified	364	4.96%
5	B42	TBT regulations on transport and storage	339	4.62%
6	B83	Certification requirement	293	4.00%
7	P13	Licensing or permit requirements to export	200	2.73%
8	A86	Quarantine requirement	196	2.67%
9	B14	Authorisation requirement for TBT reasons	178	2.43%
10	A11	Temporary geographic prohibitions for sanitary and phytosanitary reasons	177	2.41%

TBT = technical barriers to trade.

Source: Authors' calculation based on data collected.

It should be noted that Table 4 lists bilateral and multilateral measures separately. Around 66 per cent of SPS measures target a single country or group of countries, whereas most TBT measures (97.41%) apply unilaterally to all countries without discrimination. This difference could be explained by the fact that most SPS measures affect food imports. With respect to food products, the markets and product concentration of different countries varies significantly. The collected data show that 1,091 measures cover a particular commodity or group of commodities that are country specific. For instance, the Announcement on the Quarantine and Inspection Requirements of Imported Rice from Cambodia (2016, No. 98) included 12 NTMs affecting only rice imported from Cambodia.

Furthermore, depending on the exporting country, food imports could pose a risk to the biosecurity of the importing country. Of the 445 SPS-related regulations issued by AQSIQ, about 173 country-specific regulations were related to temporary geographic prohibitions of food imports. These temporary geographic prohibitions could be due to an outbreak of disease in the exporting countries or unsatisfactory hygiene conditions. These regulations were all registered as distinct regulation entries in the UNCTAD NTM database.

On the other hand, most TBT measures that China applies to imported products are related to the product quality and performance requirement (B7),

which often correspond to mandatory standards. The fundamental purpose of these mandatory standards is to achieve a certain policy objective, such as ensuring the safety and quality of products, or protecting human health or the environment. Due to their nature, these requirements shall be applied equally to all countries as a market access condition to fulfill China's policy objectives.

5. PRODUCTS AFFECTED BY NON-TARIFF MEASURES

One area that deserves special attention is the scope of affected products that are subject to NTMs. This section calculates the percentage of unilateral and bilateral NTMs applied to each product group. Tables 5 and 6 summarise the percentage of products at the national tariff line (NTL) 10-digit level that are subject to (i) 0–15 NTMs, (ii) 16–25 NTMs, and (iii) 26 or more NTMs within a certain product group. The NTMs are calculated at the most disaggregated level possible (i.e. codes A851, B84, E315, etc.) rather than at the aggregated chapter level (e.g. chapters A, B, and C).

Table 6 illustrates the percentage of product groups at the NTL 10-digit level that are subject to multiple unilateral NTMs. All 15 product groups are subject to 26 or more NTMs. All NTLs under the animal product, vegetable product, foodstuff, and machineries product groups are subject to more

Table 6
Multiple unilateral non-tariff measures, share within product groups

Harmonized System code	Product groups	0–15 NTMs (%)	16–25 NTMs (%)	26 or more NTMs (%)
01–05	Animal products	0.0%	0.0%	100.0%
06–15	Vegetable products	0.0%	0.0%	100.0%
16–24	Foodstuffs	0.0%	0.0%	100.0%
25–27	Mineral products	51.2%	20.1%	28.7%
28–38	Chemicals	30.9%	18.7%	50.3%
39–40	Plastics/rubbers	51.7%	25.1%	23.2%
41–43	Hides and skins	5.1%	1.1%	93.8%
44–49	Wood products	22.6%	7.8%	69.6%
50–63	Textiles	69.1%	14.4%	16.5%
64–67	Footwear	37.4%	8.1%	54.5%
68–71	Stone/glass	71.0%	15.2%	13.7%
72–83	Metals	72.7%	18.4%	8.9%
84–85	Machinery	0.0%	0.0%	100.0%
86–89	Transportation	19.3%	32.8%	47.9%
90–99	Miscellaneous	24.3%	7.8%	67.8%

NTM = non-tariff measure.

Note: Horizontal measures are excluded, except for one value-added tax measure.

Source: Authors' calculation based on data collected.

than 26 different types of NTMs. This shows that these products are highly regulated and are subject to a range of SPS and TBT measures related to food safety and product quality and performance, which are applied without discrimination to all countries in the world. Compared to the above-mentioned product groups, textile, stone/glass, and metals have fewer applied NTMs. In terms of NTL product groups, about 69.1 per cent of textiles, 71.0 per cent of stone/glass, and 72.7 per cent of metals are affected by 0–15 unilateral NTMs, and most applied measures fall in the TBT category.

A comparison of the product groups subject to multiple bilateral and unilateral NTMs shows that the four product groups (animal products, vegetable products, foodstuffs, and machinery) subject to 26 or more unilateral NTMs are affected by fewer bilateral NTMs (Table 7) (bilateral NTMs affect 77.5 per cent of animal products, 58 per cent of vegetable products, 22.1 per cent of foodstuffs, and 0 per cent machinery). All NTLs under the mineral products and transportation product groups are subject to only 0–15 bilateral NTMs. All NTLs of the plastics/rubbers, stone/glass, metals, and machineries product groups are subject to a

maximum of 25 bilateral NTMs. Animal products, vegetable products, and hides and skins are still the top product groups subject to 26 or more distinct NTMs.

6. CONCLUSION AND POLICY RECOMMENDATIONS

China's NTM data were collected using decentralised sources of information (in the absence of a centralised source) and based on UNCTAD's 2012 International Classification of NTMs.

While the number of NTMs identified in China is high in comparison to that of neighbouring countries, most (59.47%) are technical measures relating to technical specifications, quality requirements, and the ensuring of consumer safety, which is in line with or directly adopted from the ISO, IEC, and other recognised international standards agencies. In addition to technical measures, a significant proportion of NTMs (22.53%) come from non-discriminatory SPS measures, which ensures food safety for all and prevents the spread of pests and diseases into the country.

Table 7
Multiple bilateral non-tariff measures, share within product groups

Harmonized System code	Product groups	0–15 NTMs (%)	16–25 NTMs (%)	26 or more NTMs (%)
01–05	Animal products	1.9%	20.6%	77.5%
06–15	Vegetable products	0.5%	41.5%	58.0%
16–24	Foodstuffs	60.0%	17.9%	22.1%
25–27	Mineral products	100.0%	0.0%	0.0%
28–38	Chemicals	94.1%	4.7%	1.2%
39–40	Plastics/rubbers	99.7%	0.3%	0.0%
41–43	Hides and skins	4.5%	7.3%	88.1%
44–49	Wood products	37.5%	33.2%	29.3%
50–63	Textiles	84.2%	11.0%	4.8%
64–67	Footwear	40.4%	15.2%	44.4%
68–71	Stone/glass	98.8%	1.2%	0.0%
72–83	Metals	99.4%	0.6%	0.0%
84–85	Machinery	98.7%	1.3%	0.0%
86–89	Transportation	100.0%	0.0%	0.0%
90–99	Miscellaneous	85.9%	12.6%	1.5%

Note: Horizontal measures are excluded, except for one value-added tax measure.

Source: Authors' calculation based on data collected.

NTM-related regulations in China are issued by 29 different authorities. The SAC, AQSIQ, Ministry of Commerce, Ministry of Agriculture, and General Administration of Customs are the five major institutions that regulate NTM-related issues, and account for more than 80 per cent of all NTMs in China. In particular, they are responsible for issuing SPS and TBT measures.

During the extensive data collection process, several issues and challenges were encountered. First, many ministries and institutions do not maintain an up-to-date online repository of all of the regulations they have issued. Some ministries and institutions include all of regulations that they have published and implemented in the past while others include only the most recent regulations. This not only requires additional efforts to collect NTM-related regulations but also leads to redundancy and inconsistencies when institutions or agencies issue new regulations while unaware of existing policies.

In addition, not all of the regulations published online are easily accessible, and some links provided on the ministries and institutions' websites are no longer active or have been under maintenance for a long period of time.

Moreover, under China's multi-level legislative system, laws, decrees, and regulations promulgated at different levels do not share the same hierarchy. In reality, it is rather cumbersome to identify the implementation regulations (often in the form of administrative regulations or administrative rules) of national laws. Since China's legal regime is highly decentralised, various ministries and institutions under the State Council have the power to enact the implementation regulations of national laws. A general law often has multiple implementation regulations, and it is not always clearly stated which agencies are responsible for enacting these regulations. That said, a higher-level law is often implemented by a different set of implementation regulations issued by a different list of ministries and institutions without prior consultation.

In addition, there appear to be some overlapping regulations from different ministries and agencies affecting the same product but issued in different periods. This might be due to the lack of a central oversight body that keeps track of, manages, or consolidates existing regulations.

In light of these challenges, it would be advisable for the government to take the following actions:

Although the Government of China has made significant improvements over the years in providing information to the public online and making laws and regulations easily accessible, various ministries and institutions can still benefit from keeping track of the regulations issued and improve the maintenance of their online repositories. This would ensure that all regulations are readily available and accessible to the public, and will improve the issuance of effective and relevant regulations, as well as the availability and transparency of information for the business sector.

It would be advisable for the central government to establish a repository or otherwise keep track of regulations issued by various line ministries and institutions that affect production and business activities (especially international trade). This clarifies the role and function of different ministries and institutions, and also helps the government discover redundant and unnecessary regulations that were issued unintentionally. Moreover, a central repository would allow the government to oversee and manage the issuance and enforcement of regulations efficiently over time to ensure the consistency of regulations and avoid overlap among different enforcement ministries and institutions.

REFERENCES

- Legislation Law of the People's Republic of China (2015 amendment). Available at http://www.npc.gov.cn/npc/dbdhhy/12_3/2015-03/18/content_1930713.htm (Chinese) (accessed: 06/12/2018).
- UNCTAD. Trade Analysis and Information System (TRAINS) accessed through the World Integrated Trade System. Available at <https://trains.unctad.org/> (accessed: 12/12/2018)
- UNCTAD (2010). *Non-Tariff Measures: Evidence from Selected Developing Countries and Future Research Agenda*. Geneva: UNCTAD.
- UNCTAD (2013a), *Classification of Non-Tariff Measures, February 2012 Version*. Geneva: UNCTAD.
- UNCTAD (2013b). *Non-Tariff Measures to Trade: Economic and Policy Issues for Developing Countries*. Developing Countries in International Trade Studies, August 2013. Geneva: UNCTAD.
- UNCTAD (2014). *Guidelines to Collect Data on Official Non-tariff Measures: September 2014*. Geneva: UNCTAD.
- World Trade Organization, Sanitary and Phyto-Sanitary Information Management System. Available at <http://spsims.wto.org/> (accessed: 10/12/2018).
- World Trade Organization, Technical Barriers to Trade Information Management System. Available at <http://tbtims.wto.org/> (accessed: 10/12/2018).
-



NON-TARIFF MEASURES IN INDIA

Rael Sarmeen²¹

1. INTRODUCTION

For this report, Indian NTM consultants have examined and assessed the mandatory legal regulations of 17 Indian ministries and institutions—Agriculture and Farmers' Welfare; Chemicals and Fertilisers; Environment, Forest and Climate Change; Home Affairs; Petroleum and Natural Gas; Power; Ayurveda, Yoga and Naturopathy, Unani, Siddha and Homeopathy (AYUSH); Health and Family Welfare; Commerce and Industry; Consumer Affairs, Food and Public Distribution; Finance; Textiles; Fisheries, Animal Husbandry and Dairying; Steel; Atomic Energy; Disaster Management; and Bureau of Indian Standards—for the purpose of NTM data collection, classification, and study.²²

This report briefly outlines the legal framework for India, the various NTMs applicable within and across the 17 ministries, and the affected product groups. The primary purpose of this study is to gather data and code Indian NTMs for any ministries or institutions that issue trade-related laws and regulations. It does not emphasise the specific impacts of the aforementioned NTMs on product(s) or business models, domestic import and export levels, or their stringency.

The value of such regulatory mapping is equivalent to the value attached to transparency and information dissemination. The first step of such an analysis is to identify the entire set of enforceable regulations with respect to all of the ministries and institutions simultaneously.

India lacks a single-window repository for all of its laws, orders, rules, regulations, Acts,

²¹ NTM consultant for ERIA.

²² The author thanks Chi Le Ngo, M. Rizqy Anandhika, and Miftahudin for their assistance.

and so on. This collection of NTM data provides a centralised, coherent mapping of regulations that affect trade, as the regulations, laws, orders, and Acts included in this report are those issued at the national level (Union government). This kind of exercise has not been carried out before and offers valuable information for both exporting and importing organisations in India, as well as government officials in charge of developing regulations and designing trade policies.

2. THE LEGAL FRAMEWORK FOR INDIA

India has a complex legal framework. The Government of India is quasi-federal in nature and the Indian Constitution provides for a division of powers between the Union and state governments. The Seventh Schedule of the Indian Constitution lists the subjects on which the Union and state governments can make regulations or laws. It also provides for the sharing of legislative powers on the subjects listed in the Concurrent List of the Seventh Schedule, with residuary powers belonging to the Union government. It is important to understand the respective legislative domains of each, as well as the areas or sectors on which they do or may overlap. To elaborate further, on the one hand, a state or group of states may have regulations containing NTMs that are inapplicable in other states or even at the national level. On the other hand, the Union government may pass a regulation containing NTMs, leaving it to the discretion of the state government(s) on whether or not they would like to implement that regulation. Given the non-uniform implementation of some regulations across the country, a single-window repository is not feasible.

However, the majority of the laws and regulations of the land are tabled, discussed, and passed by the Union government, especially those that are nationally relevant, such as laws related to the environment, narcotics, and tax systems. The technical and detailed aspects of the implementation of laws are usually relegated to the various ministries. State governments largely consider Union laws as the standard and include changes to fit local and regional considerations, if required.

India applies a number of NTMs in its laws, rules, orders, regulations, and Acts. These NTMs are spread across several types of legal documents issued by specific government institutions and agencies in India. Most of these documents can be accessed online on the respective ministries' official websites.

As shown in Table 1 below, from the 17 ministries and institutions included in this report, a total of 479 regulations contained NTMs and 4,618 NTMs were coded during the collection and review process for India. With the exception of one regulation issued by the Ministry of Home Affairs, all of the regulations, rules, and Acts are written in English or in both English and Hindi. The majority of the coded NTMs were found in rules and regulations, with some found in Acts.

Table 1
Comprehensiveness of the non-tariff measures collection and review exercise for India

	Comprehensiveness	Total
1	Total number of NTM-related regulations	479
2	Total number of NTMs reported to the WTO	NA
3	Total number of coded NTMs	4,618
4	Total number of affected products (Harmonized System codes, national tariff lines)	11,483
5	Total number of issuing institutions	38 agencies (17 at the ministry level)

NTM: Non-tariff measure; WTO: World Trade Organization.
Source: Authors' calculation based on data collected.

3. APPROACH TO OBTAIN LEGAL COMPREHENSIVENESS

For the purpose of NTM collection and classification, legal comprehensiveness and clarity on the country's laws concerning NTMs, it is crucial that a collective, comprehensive, accurate, updated, and accessible database of these laws is readily available. This is especially relevant in the case of India, because some of the laws in place are more than 100 years old. Such old laws have undergone some amendments over the decades, but there is no database recording all of these

changes on a single platform. While most of the laws are available in printed and/or digital format, it is obviously preferable to have an online database that can be easily accessed. This database will be processed by the United Nations Conference on Trade and Development together with the databases of other countries, and made available online via a link to the relevant legal texts on a single site for public use.

The data used for this NTM collection and classification exercise are publicly available on the independent websites of the specific identified ministries included in this report and their respective departments and agencies. At each level, these websites provide a list of laws, orders, rules, legislations, and regulations; and all of those containing NTMs are coded. When an overlap is detected due to a cross-sectoral law being commonly implemented by more than one agency of a ministry or even of different ministries, the regulation is coded only once.

4. ISSUING INSTITUTIONS

As shown in Table 2, from the 17 ministries included in this report, the Ministry of Health and Family Welfare issued the highest number of regulations containing NTMs (36.5%), followed by the Ministry of Agriculture and Farmers' Welfare (27.15%) (most of which are sanitary and phytosanitary [SPS] measures [see Table 3]); and the Ministry of Commerce and Industry (12.23%). In stark comparison, despite being one of the most relevant products in India's international trade basket, the Ministry of Steel had only one regulation containing NTMs for steel products.

5. CLASSIFICATION OF NON-TARIFF MEASURES BY TYPE AND ISSUING INSTITUTION

As shown in Table 3, the most commonly identified types of NTMs for the 17 ministries are SPS measures, technical barriers to trade (TBT),

Table 2
Proportion of non-tariff measures by issuing ministries and institutions

No	Issuing institution	Number of NTMs	% of total number of NTMs
1	Ministry of Health and Family Welfare	1686	37%
2	Ministry of Agriculture & Farmers Welfare	1254	27%
3	Ministry of Commerce and Industry	565	12%
4	Bureau of Indian Standards	520	11%
5	Ministry of Consumer Affairs, Food and Public Distribution	134	3%
6	Ministry of Environment, Forests and Climate Change	132	3%
7	Ministry of Petroleum & Natural Gas	64	1%
8	Ministry of Finance	56	1%
9	Ministry of Home Affairs	42	1%
10	Ministry of Power	40	1%
11	Ministry of Chemicals and Fertilizers	35	1%
12	Ministry of Textiles	35	1%
13	Ministry of Fisheries, Animal Husbandry and Dairying	20	0%
14	Department of Atomic Energy	18	0%
15	Ministry of AYUSH	12	0%
16	National Disaster Management Authority	4	0%
17	Ministry of Steel	1	0%
	Total	4618	100%

NTM: Non-tariff measures.

Source: Authors' calculation based on data collected

Table 3
Classification of non-tariff measures by type

Code	NTMs by type	No. of NTMs	%	No. of affected products (national tariff lines)	%
A	Sanitary and phytosanitary (SPS) measures	2,311	50.04	2,887	25.14
B	Technical barriers to trade (TBT)	1,674	36.24	11,483	100
C	Pre-shipment inspection and other formalities	47	1.01	3,918	34.12
D	Contingent trade-protective measures	13	0.28	312	2.71
E	Non-automatic licensing, quotas, prohibitions and quantity control measures other than for SPS or TBT reasons	22	0.47	4,082	35.54
F	Price control measures including additional taxes and charges	43	0.93	2,262	19.69
G	Finance measures	3	0.06	65	0.56
H	Measures affecting competition	18	0.38	1,782	15.51
I	Trade-related investment measures	1	0.02	27	0.23
J	Distribution restrictions	0	0	0	0
K	Restriction on post-sales services	0	0	0	0
L	Subsidies (excluding export subsidies under P7)	0	0	0	0
M	Government procurement restrictions	0	0	0	0
N	Intellectual property	1	0.02	290	2.52
O	Rules of origin	0	0	0	0
P	Export-related measures	485	10.50	11,483	100
	Total coded NTMs:	4,618	100	11,483	100

NTM: Non-tariff measure.

Source: Authors' calculation based on data collected.

and export-related measures. Collectively, they account for about 96.79 per cent of all NTMs, with SPS measures alone accounting for approximately half of the total. Moreover, with respect to the spread of the types of NTMs issued by each ministry, some NTM types are not used at all in policy requirements (codes J, K, L, M and O), whereas the issuance of TBT measures (Type B) largely dominates the regulations across the 17 ministries (see Table 4).

Of the different types of NTMs, TBT and export-related measures affect the most products and product groups (100% each), followed by SPS measures (25.14%). This shows that, although SPS measures account for half of all NTMs issued in India, their effect on the total number of products and product groups is much less significant than that of TBT and export-related measures. This scenario is observable because this study includes both the Indian Trade Classification (ITC) (HS) 2012 Import Policy and the ITC (HS), 2012 Export Policy for India, which affect all products and product

groups. Moreover, India's Foreign Trade Policy (2015–2020) has an export-related measure, P9 (export measures not elsewhere specified), that similarly affects all products included in the HS codes for India (11,483 products in total). Measures like this one, which affects all products, are called 'horizontal' measures.

Tables 3 and 4 show the total products affected by each NTM type, irrespective of whether they affect the same HS codes or national tariff lines. For example, if NTMs 1, 2 and 3 each affect two exact HS codes, the total number of affected products reflected would be $3 \times 2 = 6$, instead of showing product figures that may be affected by several NTMs collectively (i.e. 2).

Table 4 shows the proportion of NTMs issued by different ministries and institutions. SPS measures (Type A) were predominantly issued by the Ministry of Agriculture and Farmers' Welfare

(49.97%), followed by the Ministry of Health and Family Welfare (45.73%). Moreover, Tables 2 and 3 show that SPS measures account for half of the most frequently applied NTMs under Indian laws (50.04%), as no other NTM type runs into four-digit figures in a similar manner.

Similarly, TBT (Type B) are the second most frequently applied NTMs in India (36.24%). However, unlike SPS measures, TBT measures have been issued by all the ministries and institutions included in this report. As seen in Table 3, the Ministry of Health and Family Welfare had the highest number of TBT measures (36.49%), followed by the Bureau of Indian Standards (28.07%).

The third most frequently applied NTMs, export-related measures (Type P), were prevalent in the regulations of the Ministry of Commerce and Industry (67.42%). In relative comparison, the share of export-related measures of other ministries and institutions are minimal.

6. NON-TARIFF MEASURE BY AFFECTED PRODUCTS

The number of NTMs applied to each product group(s) is shown in Table 5 and Figure 1, and the distribution of the total types of NTMs affecting each product group is shown in Table 6.

Table 5 and Figure 1 show that the product groups—vegetable products; animal and animal products; foodstuffs; and hides and skins are almost entirely regulated by four or more NTMs. This indicates the relatively high number of regulations that apply to these groups due to SPS (Type A), TBT (Type B), pre-shipment inspection and other formalities (Type C), and export-related measures (Type P) (see Table 6).

Table 6, a) and b) shows that for the 17 ministries and institutions, the most frequently applied NTMs are TBT (Type B) and export-related

Table 4
Proportion of non-tariff measures types by issuing ministries and institutions

Ministry/ Institution	A	B	C	D	E	F	G	H	I to N	O	P	Total:
Agriculture and Farmers' Welfare	1155	39	8		4	7		6			35	1254
Chemicals and Fertilizers		21				6		2			6	35
Environment, Forests and Climate Change	1	92	6		3			1	2		27	132
Home Affairs		17				1		3			21	42
Petroleum and Natural Gas		59			1	3	1					64
Power		40										40
AYUSH ¹		12										12
Health and Family Welfare	1057	611	5			6					7	1686
Consumer Affairs, Food and Public Distribution		133				1						134
Finance		5	6	12	3			1			29	56
Commerce and Industry	41	141	21		11	17	2	5			327	565
Textiles		15		1		1					18	35
Fisheries, Animal Husbandry and Dairying	8	10	1								1	20
Steel		1										1
Department of Atomic Energy		5				1					12	18
National Disaster Management Authority	1	3										4
Bureau of Indian Standards	48	470									2	520
Total:	2311	1674	47	13	22	43	3	18	2	0	485	4618

AYUSH = Ministry of Ayurveda, Yoga and Naturopathy, Unani, Siddha and Homeopathy.
Source: Authors' calculation based on data collected.

Table 5
Multiple non-tariff measures applied to each product group, in numbers

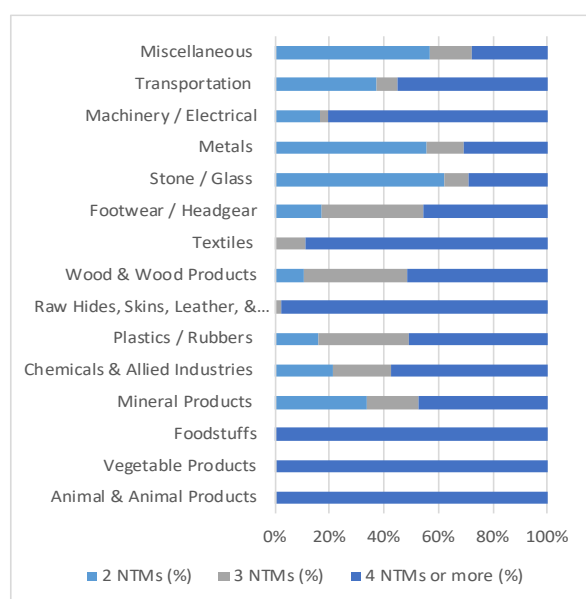
HS code	Product groups	Two NTMs	Three NTMs	Four NTMs or more
01–05	Animals and animal products	0	2	459
06–15	Vegetable products	0	2	720
16–24	Foodstuffs	0	0	426
25–27	Mineral products	109	61	152
28–38	Chemicals and allied industries	471	479	1,286
39–40	Plastics/rubbers	94	195	296
41–43	Raw hides, skins, leather, and furs	0	3	131
44–49	Wood and wood products	49	179	239
50–63	Textiles	0	206	1,664
64–67	Footwear/headgear	18	39	48
68–71	Stone/glass	220	32	102
72–83	Metals	702	170	391
84–85	Machinery/electrical	270	53	1,325
86–89	Transportation	98	20	145
90–99	Miscellaneous	356	98	173
	Total:	2,387	1,539	7,557

HS: Harmonized System; NTM: Non-tariff measure

Note: Since each product is affected by at least two NTMs (technical barriers to trade and export measures), we have calculated for two, three, and four or more NTMs instead of one, two, and three or more NTMs.

Source: Authors' calculation based on data collected.

Figure 1
Multiple non-tariff measures, share within product groups



Source: Authors' calculation based on data collected.

measures (Type P). The product groups mostly affected by four or more NTMs within their own category are textiles (88.9%); machinery/electricals (80.4%); and chemicals and allied industries (57.5%). Similarly, the product groups most affected by three NTMs within their own category are wood and wood products (38.32%); footwear and headgear (37.14%); and plastics/rubbers (33.33%); most of which are SPS measures (Type A); TBT (Type B); pre-shipment inspection and other formalities (Type C); non-automatic licensing, quotas, prohibitions, and quantity-control measures other than for SPS or TBT reasons (Type E); price control measures, including additional taxes and charges (Type F); intellectual property (Type N); and export-related measures (Type P) (see Table 6).

Table 6 a): Distribution of non-tariff measure types on the basis of Harmonized System Codes for India. Number of products affected in each group

HS Codes	A	B	C	D	E	F	G	H	I	N	P
01-05	419	461	156		461						461
06-15	694	722	650		722	657		219		269	722
16-24	400	426	353		426	384		20		19	426
25-27	62	322	122		47	84	3	74			322
28-38	256	2236	763		321	603		73	27		2,236
39-40	264	585	9		8	27				2	585
41-43	133	134	2		93			2			134
44-49	387	467	163		153	152		36			467
50-63	210	1870	22	26	245	23		8			1,870
64-67		105			48						105
68-71	25	354	16		51	17	8	4			354
72-83	30	1263	194	283	20	172		6			1,263
84-85		1648	1273		1282	1	5	1268			1,648
86-89		263	116	1	54		49	8			263
90-99	7	627	79	2	151	17		64			627
Total:	2,887	11,483	3,918	312	4,082	2,262	65	1,782	27	290	11,483

Table 6 b): Distribution of non-tariff measure types on the basis of Harmonized System Codes for India. % of total tariff line affected in each group

	A	B	C	D	E	F	G	H	I	N	P
01-05	90.88	100	33.83		100						100
06-15	96.12	100	90.02		100	90.99		30.33		37.25	100
16-24	93.89	100	82.86		100	90.14		4.69		4.46	100
25-27	19.25	100	37.88		14.59	26.08	0.93	22.98			100
28-38	11.44	100	34.12		14.35	26.96		3.26	1.2		100
39-40	45.12	100	1.53		1.36	4.61				0.34	100
41-43	99.25	100	1.49		69.4			1.49			100
44-49	82.86	100	34.9		32.76	32.54		7.7			100
50-63	11.22	100	1.17	1.39	13.1	1.22		0.42			100
64-67		100			45.71						100
68-71	7.06	100	4.51		14.4	4.8	2.25	1.12			100
72-83	2.37	100	15.36	22.4	1.58	13.61		0.47			100
84-85		100	77.24		77.79	0.06	0.3	76.94			100
86-89		100	44.1	0.38	20.53		18.63	3.04			100
90-99	1.11	100	12.59	0.31	24.08	2.71		10.2			100
Total:	25.14	100	34.12	2.71	35.54	19.69	0.56	15.51	0.23	2.52	100

HS: Harmonized System; NTM: Non-tariff measure.

Note: Figures for NTM codes J, K, L, M, and O have not been included in Table 6 as there are no regulations that affect these codes in this report.

Source: Authors' calculation based on data collected

7. MAIN FINDINGS

Our main findings are as follows:

- i. A total of 479 regulations across 17 ministries and institutions contained NTMs. These 479 regulations included 4,618 NTMs affecting 11,483 HS codes (i.e. all products in India).
- ii. The Ministry of Health and Family Welfare issued the highest number of NTMs (i.e. 1,686). This accounted for approximately 36.5 per cent of the total number of NTMs issued by all 17 ministries and institutions.
- iii. SPS measures were the most frequently applied NTMs across the 17 ministries and institutions, accounting for approximately 50 per cent of the total NTMs and affecting a total of 2,887 products (HS codes).
- iv. TBT (36.24 per cent of the total NTMs) and export-related measures (10.5 per cent of the total NTMs), both affecting 11,483 products (HS codes), were the second and third most frequently applied NTMs, respectively.
- v. The Ministry of Agriculture and Farmers' Welfare and Ministry of Health and Family Welfare are the major issuers of NTMs in India. Combined, their issued measures account for 63.6 per cent of total measures in India. The Ministry of Agriculture and Farmers' Welfare issued 1,155 SPS measures, whereas the Ministry of Health and Family Welfare issued 1,057 SPS measures. It should be noted that agricultural products and pharmaceuticals are major items in India's trade basket; therefore, Indian regulations largely emphasise on SPS (Type A) and TBT measures (Type B) for these two product groups to ensure quality control and standardisation.
- vi. Of all the product groups (HS codes), foodstuffs (100 per cent) is the product group, which is most frequently affected by NTMs, followed by vegetable products (99.72 per cent) and animals and animal products (99.56 per cent). Table 5 shows that, overall,

product groups were largely affected by four or more NTMs.

8. POLICY RECOMMENDATIONS

This chapter examines and records regulations (and corresponding NTMs) up to 31 December 2016 for the 17 Indian ministries and institutions. Since the ITC (HS) codes for India has been updated to 2017 version for both export and import policy, future studies should include all updates for all sectors concerned.

As noted above, India has a quasi-federal form of government with a bias towards the centre, as seen by the demarcation of subjects for legislation in the Seventh Schedule of the Indian Constitution. The Union List includes 100 subjects, whereas the State List includes 61 subjects and the Concurrent List includes 52 subjects. The Constitution also provides primacy to the Union government on concurrent list items: if there is a conflict, a central law will override a state law. Moreover, it also possesses residuary powers.

However, given India's federal form of governance, a state or group of states may have regulations containing NTMs that are not applicable in the other states of the country or even at the national level. At the same time, the Union government may pass a regulation containing NTMs but can leave it to the discretion of the state government(s) on whether or not they would like to implement that regulation.

Due to the non-uniform implementation of regulations across the country, a single-window repository is not feasible. Thereby, to make this database more robust and comprehensive, state-level regulations should also be included in further studies.

Although the current database for NTMs with respect to India is relatively comprehensive, it requires regular updates to capture the impacts on international trade, value chains, and business models. This is because laws are often amended, as seen by the quinquennium update of India's

Foreign Policy and continuous reviewing by the Ministry of Commerce and Industry and Ministry of Finance, to ensure that India's trade practices and policy are fair, inclusive, profitable and feasible. Therefore, this report and the gathered database for India can serve as the foundation for all further NTM classification, coding and research.

When there is a large volume of regulations, as is the case with India, it is often difficult to detect potential areas for improvement. Such a database can allow targeted ministries and departments to study the impact of specific measures, laws, regulations, orders, and so on, and consider how to improve business models and trade practices in India. Continuous updates and studies such as this chapter can directly support future revisions for relevant legislative bodies and ministries, thereby keeping this database updated and official.

The Government of India could also consider developing its national portal for NTMs and other related studies as a single-window repository (at both Union and state levels) for all concerned trade laws, regulations, orders, etc. to facilitate information access, disseminations and transparency.

REFERENCES

- UNCTAD (2013). *Classification of Non-Tariff Measures*. February 2012 Version. Geneva: UNCTAD.
- ERIA and UNCTAD (2016). *Non-Tariff Measures in ASEAN*, ERIA. Research Project FY2015 No.01, ISBN: 978-602-8660-89-1.



NON-TARIFF MEASURES IN JAPAN

Kaoru Nabeshima²³ and Ayako Obashi²⁴

1. INTRODUCTION

Under the initiative of UNCTAD and ERIA, the authors, with assistance from Miftahudin and Seul Lee, have scrutinised legal documents to gather information on NTMs implemented by governments as of April 2015, and have coded them into an internationally comparable database format.²⁵

As an output of our data gathering and coding work, this chapter provides a brief overview of existing NTMs in Japan. In doing so, we do not intend to demonstrate the stringency of Japanese non-tariff regulations of international trade (technical measures and other behind-the-border trade-related measures may either increase or decrease trade).²⁶ Instead, we hope to demonstrate how our data gathering and coding efforts can help us understand the landscape of existing NTMs in Japan and determine the features of Japanese NTMs.

²³ Professor, Graduate School of Asia-Pacific Studies, Waseda University.

²⁴ Associate Professor of International Economics at School of International Politics, Economics and Communication (SIPEC), Aoyama Gakuin University.

²⁵ The initial data gathering effort was also assisted by Sho Haneda, Naohiko Ijiri, Yui Iwasaki, Toru Nagase, Lika Sasaki, Shyamala Sethuram, and Akihiro Yogata. We are grateful for their assistance as well as the continuous encouragement and guidance provided by Seul Lee, Santiago Fernandez de Cordoba and Narmine Khalilova at UNCTAD.

²⁶ When individual countries employ different technical regulations or standards, these can be barriers to trade. However, employing technical regulations in an internationally harmonised manner or through a mutual recognition agreement enhances trade, and can be seen as a mild form of policy convergence or harmonisation.

2. TYPES AND SCOPES OF LEGAL DOCUMENTS

To gather information on NTMs in Japan, we rely on the online database of Japanese laws and regulations maintained by the Ministry of Internal Affairs and Communications, as a part of the Government of Japan's e-Gov initiative.²⁷ As of 1 February 2016, Japan's legal system consisted of the Constitution of Japan, 1,960 laws, 2,112 cabinet orders, and 4,048 cabinet office and ministerial ordinances (including rules). A cabinet order collectively establishes the provisions necessary for enforcing a specific law. A cabinet office and ministerial ordinance is a decree promulgated by the Cabinet Office and a particular ministry that specifies the details of the enforcement provisions. Further detailed provisions are enacted in the public notices. Typically, a specific law is accompanied by one cabinet order, one ministerial ordinance, and multiple public notices, but there could be multiple cabinet orders and ministerial ordinances to enforce the law.

All laws, cabinet orders, and ministerial ordinances currently in force are included in the Japanese law database, which is regularly updated to reflect changes in laws and regulations as soon as they are reported in the Official Gazette. Although the database originally operated in Japanese, English translations (though sometimes outdated) are also available for some laws and regulations.²⁸ For public notices there is no centralised source of information and we must refer to webpages maintained by the relevant ministries and other government bodies. In addition, although regulatory authorities often publish instructions, notifications, and announcements of actual procedural issues relating to enforcement, we check these as needed for supplementary information but do not address them all.

In the Japanese law database, laws and regulations are classified by category (or sector) as listed in Table 1. Out of 50 categories, we selected 32 (potentially trade-related), 21 of which we identified as trade-related (closely trade-related). We gathered information on NTMs by looking at 2,887 laws and regulations (in the identified 21 sectors) available from the Japanese law database, as well as associated public notices obtained from the webpages of government bodies.

By scrutinising legal documents as described above, we gathered information on NTMs that are official, mandatory, and currently imposed (as of April 2015) by the Japanese government, and that potentially affect, positively or adversely, imports or exports of the targeted products. In keeping with UNCTAD's data collection guidelines (UNCTAD, 2014), we call legal documents that are sufficiently specific to identify NTMs and the affected products and countries 'regulations'. All NTMs contained within each regulation are then translated into a database format by linking the contents of the detected NTMs and descriptions of the affected products to the pre-defined NTM classification codes and Harmonized Commodity Description and Coding System (HS) product classification codes, respectively.

To detect independent 'measures' of different types contained within each regulation, we use the M3 version of UNCTAD's NTM classification (UNCTAD, 2013), in which NTMs are categorised based on type into 16 chapters (A–P), each of which is further disaggregated into groups in most chapters and also subgroups in certain chapters. The scope of our data gathering efforts under UNCTAD's initiative has so far been limited to NTMs categorised under chapters A to I; and P (export-related measures), except chapter D. For Chapters A–C, E–I, and P, there exist 227 NTM classification codes in total, including all possible codes at any aggregation level.

Furthermore, we code the products affected by each 'measure' based on the 2012 (H4) version of the HS classification codes and, at a more disaggregated level, on the 2015 version of Japan's national tariff lines (NTLs) for imports. Based on the H4 version of the HS codes, there exist 5,206 product codes at the six-digit level. Based on the

²⁷ Available at http://elaws.e-gov.go.jp/search/elawsSearch/elaws_search/lsg0100/.

²⁸ The Japanese Law Translation Database System can be accessed at <http://www.japaneselawtranslation.go.jp/?re=02>. The translated documents are not official—the database states that 'only the original Japanese texts of the laws and regulations have legal effect, and the translations are to be used solely as reference.'

Table 1
Categories of Japanese laws and regulations

Closely trade related	Potentially trade related	Not trade related
Agriculture	Construction and housing	Administrative organs
Air transport	Education	Administrative procedures
Business	General rules on tax	Civil proceedings
Commerce	Land	Civil services
Culture	Land development	Constitution
Environment	Logistics	Diet
Fire fighting	National assets	Disaster management
Fishery	National defence	Finance and insurance
Foreign exchange and trade	Postal service	Foreign affairs
Forestry	Statistics	Judiciary
General rules on industry	Tourism	Local administration
Health		Local budget
Labour		National bonds
Land transport		Penal proceedings
Manufacturing		River management
Mining		Social insurance
National tax		Social welfare
Police		Urban planning
Road		
Sea transport		
Telecommunication		

Source: Authors.

2015 NTLs, there exist 9,323 product codes at the nine-digit level, including the special ‘misc.’ code.

3. SUMMARY OF NON-TARIFF MEASURES AND MAIN FINDINGS

The comprehensiveness of our NTM data gathering efforts is summarised in Table 2. We have identified 331 regulations, most of which are either cabinet orders, ministerial ordinances, or public notices, containing 1,278 NTMs in total.

To check if the identified regulations and measures are those previously reported to the WTO, we use the ‘TRAINS-Historical Non-Tariff Measures’ data for the latest year of 2009 that is obtained through the World Bank’s World Integrated Trade Solution (WITS). We assume that the measures included in the ‘TRAINS-Historical Non-Tariff

Measures’ dataset were already reported to the WTO. Comparing our dataset with the ‘TRAINS-Historical Non-Tariff Measures’ dataset, we can detect the overlapping entries based on the HS six-digit codes and the most disaggregated measure classification codes.²⁹ Our data comparison

²⁹ To do so, we use the conversion table from the H4 to H3 version of the HS classification and the correlation table between the M2 and M3 version of the NTM classification because our data collection is based on the H4 and M3 version while the ‘TRAINS-Historical Non-Tariff Measures’ data are reported based on the H3 and M2 version. The conversion and correlation tables are publicly available at the webpage of the Trade Statistics Branch of the United Nations Statistics Division (<https://unstats.un.org/unsd/trade/classifications/correspondence-tables.asp>) and at the WITS’s Reference Data page (<https://wits.worldbank.org/referencedata.html>). According to the M2–M3 correlation table available at the WITS webpage, the M2 codes A700, B500, and F290 have no direct counterpart M3 codes. Among the three M2 codes, Japanese measures are classified under F290 only. All Japanese measures coded

Table 2
Comprehensiveness of collected non-tariff measures data

	Comprehensiveness	Number
1	Total number of NTM-related regulations	331
2	Total number of coded NTMs reported to the WTO*	383
3	Total number of coded NTMs	1,278
4	Total number of affected products**	
	(i) Total number of affected products	9,323***
	(ii) Affected products as a share of total products	100%***
5	Total number of issuing institutions	12

NTM = non-tariff measure.

Note: Affected products are counted based on the H4 version of the Harmonized Commodity Description and Coding System (HS) six-digit codes and on the 2015 version of nine-digit national tariff lines (NTLs). Even if a product is affected by more than one measure, the same coded product will be counted as one product. The number of issuing institutions is counted at the ministry level.

* From 119 NTM-related regulations reported to the WTO.

** Based on nine-digit NTLs. The corresponding figure based on six-digit HS codes is 5,206 (100%).

*** This includes three specific measures involving the Democratic People's Republic of Korea. These three measures affect all products imported from or exported to the Democratic People's Republic of Korea and are contained within the regulation 'Foreign Exchange and Foreign Trade Act' as a part of economic sanctions against the Democratic People's Republic of Korea. If we exclude those three measures from our calculations, the number of affected products is slightly reduced to 8,779 (94.2%) at the NTL nine-digit level and to 4,894 (94.0%) at the HS six-digit level.

Source: Authors' calculation based on data collected.

indicates that only 36 per cent of the identified regulations and 30 per cent of the measures were previously reported to the WTO. Thus, our data-gathering efforts have contributed considerably to shed light on existing NTMs in Japan.

Table 2 also shows that all products imported or exported by Japan are subject to NTMs because of three specific measures involving the Democratic People's Republic of Korea. These three measures affect all products imported from or exported to the Democratic People's Republic of Korea and are contained within the regulation 'Foreign Exchange and Foreign Trade Act'. If we exclude these three measures from our calculations, the number of affected products is slightly reduced to 8,779 (94.2%) at the NTL nine-digit level and to 4,894 (94.0%) at the HS six-digit level.

with F290 are stipulated by the same legal source, 'Law Concerning Wild Life Protection and Hunting'. Based on this legal document, we interpret F290 of M2 as corresponding to F69 of M3.

Table 3 categorises the identified NTMs by type or purpose of measures. As expected, most of the identified measures are concentrated in chapters A and B, that is, SPS measures (21%) and TBTs (57%). These proportions increase to 24 per cent for SPS measures and 67 per cent for TBTs if we exclude export-related measures from the calculation.

As for the number of affected products at the NTL nine-digit level, Table 3 indicates that all nine-digit NTLs are subject to some NTMs categorised under chapters E, G, and P. As mentioned above, three of the identified measures affect all products imported from or exported to the Democratic People's Republic of Korea. These NTMs are implemented as a part of economic sanctions against the Democratic People's Republic of Korea and are coded with import prohibitions for political reasons (embargo) (E322), financial measures not elsewhere specified (G9), and licensing or permit requirements to export (P13). If we exclude these three measures from the calculation, the number of

Table 3
Non-tariff measures by type

	NTMs by type	No. of NTMs	%	No. of affected products (national tariff lines)	%
A	Sanitary and phytosanitary measures	264	20.7%	2,815	30.2%
B	Technical barriers to trade	722	56.5%	7,787	83.5%
C	Pre-shipment inspection and other formalities	32	2.5%	3,985	42.7%
D	Contingent trade-protective measures				
E	Non-automatic licensing, quotas, prohibitions and quantity control measures other than for sanitary and phytosanitary or technical barrier to trade reasons	16	1.3%	9,323*	100.0%
F	Price control measures including additional taxes and charges	45	3.5%	3,256	34.9%
G	Finance measures	2	0.2%	9,323*	100.0%
H	Measures affecting competition	3	0.2%	317	3.4%
I	Trade-related investment measures				
J	Distribution restrictions				
K	Restriction on post-sales services				
L	Subsidies (excluding export subsidies under P7)				
M	Government procurement restrictions				
N	Intellectual property				
O	Rules of origin				
P	Export-related measures	194	15.2%	9,323*	100.0%
	Total coded NTMs	1,278	100.0%		

NTM = non-tariff measure.

Notes: The scope of our data gathering is limited to chapters A–C, E–I, and P, and we identified no measures categorised under Chapter I. Affected products are counted based on the 2015 version of nine-digit NTLs. Even if a product is affected by more than one measure, the same coded product will be counted as one product within a certain NTM chapter.

* These include NTMs (E322, G9, and P13) as a part of economic sanctions against the Democratic People's Republic of Korea. If we exclude those three measures against the Democratic People's Republic of Korea from the calculation, the number of affected NTLs reported for chapters E, G, and P will be reduced, respectively, to 965 (10.4%), 159 (1.7%), and 6,812 (73.1%).

Source: Authors' calculation based on data collected.

affected NTLs reported decreases to 965 (10.4%) for Chapter E, 159 (1.7%) for Chapter G, and 6,812 (73.1%) for Chapter P.

As expected, product coverage is the broadest for TBTs (84%), but it is also quite broad for export-related measures (73%), even after ignoring economic sanctions against the Democratic People's Republic of Korea. The latter finding is due to the all-in-one nature of Chapter P in the NTM type classification, and because some measures are implemented against exported products for the purpose of restricting military and weapons usage. In addition, 43 per cent of nine-digit NTLs are

subject to NTMs categorised under Chapter C, and 35 per cent of are subject to those under Chapter F. Pre-shipment inspection and other formalities affect imports of fuels, medical devices, medicines, and chemicals for monitoring purposes, and animals for quarantine purposes (e.g. specific ports of entry). Price control measures including additional taxes and charges are often implemented in combination with inspection, testing, certification, or labelling requirements, in addition to excise taxes.

As reported in Table 2 above, the identified regulations containing NTMs are issued by 12 institutions or ministries in total. Table 4 lists the

top 10 ministries issuing NTM-related regulations in terms of the number of coded measures. The remaining institutions or ministries are classified as 'other institutions' at the bottom of the table. The gross total number of coded measures, 1,443, is larger than the number reported in Table 2 (1,278) because some measures are issued jointly by multiple ministries. We calculate the percentage of coded measures issued by a certain ministry as a fraction of the substantial number of affected products (1,278). Reflecting our earlier observation that the bulk of NTMs are implemented for SPS and TBT reasons, the ministries responsible for the majority of coded measures are the Ministry of Health, Labour and Welfare; Ministry of Economy, Trade and Industry; and Ministry of Agriculture, Forestry and Fisheries.

Next, we overview the frequency of NTMs per affected product. The number of affected products reported in Tables 2 and 3 suggests that many products at the NTL nine-digit level are subject to multiple NTMs of different types. To confirm this, we look at the pattern of per-product frequency of NTMs across product groups in Figure 1 and Table

5. Since three of the coded measures affect all nine-digit NTLs, we created bar charts indicating the proportion of nine-digit NTLs that are subject to three, four, and five and more coded measures.

Of products at the NTL nine-digit level, 6 per cent are subject to three measures, which were implemented as a part of economic sanctions against the Democratic People's Republic of Korea. In other words, the remaining 94 per cent of products are also subject to a certain measure or more (other than those related to economic sanctions against the Democratic People's Republic of Korea). Indeed, 81 per cent of products are subject to five or more NTMs, corresponding to two or more measures in addition to those related to economic sanctions against the Democratic People's Republic of Korea. It is noteworthy that all nine-digit NTLs classified under either animal products, machinery, or transportation are subject to five or more NTMs. Almost all nine-digit NTLs are subject to five or more NTMs in the following product groups: vegetable products, foodstuffs, and chemicals.

Table 4
Non-tariff measures by issuing institution

No	Issuing Institution	Number of NTMs	% of total number of NTMs
1	Ministry of Health, Labour and Welfare	586	45.9%
2	Ministry of Economy, Trade and Industry	341	26.7%
3	Ministry of Agriculture, Forestry and Fisheries	250	19.6%
4	Ministry of Land, Infrastructure, Transport and Tourism	102	8.0%
5	Minister of the Environment	81	6.3%
6	Ministry of Finance	29	2.3%
7	Nuclear Regulation Authority	19	1.5%
8	Cabinet Office	11	0.9%
9	Ministry of Education, Culture, Sports, Science and Technology	10	0.8%
10	Ministry of Internal Affairs and Communications	10	0.8%
11	Other institutions	4	0.3%
	Total	1,278	100%

NTM = non-tariff measure.

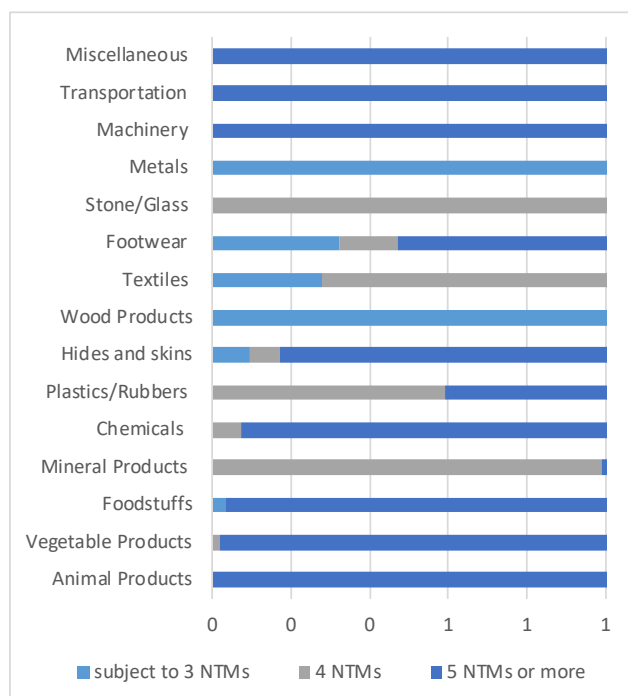
Note: Some NTMs are issued by multiple ministries, which accounts for the gap between the gross and substantial total number of coded measures.

Source: Authors' calculation based on data collected.

Table 5
Multiple non-tariff measures applied to each product group, in numbers

Product groups	3 NTMs	4 NTMs	5 NTMs or more
Animal & Animal Products	0	0	770
Vegetable Products	0	2	706
Foodstuffs	3	0	815
Mineral Products	0	92	164
Chemicals & Allied Industries	0	7	1070
Plastics / Rubbers	0	55	241
Raw Hides, Skins, Leather, & Furs	9	7	209
Wood & Wood Products	282	7	142
Textiles	26	706	1242
Footwear / Headgear	30	14	84
Stone / Glass	0	134	107
Metals	194	221	431
Machinery / Electrical	0	0	918
Transportation	0	0	145
Miscellaneous	0	0	490
Total	544	1245	7534

Figure 1
Multiple of non-tariff measures applied to each product group, share within group



NTL= national tariff line, NTM = non-tariff measure.

Note: 'Animal products' includes HS01–05, 'Vegetable products' includes HS06–15, 'Foodstuffs' includes HS16–24, 'Mineral products' includes HS25–27, 'Chemicals' includes HS28–38, 'Hides and skins' includes HS39–40, 'Wood products' includes HS44–49, 'Textiles' includes HS50–63, 'Footwear' includes HS64–67, 'Stone/glass' includes HS68–71, 'Metals' includes HS72–83, 'Machinery' includes HS84–85, 'Transportation' includes HS86–89, and 'Miscellaneous' includes HS90–99.

Source: Authors' calculation based on data collected.

Table 6
Number of coded measures per national tariff line, by product group

Product groups	Number of coded measures per NTL					
	Mean	Min.	p25	Median	p75	Max.
Animal products	25.9	8	17	24	30	61
Vegetable products	24.8	4	15	18	37	106
Foodstuffs	21.5	3	12	15	23	77
Mineral products	22.5	4	4	14	43	61
Chemicals	41.5	4	19	46	55	176
Plastics/rubbers	13.8	4	8	12	16	100
Hides and skins	16.8	3	15	17	19	29
Wood products	7.3	3	3	3	7	98
Textiles	5.9	3	4	5	6	21
Footwear	10.5	3	4	15	15	16
Stone/glass	5.9	4	4	4	5	38
Metals	6.7	3	4	5	8	99
Machinery	23.1	12	22	23	26	56
Transportation	17.2	12	13	15	20	35
Miscellaneous	21.8	7	12	16	24	73
Total	18.3	3	5	14	23	176

NTL= national tariff line.

Note: For the definitions of product groups, see the note of Figure 1.

Source: Authors' calculation based on data collected.

To complement Figure 1, Table 6 provides summary statistics for the number of coded measures per product at the NTL nine-digit level by product group. On average, one product at the NTL nine-digit level is subject to 18 different NTMs (including when the code is repeated). The number of NTMs per product follows a right-skewed distribution. As an extreme case, one specific chemical product is subject to 176 NTMs of various kinds. Chemical, machinery, and transportation products appear to be highly regulated with multiple NTMs since many can be imported or exported for military and weapons use.³⁰ Animals and agricultural and food products are also subject to a combination of many NTMs, mostly for SPS and TBT reasons.

³⁰ Care is needed in interpreting the coverage of regulations for these products. This is especially true for chemical products, which can be used in multiple sectors (e.g. food, cosmetics, and pharmaceuticals, which are heavily regulated in most countries) and for multiple purposes (e.g. military). These regulations may be applied under certain conditions, especially if the products are dual-purpose.

4. POLICY RECOMMENDATIONS

There are two groups of policy recommendations, one directed at the Government of Japan, and the other at UNCTAD (and other institutions collaborating in the global effort to gather NTM data).

A. RECOMMENDATIONS FOR THE GOVERNMENT OF JAPAN

While the online availability of all existing laws greatly assisted our efforts to gather NTMs, dissemination of this information can be improved significantly. We found four areas where the Government of Japan can improve their regulatory regime. First, it is difficult to identify all relevant documents for each law. As mentioned earlier, the online resource contains laws, cabinet orders, and ministerial ordinances; however, implicit

linkages among these three different levels of legal documents made it difficult to find the relevant orders and ordinances. Often a law merely states, 'the detail is specified in the Order' or 'the detail is specified in the Ordinances' without identifying what these are. While identification of these at the legislative stage may be difficult, these could be added at the dissemination stage. This is an important issue since a law can have multiple orders and ordinances. In addition, for some regulations we needed to look deeper into public notices and other relevant documents for further details. Although for an important law, the relevant ministry provides the information in an easy-to-access format, finding these resources for a non-major law proved difficult, especially for some ministries. Since details of the regulations are sometimes specified in public notices, they can be also listed in the Japanese Law Database.

The second area where we encountered difficulties was cross-references to other laws. In some instances, the law refers to multiple other laws, making it rather difficult to read the law. Thirdly, a lack of English translations of these laws, orders, and ordinances (and other relevant documents) makes it difficult for non-Japanese-speaking people to understand these regulations. While English translations of some regulations are available, these translations were produced some time ago and have not been updated since then (even if the laws were revised). Fourthly, the government should attempt to streamline certain regulations. Some products are subject to several regulations some of which seem to overlap. Moreover, some old laws are still in force, although their relevancy in modern times seems weak.

All of these issues relate to the accessibility of information and transparency of the regulatory regime in a country. While the Government of Japan has begun to move in the right direction by making this information available online, they can greatly improve access to information by offering additional information (e.g. relevant documents for each law) to provide anyone interested in a particular law with easy access to all necessary information.

B. RECOMMENDATIONS FOR GATHERING NON-TARIFF MEASURE DATA

The current effort to gather NTM data is laudable. However, since laws are often revised, the database must be updated regularly to reflect these revisions in order to contribute to the discussion on how regulations impact international trade. This is especially true for trade-related measures, since some of the measures are subject to yearly, half-yearly, or quarterly reviews. For instance, measures concerning tariff-rate quotas fall under this category. In addition, newer laws in Japan now incorporate an explicit review requirement after a certain number of years, at which time the law could be repealed or amended. While continuous updating may be difficult, an at least yearly update is desirable to keep the database contents fresh and relevant for conducting both academic and policy-oriented research. Depending on the country's revision practices, a repository of regulatory materials at the time of data gathering may be necessary. For instance, Japan has adopted the meld-in method, which makes it difficult to validate past data gathering efforts since revised laws incorporate all previous changes.

Ideally, updates should be done with the full collaboration of the targeted governments, since their legislative bodies and ministries are directly responsible for introducing new laws and amendments and repealing existing laws. The ability to collect revision information directly from the relevant government bodies can make this database both 'official' and 'up-to-date'.

REFERENCES

UNCTAD (2010). *Non-Tariff Measures: Evidence from Selected Developing Countries and Future Research Agenda*. Geneva: UNCTAD.

UNCTAD (2013). *Classification of Non-Tariff Measures*, February 2012 Version. Geneva: UNCTAD.

UNCTAD (2014). *Guidelines to Collect Data on Official Non-Tariff Measures: September 2014*. Geneva: UNCTAD



NON-TARIFF MEASURES IN NEW ZEALAND

Mike Webb and Anna Strutt^{31, 32}

1. INTRODUCTION

New Zealand's overall regulatory regime is well regarded internationally; for example, New Zealand ranks first in the World Bank's Ease of Doing Business 2018 Index (World Bank, 2018). Non-tariff measures (NTMs), regulations that may affect trade, are a subset of this regulatory regime. A major feature of New Zealand's NTM regime is its relatively stringent sanitary and phytosanitary (SPS) measures, reflecting the fact that New Zealand is a major agricultural producer and an island nation, free from many diseases and pests affecting international animal and plant product trade (see Webb, Strutt, and Rae, 2017).

New Zealand has actively participated in the negotiation of free trade agreements (FTAs) containing provisions covering both SPS and technical barrier to trade (TBT) issues. Bilateral agreements are currently in force with China, Australia, Hong Kong (China),

³¹ Waikato Management School, University of Waikato.

³² We gratefully acknowledge support provided by the United Nations Conference on Trade and Development (UNCTAD) and the Economic Research Institute of ASEAN and East Asia (ERIA) throughout this project. Detailed comments and very helpful suggestions were provided by staff of these agencies, including Guillermo Abramowitz, Santiago Fernandez De Cordoba, Fabien Dumesnil, Maxim Gubarev, Samuel Munyaneza, Ralf Peters, and Denise Penello Rial from UNCTAD; as well as Rizqy Anandhika and Lili Yan Ing from ERIA. We are particularly grateful to Peter Bailey (New Zealand Ministry of Foreign Affairs and Trade) for his strong support of this project as the nominated government official, including attending international workshops to work alongside the New Zealand team undertaking this study and helping to organise a stakeholder workshop in Wellington, New Zealand. We are also grateful to other officials from a range of key New Zealand agencies who have provided assistance, including the Ministry of Foreign Affairs and Trade, the Ministry for Primary Industries, Customs New Zealand, the Treasury, Standards New Zealand, New Zealand Trade and Enterprise, and the Ministry of Business, Innovation and Employment. However, this report reflects the views of the authors and not any government agency. This chapter was finalized in November 2017.

Malaysia, Singapore, Thailand, and the Republic of Korea. Regional agreements in force include the Association of Southeast Asian Nations-Australia-New Zealand FTA (with Association of Southeast Asian Nations members and Australia) and the P4 Agreement (with Singapore, Brunei Darussalam, and Chile). New Zealand has also concluded the Trans-Pacific Partnership Agreement, Pacific Agreement on Closer Economic Relations (with Pacific island countries), and an FTA with the Gulf Cooperation Council. New Zealand is also currently involved in negotiations for the Regional Comprehensive Partnership and the Pacific Alliance, as well as bilateral agreements with the European Union and India (New Zealand Foreign Affairs and Trade).

New Zealand is also an active member of international standards setting organisations, including Codex Alimentarius (the International 'Food Code') and the World Organisation for Animal Health, as well as a party to various international conventions that are relevant to the establishment of NTMs.³³

2. NEW ZEALAND'S LEGAL SYSTEM

Legislation passed by Parliament, known as acts, is the highest form of law in New Zealand's legal system.³⁴ Acts may contain detailed rules serving as NTMs; for example, the Anti-Personnel Mines Prohibition Act 1998 prohibits the use and import of anti-personnel mines. There are approximately

³³ These include the International Plant Protection Convention, Montreal Protocol and Vienna Convention, Single Convention on Narcotic Drugs, Convention on Psychotropic Substances, Convention against Illicit Traffic in Narcotic Drugs and Psychotropic Substances, Convention on International Trade in Endangered Species of Wild Fauna and Flora, Chemical Weapons Convention, Basel Convention (on the control of transboundary movements of hazardous wastes and their disposal), Rotterdam Convention (for certain hazardous chemicals and pesticides), and the Stockholm Convention on Persistent Organic Pollutants. Full details of New Zealand's international treaty obligations are available at <http://www.treaties.mfat.govt.nz/>

³⁴ Further information is available at <http://www.parliament.nz/en-nz/about-parliament/how-parliament-works/our-system/00CLOOCHowPWorks111/our-system-of-government>. All legislation is publicly available from an official government website: www.legislation.govt.nz.

2,000 acts in force in New Zealand, 59 of which either contain or authorise NTMs.

In practice, however, most legislation in New Zealand is not passed by Parliament, but rather by other persons or bodies under powers granted or delegated by Acts of Parliament.³⁵ Such legislation is generally known as delegated legislation, all of which must be based on authority conferred by an Act of Parliament.

There are various forms of delegated legislation in New Zealand, including Orders in Council and 'notices' made by ministers. For instance, Section 29 of the Fair Trading Act 1986 empowers the making, by Order in Council, of regulations setting product safety standards. A specific example is the Product Safety Standards (Cigarette Lighters) Regulations 1998, which include performance standards and labelling requirements for cigarette lighters. In some cases, delegated legislation is made by the head of a government department and published on their website. For instance, import health standards with rules for the import of primary products are issued by the Director-General under the Biosecurity Act 1993 and are available on the website of the Ministry for Primary Industries (www.mpi.govt.nz). Most information on acts and regulations is readily available and New Zealand Customs provides guides for exporters and importers.

Some of New Zealand's international obligations under FTAs and other international treaties are reflected directly in acts. In other cases, international obligations are reflected in delegated legislation or the rules, practices, and procedures of regulatory agencies.

3. DATA COLLECTION AND UPDATE

NTM data for New Zealand were initially collected by our team between September 2014 and June 2015; these were included in the NTM

³⁵ Further information is available at http://www.parliament.nz/en-nz/about-parliament/how-parliament-works/ppnz/00HOOOCPNZ_291/chapter-29-delegated-legislation.

database publicly launched in July 2016.³⁶ For the current ERIA-UNCTAD project, we updated the data with changes made to the measures between September 2014 and May 2016.

A. INITIAL DATA COLLECTION PROCESS

To gather comprehensive information on New Zealand's NTMs, a five-stage process was initially used. First, we undertook a survey of the websites of all government agencies considered likely to administer regulations that might affect trade. Second, we used official documents that included an inventory of measures (e.g. Schedules of Prohibited Imports and Exports from Customs New Zealand³⁷ and a Standards New Zealand database of all standards referred to in legislation³⁸) to identify acts and regulations. We found additional regulations by searching the gazette and legislation websites for regulations issued under the same act, and examining the information available on the websites of the regulatory agencies.

Third, we held meetings with key agencies to raise awareness of the project, identify possible gaps in recorded information, and follow up on any information that may not be publicly available. Meetings were held with the Ministry of Foreign Affairs and Trade; the Ministry of Business, Innovation and Employment; the Ministry for Primary Industries; and Standards New Zealand. There was strong interest in and support for the project.³⁹

Fourth, we performed a search of all references to the word 'import' and 'export' in acts and legislative instruments available from the New Zealand government legislation website (www.legislation.govt.nz) to find any legislation and measures that might otherwise have been missed.

³⁶ Under the guidance of UNCTAD, consistent with the guidelines and classifications in UNCTAD (2013) and (2014). This project was undertaken with support from the World Bank and the NTM data collection for Trans-Pacific Partnership countries project supported by the National Graduate Institute for Policy Studies.

³⁷ Available at <https://www.customs.govt.nz/business/import/prohibited-and-restricted-imports/>.

³⁸ Available at <http://shop.standards.co.nz/default.htm?mod=catalog&action=browseLegStandards>.

³⁹ Including a roundtable discussion on 26 July 2016 held with representatives from key government agencies.

Finally, we crosschecked the database against data available from Customs New Zealand showing the regulatory agency for each tariff line where 'permits' or other authorisations might be necessary.⁴⁰ While this did not identify any new measures, it identified extra tariff lines that had not been assigned to some measures.

B. DATA UPDATE

In updating the data, we systematically worked through all regulations to look for changes made since the data were originally collected. This was facilitated by the New Zealand government legislation website, which shows the details and dates of any amendments and whether a regulation has been revoked. The following changes were identified:

- i. The United Nations (Iran—Joint Comprehensive Plan of Action) Regulations 2016 replaced the United Nations Sanctions (Iran) Regulations 2010.
- ii. The Customs Import Prohibition Order 2014 replaced the Customs Import Prohibition Order 2011.
- iii. The Customs Import Prohibition (Trout) Order 2015 replaced the Customs Import Prohibition (Trout) Order 2010.
- iv. The Customs Export Prohibition (Toothfish) Order 2015 replaced the Customs Export Prohibition (Toothfish) Order 2009.
- v. The Hazardous Substances (Classes 6, 8, and 9 Controls) Regulations 2001 were amended, leading to new measures applying to the poison '1080', as recorded in the database.
- vi. The Product Safety Standards (Children's Nightwear and Limited Daywear Having Reduced Fire Hazard) Regulations 2016 replaced the Product Safety Standards (Children's Nightwear and Limited Daywear

⁴⁰ Available at <https://www.customs.govt.nz/business/import/prohibited-and-restricted-imports/>.

Having Reduced Fire Hazard) Regulations 2008.

We also identified two major sets of changes: (i) changes to the Australia New Zealand Food Standards Code, and (ii) changes associated with the Food Act 2014.

A major set of necessary revisions to the New Zealand data in the 2016 update arose from a complete overhaul of the Australia New Zealand Food Standards Code that took effect from 1 March 2016 (Food Standards Australia New Zealand).⁴¹ While the structure remained largely the same, a significant number of changes have been made to various components in the database.

The new Food Act 2014 came into force on 1 March 2016. This will gradually replace the previous Food Act 1981 as the principal act governing food safety in New Zealand. There was a transition programme until the Food Act 2014 took full effect on 28 February 2019.⁴² We used information from the Ministry for Primary Industries to identify which regulations previously in the database have been replaced by new regulations. Six regulations under the Food Act 1981 have now been repealed: Food (Importer Listing) Standard 2008, Food (Prescribed Foods) Standard 2007, Food (Importer General Requirements) Standard 2008, New Zealand Food (Supplemented Food) Standard 2013, Food (Imported Milk and Milk Products) Standard 2009, and New Zealand (Maximum Residue Limits of Agricultural Compounds) Food Standards 2014. Three new regulations have been included in the database: New Zealand Food (Supplemented Food) Standard 2016, Food Notice: Maximum Residue Levels for Agricultural Compounds, and Food Notice: Importing Food (New Zealand Food Safety).

As part of the update process, we identified acts authorising the making of delegated legislation that could provide new regulations. These are areas where new regulations could be added without

passing or amending Acts of Parliament, as shown in Table 1.⁴³

Table 1
Acts that provide scope for new regulations

Act	Delegated Legislation
Fair Trading Act 1996	Unsafe goods notices, product safety standards, and consumer information standards
United Nations Act 1946	Sanctions (which may be passed as acts)
Gas Act 1992	Notices
Resource Management Act 1991	National environmental standards
Radiocommunications Regulations 2001	Notices
Contraception, Sterilisation, and Abortion Act 1977	Standards
New Zealand Horticulture Export Authority Act 1987	Horticultural prescribed products orders and New Zealand horticulture export authority orders
Hazardous Substances and New Organisms Act 1996	Group standards, regulations, and hazardous substances notices (following the Hazardous Substances and New Organisms Amendment Act 2015)
Biosecurity Act 1993	Import health standards (we included nine new import health standards and revised measures where import health standards were updated).

Source: Authors' study.

In the 2016 update, with the exception of the aforementioned United Nations (Iran—Joint Comprehensive Plan of Action) Regulations 2016 under the United Nations Sanctions (Iran) Regulations, no new regulations were passed pursuant to any of these acts. We also checked the websites of key agencies to find any new types of regulations made under new powers conferred by changes to Acts of Parliament. This identified an amendment to the Hazardous Substances and New Organisms Act 1996, which enabled the making of hazardous substances notices, one of which has been enacted.

⁴¹ See also the box below.

⁴² See <https://www.mpi.govt.nz/food-safety/food-act-2014/>.

⁴³ We recommend that future researchers updating New Zealand NTM data look for new regulations under these acts.

Box: Joint food standards and Australia New Zealand economic integration

The current joint food standards regime between Australia and New Zealand stems from the Agreement between Australia and New Zealand establishing a System for the Development of Joint Food Standards signed in December 1995. This treaty aimed to harmonise food standards, reduce compliance costs, and remove regulatory barriers to trade. It created a new agency, the Australia New Zealand Food Authority, which was established in July 1996 and renamed Food Standards Australia New Zealand in 2002. The joint Australia New Zealand Food Standards Code was developed over several years, guided by a Ministerial Council with representation from Australia and New Zealand. It was agreed in 2000 and phased in over a 2-year period.

The Food Standards Code is given effect through domestic Australian and New Zealand legislation, and not all provisions apply to New Zealand (for instance, New Zealand sets its own maximum residue limits.) However, under the Trans-Tasman Mutual Recognition Arrangement, food and other products produced or imported into one country that meets that country's standards may be legally sold in the other country. In practice, this means that most food exported to Australia from New Zealand is not assessed for compliance with Australian food standards, and vice versa.

The joint Australia New Zealand Food Standards Code and Trans-Tasman Mutual Recognition Arrangement are part of a wider project of economic integration between Australia and New Zealand. This stems from the Closer Economic Relations Treaty of 1983, which includes the freedom for Australians and New Zealanders to live and work in the other country. A current focus is the Single Economic Market project under which New Zealand and Australia are committed to creating a seamless trans-Tasman economic environment.

Note:

a For further details, see Food Safety New Zealand Australia. History of FSANZ. www.foodstandards.govt.nz/about/foodlawandtreaties/history/pages/default.aspx (accessed July 2017).

b For further details, see www.agriculture.gov.au/import/goods/food/importing-zfood-from-new-zealand (accessed July 2017).

c For further details, see www.mfat.govt.nz/en/trade/free-trade-agreements/free-trade-agreements-in-force/nz-australia-closer-economic-relations-cer/ (accessed July 2017).

Source: Authors.

Furthermore, we searched the government legislation website for any new acts passed containing NTMs. In a relatively mature regulatory system such as New Zealand's, we did not expect to find many (if any) instances of this. Any new regulatory issue that arises will generally either be resolved within the existing regulatory framework (e.g. a new unsafe goods notice), or involve revoking or amending existing legislation, and so will be noted through that mechanism. In this update, we identified the Radiation Safety Act 2016; however, we did not include new measures under this act since it did not enter into force until 2017.

4. SUMMARY OF NON-TARIFF MEASURES AND MAIN FINDINGS

Tables 2–4 provide overview statistics in a format consistent with other data collected as part of this project. In total, we collated and coded 3,096 regulations from 59 acts, administered by 14 institutions.

Table 2
Comprehensiveness of collected non-tariff measure data

	Comprehensiveness	Number
1	Total number of coded regulations	530
2	Total number of coded regulations reported to the World Trade Organization	754
3	Total number of coded NTMs	3,096
4	Total affected products (Harmonized System lines, national tariff lines)	
	(i) Total number of affected products	7,517 ^b
	(ii) Affected products as a share of total products	100% ^b
5	Total number of issuing institutions	14

NTM = non-tariff measure.

a World Trade Organization. I-TIP Goods: Integrated Analysis and Retrieval of Notified Non-Tariff Measures. <https://i-tip.wto.org/goods/> (accessed July 2017).

b Coverage is 100 per cent because all products are subject to a goods and services (value added) tax (measure F71) and an import entry transaction fee (measure F61). Moreover, any good that infringes copyright is subject to an NTM (measure E315). If we exclude these measures, we count 5,082 measures, covering 67.7 per cent of all tariff lines.

Source: Authors' calculation based on data collected.

Table 3
Non-tariff measures by issuing institutions

No.	Issuing Institution	Number of NTMs	% of total number of NTMs
1	Ministry for Primary Industries	1,705	55.07%
2	Ministry for the Environment	1,189	38.40%
3	Ministry of Business, Innovation and Employment	63	2.03%
4	Ministry of Health	35	1.13%
5	Ministry of Foreign Affairs and Trade	28	0.90%
6	Ministry of Transport	25	0.81%
7	Ministry of Justice	16	0.52%
8	New Zealand Customs	15	0.48%
9	Department of Internal Affairs	6	0.19%
10	Department of Conservation	5	0.16%
11	Other institutions	4	0.29%
	Total	3,096	100.00%

NTM = non-tariff measure.

Source: Authors' calculation based on data collected.

Table 4
Non-tariff measures by type

Code	NTMs by type	No. of NTMs	(%)	No. of affected products (national tariff lines)	(%)
A	Sanitary and phytosanitary measures	1,569	50.68	2,592	34.48
B	Technical barriers to trade	1,424	45.99	4,511	60.01
C	Pre-shipment inspection and other formalities	29	0.94	87	1.16
D	Contingent trade-protective measures	3	0.10		
E	Non-automatic licensing, quotas, prohibitions and quantity control measures other than for sanitary and phytosanitary or technical barriers to trade reasons	2	0.06	7,510	99.91
F	Price control measures including additional taxes and charges	5	0.16	7,510	99.91
J	Distribution restrictions	3	0.10	95	1.26
K	Restriction on post-sales services				
L	Subsidies (excluding export subsidies under P7)				
M	Government procurement restrictions				
N	Intellectual property				
O	Rules of origin				
P	Export-related measures	61	1.97	7,517	100.00
Total coded NTMs		3,096	100.00		100.00

NTM = non-tariff measure.

Source: Authors' calculation based on data collected.

Due to its role in administering the Biosecurity Act 1993, the New Zealand Ministry for Primary Industries is responsible for issuing over half of all NTMs recorded for New Zealand.⁴⁴ As explained below, the high number of measures recorded is also a function of the database structure: different measures are recorded when different requirements apply to different products from different countries.

Under the Biosecurity Act, animal and plant products that may present a biosecurity risk for the introduction of pests and diseases cannot be imported into New Zealand until a risk analysis assessment consistent with international standards has been completed.⁴⁵ This process is triggered by

a request from the country interested in exporting the product and involves the development by the Ministry for Primary Industries of an import health standard that mitigates the risk associated with importing that product, pursuant to the Biosecurity Act 1993. There are approximately 200 import health standards covering a particular commodity or category of commodities; these may be generic, covering all countries, or country-specific (Ministry for Primary Industries). They are all listed as distinct 'regulations' within the database.

The largest single source of New Zealand SPS measures is 'MPI Standard 152.02: Importation and Clearance of Fresh Fruit and Vegetables into New Zealand', which covers fresh fruit and vegetables and consolidates a large number of country-specific import health standards for fruit and vegetables.⁴⁶

⁴⁴ It should be noted that the Ministry for Primary Industries is responsible for agriculture, forestry, fisheries, and food safety more generally.

⁴⁵ The rationale for this is that New Zealand's geographic isolation and biosecurity measures have meant that it is free from many World Organisation for Animal Health-listed diseases common throughout much of the world. See the World Trade Organization Trade Policy Review of New Zealand 2009, particularly the Record of Meeting with

Questions and Answers from Members, available at World Trade Organization. Trade Policy Reviews. http://www.wto.org/english/tratop_e/tpr_e/tp_rep_e.htm (accessed July 2017).

⁴⁶ For further details, see <https://www.mpi.govt.nz/importing/food/fresh-fruit-and-vegetables/requirements/>.

Table 5
Most common non-tariff measures (in Chapters A–C), (%)

NTM	Description	Per cent of tariff lines affected	Per cent of imports affected (Min)	Per cent of imports affected (Max)
B310	Labelling requirements	42.7	32.7	43.1
B140	Authorisation requirements (for importers)	23.9	31.4	32.3
B700	Performance standards	18.9	32.6	44.7
A690	Other production requirements	18.5	10.5	11.6
A220	Restricted use of substances	17.1	14.0	14.9
B150	Importer registration requirements	16.9	21.8	24.1
B490	Production requirements	16.2	13.7	26.6
A590	Treatment requirements not elsewhere specified	16.0	2.2	30.5
A310	Labelling requirements	15.4	9.3	10.4
A210	Residue tolerance limits	14.9	9.3	9.3

Max = maximum, Min = minimum, NTM = non-tariff measure.

Source: Authors' calculation based on data collected.

Despite the existence of this consolidated standard for fresh fruit and vegetables, the data collation nevertheless required that separate measures be listed for each exporting country. This is because the database does not allow the assignment of specific products to specific countries; the same measure can be used only if the same set of products is covered for each country (which is never the case).

Over a third of the measures in the database stem from the Hazardous Substances and New Organisms (HSNO) Act 1996 which is administered by the Ministry for the Environment to regulate pesticides, dangerous goods, household chemicals, and other dangerous substances.⁴⁷ As with measures issued by the Ministry for Primary Industries, the high number of recorded measures is partly a function of the way in which regulations and the database are structured. While there are some general regulations under the HSNO Act, such as the Hazardous Substances (Identification) Regulations 2001, the precise conditions for most hazardous substances are contained in group standards issued by the Environment Protection Agency pursuant to section 96A of the HSNO Act. Group standards apply to 34 categories of goods such as 'cosmetic products' and 'surface coatings and colourants'. For each category of substance,

between one and 24 group standards apply, depending on the combinations of hazards inherent in the substance (e.g. whether they are combustible, corrosive, or combustible and corrosive).⁴⁸ In total, 172 group standards are entered into the database as regulations, leading to 1,164 measures. Moreover, some hazardous substances (fireworks, pesticides, veterinary medicines, timber treatment chemicals, fumigants, and vertebrate toxic agents) are not covered by group standards, but are instead governed by specific rules that can be traced to regulations made under the HSNO Act.

Table 5 sets out the most common NTMs applied in New Zealand. We have also calculated, using data on New Zealand import values from the world in 2016, the percentage of imports in tariff lines covered by these NTMs. We present these as a range because some NTMs have 'partial coverage'; that is, they only apply to some products within a tariff line.⁴⁹

⁴⁷ For further details, see <https://www.epa.govt.nz/industry-areas/hazardous-substances/rules-for-hazardous-substances/>.

⁴⁸ For further details, see <https://www.epa.govt.nz/industry-areas/hazardous-substances/group-standards/>.

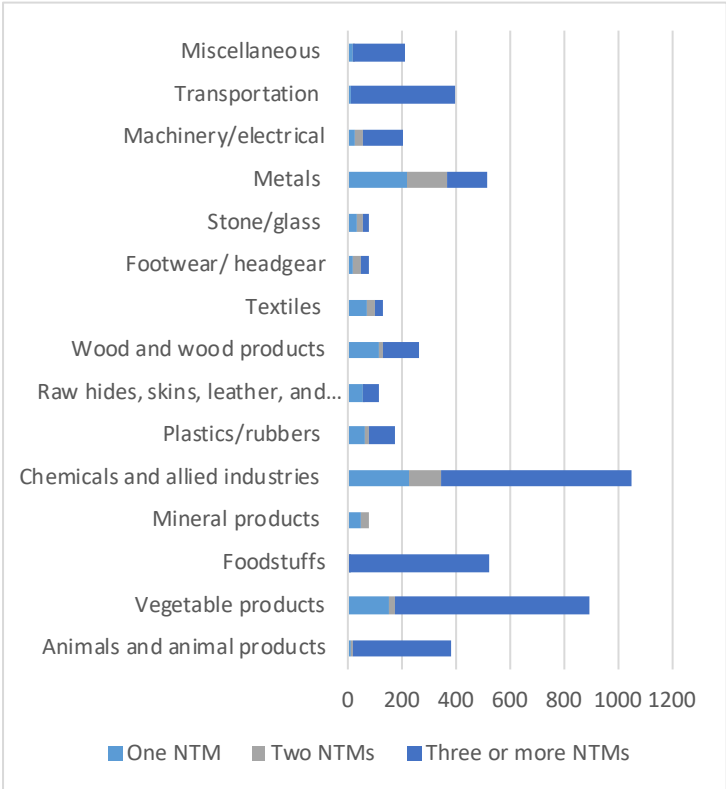
⁴⁹ In calculating the 'minimum', we excluded the value of all imports under tariff lines with partial coverage as it is possible that all trade was in parts of the tariff line not subject to the NTM. The 'maximum' assumes that all trade in a tariff line with partial coverage was affected by the NTM.

Figure 1 shows how the incidence of multiple NTMs varies across sectors. We limit our analysis to UNCTAD chapters A, B, and C because, as noted in Table 2, all products are subject to a goods and services (value added) tax (measure F71) and import entry transaction fee (measure F61), and any good that infringes copyright is subject to an NTM (measure E315).

Figure 2 illustrates where individual tariff lines are affected by multiple different types of NTMs (in chapters A, B, or C of the UNCTAD NTM classification). Approximately one-third of all tariff lines are not subject to any NTM in these chapters.

The most regulated products are meat, fresh fruit, and vegetables; these are subject to a range of SPS measures for both biosecurity and food safety as well as some measures classified as TBTs (e.g. labelling requirements). Tariff lines that attract very high numbers of NTMs (i.e. more than 25 types of NTMs) are generally miscellaneous categories such as food preparations not elsewhere specified (Harmonized System subheading 2106.90), animal products not elsewhere specified (Harmonized System subheading 0511.99), or tariff lines that contain a range of different products (e.g. tariff line 0804.50.00 covering guavas, mangoes, and mangosteens).

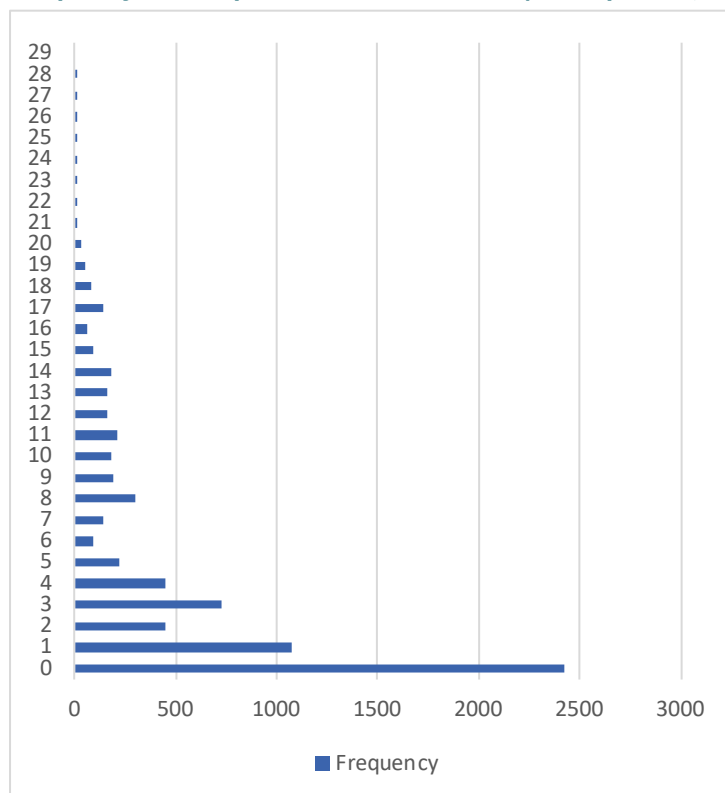
Figure 1
Incidence of non-tariff measures by product as a percentage of total tariff line



NTM = non-tariff measure.

Source: Authors' calculation based on data collected.

Figure 2
Frequency of multiple non-tariff measures (in Chapters A, B, and C)



NTM = non-tariff measure.

Source: Authors' calculation based on data collected.

5. POLICY RECOMMENDATIONS

We are confident that we have collected comprehensive and high-quality data for New Zealand.⁵⁰ This is in part due to New Zealand's relatively transparent legislative system, as well as key agencies being willing to provide information, including on NTMs.

We note that regulations associated with NTMs are often dealing with complex issues and that it will be challenging to reduce or harmonise

⁵⁰ However, there will of course be limitations to the data collected. For example, most of New Zealand's NTMs do not indicate the particular tariff lines covered; therefore, some judgement is required in assigning tariff codes, particularly for complex areas such as those under the Hazardous Substances and New Organisms Act 1996. It should also be noted that the database is just a snapshot in time, as at May 2016.

some NTMs. We also note that New Zealand has already made progress in reducing the effect of regulations on trade, such as harmonised food standards with Australia, and providing treatment options for fresh fruit and vegetables under import health standards and choices of international standards, particularly in the vehicle sector. We suggest that making improvements in the following areas may be particularly useful for New Zealand policy makers:

- i. Support the Ministry for Primary Industries' efforts to move to a generic import health standard for each product, rather than separate standards for each exporting country.
- ii. Undertake further investigation of the complex regime for hazardous substances, with various standards depending on the properties of a substance (e.g. if it is corrosive

or flammable). It may be useful to explore the extent to which this poses a barrier to exporters and whether this regime can be simplified.

- iii. Further investigate possibilities for harmonising regulations with Australia and other trading partners, for example building on experience with joint food standards between New Zealand and Australia.
- iv. Although already practiced fairly widely in New Zealand, investigation of the scope to further recognise international standards might be useful in a range of areas.
- v. As proposed by the New Zealand Productivity Commission (2014), all regulations should be available from a single source, such as the New Zealand government legislation website.
- vi. Continue active involvement in FTA negotiations, particularly regional agreements such as the Regional Comprehensive Partnership, which may provide a basis for further regulatory alignment, including eventual harmonisation or mutual recognition.

Given the potential gains from reducing NTMs, it will be important for policy makers and officials in New Zealand and other countries to examine carefully areas where non-tariff barriers to trade may be reduced, while still achieving legitimate objectives of the various NTMs.

REFERENCES

- Food Standards Australia New Zealand. Food Standards Code. Available at www.foodstandards.govt.nz/code/Pages/default.aspx (accessed July 2017).
- Ministry for Primary Industries. Importing: Import Health Standards. Available at <http://www.mpi.govt.nz/importing/overview/import-health-standards/> (accessed July 2017).
- New Zealand Food Safety. Food Act 2014 Requirements. Available at <http://www.mpi.govt.nz/food-safety/food-act-2014/requirements/> (accessed July 2017).
- New Zealand Foreign Affairs and Trade. Free Trade Agreements. Available at <https://www.mfat.govt.nz/en/trade/free-trade-agreements/> (accessed July 2017).
- New Zealand Productivity Commission (2014). *Regulatory Institutions and Practices*. Wellington: New Zealand Productivity Commission.
- UNCTAD (2013). *Classification of Non-Tariff Measures: February 2012 Version*, UNCTAD/DITC/TAB/2012/2. New York, Geneva: UNCTAD.
- UNCTAD (2014). *Guidelines to Collect Data on Official Non-Tariff Measures: September 2013 Version*, UNCTAD/DITC/TAB/2013/3. New York, Geneva: UNCTAD.
- Webb M, Strutt A, and Rae A (2017). Impacts of Geographical Restrictions: New Zealand Fruit and Vegetable Imports. *Journal of International Agricultural Trade and Development* 10(2): 203–224.
- World Bank (2018). Ease of Doing Business 2018 Index. Available at <http://www.doingbusiness.org/rankings> (accessed July 2017).



NON-TARIFF MEASURES IN THE REPUBLIC OF KOREA

Korea Institute for International Economic Policy^{51, 52}

1. INTRODUCTION

Despite their importance, analyses involving NTMs are limited. This is because NTMs are not easily distinguishable nor quantifiable, as they are literally embedded in legal documents. Measures need to be extracted from regulations based on consistent and concrete criteria. Under UNCTAD's initiative, international organisations gathered to establish the Multi-Agency Support Team in 2006 and worked on the taxonomy of NTMs. The results of this collaboration facilitated data collection and analyses on measures affecting international trade. The database currently includes 91 countries; the Republic of Korea became part of the project through the NTM database construction project for Regional Comprehensive Economic Partnership member countries.

This chapter shows how data are collected and sheds light on the current status of NTMs in the Republic of Korea. The data include NTMs as of 30 November 2016, including all measures issued by the central government collected from the National Law Information Center managed by the Ministry of Government Legislation. Overall, there are 1,930 NTMs,⁵³ most of which are sanitary and phytosanitary (SPS) measures or technical barriers to trade (TBT). Accordingly, the Ministry of Agriculture, Food and Rural Affairs is responsible for the

⁵¹ This NTM project from the Republic of Korea was led by Jongduk Kim of KIEP (research fellow, jongduk.kim@kiep.go.kr) with Bo-Young Choi, former colleague of KIEP and currently professor of Kyungpook National University (bychoi2@knu.ac.kr). Minchirl Chung and Jihyeon Kim of KIEP greatly contributed to completing this project. This was independently funded by KIEP and superbly coordinated by UNCTAD and ERIA. Special thanks are dedicated to Santiago Fernandez de Cordoba, Denise Penello Rial and Seul Lee of UNCTAD and Lili Yan Ing of ERIA.

⁵² The following is the list of members who took part in the initial data collection: Gahyeon Cheon, Seohyun Hong, Hajung Kil, Hwiu Lee, Seora Hong, Eunbi Lee, Haeseong Park, Hyeri Bok, Hee Eun Mun, Sujin Park. We gratefully acknowledge their enthusiastic participation and hard work.

⁵³ Independently if each affects a large or a small list of products.

Table 1
Definitions

Category	Definition	Korean legislation	Note
Source	Includes information such as legislations, ordinances, or else proclaimed and enforced	National Law Information Center	Accessible from the National Law Information Center website
Document	Official document or the higher law of the Regulation that includes the NTMs	Act	Higher law used when no Act exists
Regulation	Law or administrative rule that actually includes the NTMs	Act, enforcement decree, enforcement rule, notification, guidelines, standards	The act itself can be a regulation.
NTM	All policy instruments other than customs tariffs that economically affect the flow of goods	Each article and contents of legislation or administrative rule	

NTM = non-tariff measure.

Source: Kim, J.D., B.Y. Choi, J.H. Eom, and M.-Ch. Chung (2016). 'An Analysis of Korea's Non-Tariff Measures: Focused on Data Collection and Classification'. Policy Reference 16-11. Korea Institute for International Economic Policy.

issuance of over 38 per cent of all NTMs. Lastly, almost all product categories are subject to more than one NTM. It is important to note that not all NTMs are barriers to trade. The main objective of NTMs is to serve public interests, especially with respect to safety issues. In this chapter we first describe the data collection process starting with a discussion of the legal system of the Republic of Korea, before providing an overview of NTMs in the Republic of Korea.

The legal system of the Republic of Korea: the legal system of the Republic of Korea consists of five layers.⁵⁴ The Constitution represents the highest form of law. Although the constitution does not stipulate specific NTMs, Acts that realise constitutional notions limit people's rights and freedom or clarify their duties. These Acts are called 'Documents'. Often, implementation details are left for subordinate implementation regulations.

NTMS are extracted from those legal texts that offer sufficient details. We also looked at presidential decrees, ordinances of the Prime Minister, and ministries. Administrative rules elaborate on administrative agency's roles and duties. Although these rules do not restrict peoples' rights or freedom per se, the work of those agencies can act as an NTM. All such texts including NTMs are called 'Regulations'.

⁵⁴ The first level is the Constitution, the second are acts, the third are Presidential decrees, the fourth are Ordinances of the Prime Minister and Ministries, and the fifth are administrative rules (National Law Information Center).

Not all legislation includes NTMs; that is to say, not all relate to requirements that would affect imported or exported products. We collected information from acts, decrees and ordinances, and administrative legislation. Acts are usually 'documents' that include the 'regulations', which in turn have the NTMs embedded in them. More details are provided in Table 1.

2. DATA CONSTRUCTION

The National Law Information Center is the Korean representative legal information web site, which categorises the law of the Republic of Korea into 44 sectors.⁵⁵ Twenty-five sectors related to trade were selected to construct the NTM data, as shown in Table 2. These 25 sectors consist of 2,408 acts, enforcement decrees, and rules. By mapping these, we were able to investigate 480 laws, including their subsidiary administrative rules.

3. OVERVIEW OF NON-TARIFF MEASURES

Table 3 shows the comprehensiveness of our data. Twenty-nine institutions issued 427 regulations, which included 1,930 coded measures. In total, 11,483 products were affected by NTMs. As there are 12,244 national tariff lines (NTLs), 93.7 per cent of products are subject to NTMs. This is also called the frequency index. Since other countries

⁵⁵ See <https://www.law.go.kr/LSW/eng/engMain.do> (accessed July 2020)

Table 2
Categories of law of the Republic of Korea

	categories NOT related to non-tariff measures		categories related to non-tariff measures
1	Constitution	13	Military affairs
2	National assembly	18	Science and technology
3	Election and political party	20	Internal tax
4	Administration in general	21	Tariff
5	Public official	22	Tobacco and ginseng
6	Court	24	Agriculture
7	Judicial affairs	25	Livestock
8	Civil affairs	26	Forest
9	Crimes and criminal procedure	27	Fishery
10	Local government	28	Commerce, trade, and industry
11	Police affairs	29	Industrial standards and measures
12	Civil defence and firefighting	30	Industrial property right
14	Conscription affairs	31	Energy utilisation and mining
15	Patriots and veterans	32	Electricity and gas
16	Education and academy	33	National land development and city
17	Culture and public relations	34	Housing, building and road
19	Finance and economy in general	35	Water resources, land and construction
23	Currency, state bond and banking	36	Health and medical affairs
44	Foreign affairs	37	Pharmaceutical affairs
		38	Social welfare
		39	Environment
		40	Labor
		41	Land transportation, aviation and tourism
		42	Marine transportation
		43	Information and telecommunication

Source: Kim, J.D., B.Y. Choi, J.H. Eom, and M.-Ch. Chung (2016). 'An Analysis of Korea's Non-Tariff Measures: Focused on Data Collection and Classification'. Policy Reference 16-11. Korea Institute for International Economic Policy.

Table 3
Data comprehensiveness

	Comprehensiveness	Number
1	Total NTM-related regulations	427
2	Total NTMs reported to the World Trade Organization	1,507
3	Total number of coded NTMs	1,930
4	Total affected products (Harmonized System lines, national tariff lines)	11,483 (93.8%)
5	Total issuing institutions	29

NTM = non-tariff measure.

Source: Authors' calculation based on data collected.

Table 4
Non-tariff measures by institutions

No.	Issuing Institution	Number of NTMs	% of total number of NTMs
1	Ministry of Agriculture, Food and Rural Affairs	740	38.3
2	Ministry of Trade, Industry and Energy	225	11.7
3	Ministry of Food and Drug Safety	207	10.7
4	Ministry of Environment	204	10.6
5	Ministry of Land, Infrastructure and Transport	94	4.9
6	Ministry of Oceans and Fisheries	83	4.3
7	Animal and Plant Quarantine Agency	71	3.7
8	National Fishery Products Quality Management Service	65	3.4
9	Nuclear Safety and Security Commission	46	2.4
10	Ministry of Health and Welfare	41	2.1
11	Other institutions	166	8.6
	Total	1,930	

Source: Authors' calculation based on data collected.

exhibit similar percentages, the magnitude of products subject to NTMs is not of particular concern (UNCTAD; Economic Research Institute for ASEAN and East Asia, 2016). Again, NTMs are not necessarily barriers to trade. They protect domestic consumers from harmful materials and ban illegal production practices. What would be beneficial is to distinguish the necessary measures from the unnecessary measures. This could be the subject of a future study.

Table 4 presents the number of institutions that issue NTMs ranked by the number of issued measures, independent of the number of products affected by each. The results align with the concentration found in SPS and TBT measures; highly ranked institutions relate to agriculture, food, and trade. The Ministry of Agriculture, Food and Rural Affairs issues 38.3 per cent of NTMs and similar institutions related to fisheries, animals, and plants are highly ranked. On the other hand, the Ministry of Trade, Industry and Energy, which is responsible for trade-related issues, issues 11.7 per cent of NTMs.

The coded NTMs can be divided by type, as in Table 5. The last row shows export-related NTMs, while the rest are import-related. Measures coded A, B, and C are technical measures, while D–O are non-technical measures. Most NTMs are concentrated in SPS (A) measures (accounting

for 36.6 per cent) and TBTs (B, accounting for 41.9 per cent). Interestingly, although the two are similar in number, TBTs are mostly imposed on the world (93%), while SPS measures are imposed on a limited number of countries (74.7%). These are followed by export-related measures (P), of which 66 per cent are export technical measures (P69).⁵⁶ Next, price control measures (F) include fees at the border or taxes such as excise taxes; pre-shipment inspection and other formalities (C) are mostly import monitoring and surveillance requirements and other automatic licensing measures (C4). The only finance measure (G) identified is the refundable deposits for sensitive product categories (G14).

Identifying NTMs by type shows that the quantity of SPS measures and TBTs are similar. However, considering tariff lines offers another perspective. Almost all existing tariff lines (91.1%) are subject to TBT measures. In comparison, 30 per cent of tariff lines are subject to SPS measures, which is lower than for pre-shipment inspection and other formalities (37.5%). The latter represents only 1.4 per cent of coded NTMs. This could be because SPS measures mainly affect specific products, especially those related to agriculture and food.

⁵⁶ Data were collected using the M3 version of the Classification of NTM. The P69 code (technical export measures) corresponds to the P1 code in the M4 version of the Classification of NTM.

Table 5
Types of non-tariff measures, by chapter

Code	NTMs by type	No. of NTMs	%	No. of affected products (national tariff lines)	%
A	Sanitary and phytosanitary measures	707	36.6	3,738	30.5
B	Technical barriers to trade	809	41.9	11,152	91.1
C	Pre-shipment inspection and other formalities	27	1.4	4,595	37.5
D	Contingent trade-protective measures				
E	Non-automatic licensing, quotas, prohibitions and quantity control measures other than sanitary and phytosanitary or technical barrier to trade reasons	8	0.4	631	5.2
F	Price control measures including additional taxes and charges	71	3.7	8,552	69.8
G	Finance measures	1	0.1	16	0.1
H–O	Other chapters (not collected)				
P	Export-related measures	307	15.9	10,969	89.6
	Total coded NTMs	1,930	100		

NTM = non-tariff measure.

Source: Authors' calculation based on data collected.

Table 6 shows the types of NTMs used in more detail. The code B7 (product quality or performance requirement) is the most used type of NTM, followed by B31 (labelling requirements), A83 (certification requirements), B82 (testing requirements), and A42 (hygienic practices during production). These are the codes most mentioned in the regulations (column three of Table 6). The last column in the table shows the prevalence of the

regulations. some of them affect many products at a time. from this perspective, accounting from the NTLs, the code B851 (origin of materials and parts) is the most used NTM. It affects 73.8 per cent of NTLs, despite there being only 13 NTMs using this code. This is because the Foreign Trade Act requires a large portion of products to reveal their origin.

Table 6
Most commonly applied non-tariff measures

NTM codes	NTM description	Number of NTMs	% of affected products (NTL)
B7	Product quality or performance requirement	154	46.2
B31	Labelling requirements	135	70.3
A83	Certification requirement	89	6.6
B82	Testing requirement	84	44.2
A42	Hygienic practices during production	70	16.3
A64	Storage and transport conditions	53	25.7
A86	Quarantine requirement	53	12.0
A62	Animal raising or catching processes	47	3.2
B859	Traceability requirements, not elsewhere specified	44	51.3
B14	Authorisation requirement for technical barrier to trade reasons	40	56.0

NTL = national tariff line, NTM = non-tariff measure.

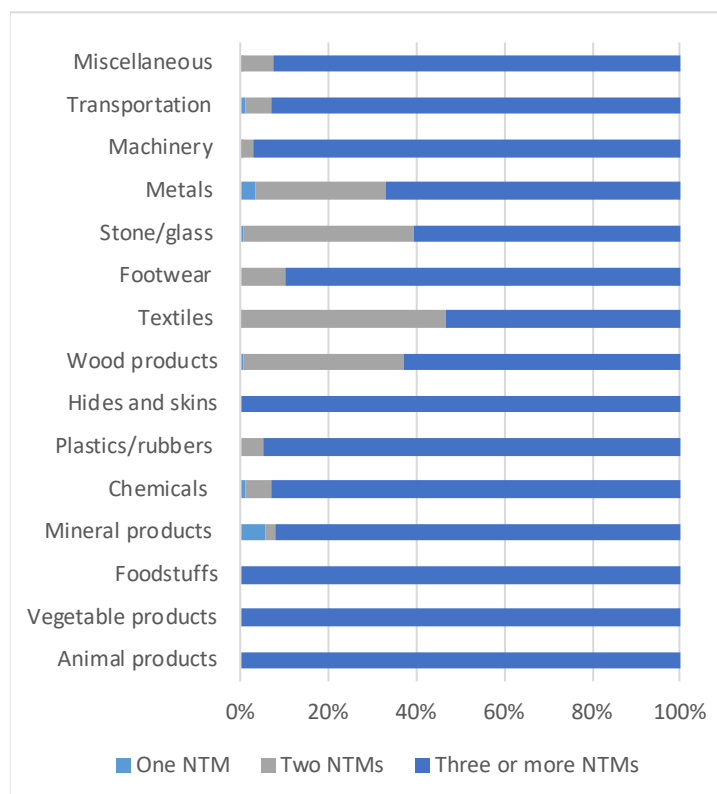
Note: Export measures are not considered here. Data were collected using the M3 classification version. The B1 codes from M3 are converted into Chapter E when using M4.

Source: Authors' calculation based on data collected.

Table 7
Multiple non-tariff measures applied to each product group, in numbers

HS code	Product	One NTM	Two NTMs	Three or more NTMs
01-05	Animal products			762
06-15	Vegetable products			798
16-24	Foodstuffs			543
25-27	Mineral products	17	6	266
28-38	Chemicals	27	131	2113
39-40	Plastics/rubbers		19	345
41-43	Hides and skins			242
44-49	Wood products	4	206	357
50-63	Textiles	1	446	507
64-67	Footwear		10	87
68-71	Stone/glass	2	162	253
72-83	Metals	30	257	587
84-85	Machinery	3	60	1991
86-89	Transportation	3	19	295
90-99	Miscellaneous	2	66	866
	Total	89	1382	10012

Figure 1
Multiple non-tariff measures, share within product groups



Source: Authors' calculation based on data collected

Products can be subject to multiple NTMs. For instance, the products most subject to NTMs are chemicals (18.4%) and machinery (17.3%). The majority of those products have more than three NTMs. Figure 1 shows the frequency of multiple NTMs for each product category. The majority of those product categories are subject to three or more NTMs. Animal products, vegetable products, foodstuffs, and hides and skins are all subject to more than three NTMs.

4. POLICY RECOMMENDATIONS

Weakness in the global economy and the rise of protectionism are strong reasons to monitor any NTMs that can hamper international trade. The current project is thus a timely effort from the international community to improve transparency regarding behind-the-border measures. Nonetheless, it is important to remember that the project's objective is not to remove all the collected NTMs but to help them serve their purpose while minimising their impacts on trade.

To further reap the fruits of such cooperative work, it is recommended that domestic regulations be analysed in more detail. Domestic regulations are legitimate in the sense that they promote social welfare by emphasising public safety and environment protection. However, measures that do not align with global standards can have unintended consequences. Although measures protecting domestic industries can be helpful in the short term, they increase costs for exporting firms that need to comply with standards in other countries and undermine their competitiveness in the long term.

Internationally, it is important to continue sharing and updating information on NTMs. Further analyses would be made possible by accumulating time series data on NTMs from which we could draw other reliable policy recommendations. Efforts to establish international standards and abolish redundant regulations should also not stop. We hope that the current data will contribute to further analyses of NTMs, especially while comparing countries.

Nevertheless, we remain vigilant while interpreting the data, as aggregate measures can be sometimes misleading. For example, if one measure is imposed on all products, the percentage of affected products (also called the frequency ratio) would be 100 per cent. These measures are often called 'horizontal' measures. If such NTMs were included in the incidence measures (e.g. frequency index), the country could be seen as highly restrictive. This is why the standard process for computing incidence measures does not include horizontal measures. Thus, it is always recommended to consider measures in detail. Furthermore, given potential development gaps between countries' regulating systems, including enforcement challenges, simply comparing incidence measures at the country level can obscure the reality of the situation.

NTMs are generally considered as having negative effects on international trade. Previous research on NTMs estimated their ad-valorem equivalents or calculated their coverage ratios to investigate the level of protectionism. However, as defined by the UNCTAD Multi-Agency Support Team, NTMs include both measures that hamper trade (also called non-tariff barriers) and other measures that do not have a protectionist intent. Food safety standards, hazardous substance residue standards, and safety tests for baby products are NTMs that cannot be seen as protectionist measures; these can sometimes even promote trade under certain circumstances. Moreover, these NTMs essentially aim to fulfill public objectives relating to hygiene, security, animal and plant protection, quality improvement, and so on. Thus, to understand NTMs better it is necessary to acknowledge their dual side. We hope that, in the near future, UNCTAD's project will allow us to distinguish between necessary and unnecessary NTMs, and eventually help us better assess their effects. This can be achieved through analyses such as those under good regulatory practices, which go beyond the statistical analysis presented here.

REFERENCES

- ERIA and UNCTAD (2016). Non-Tariff Measures in ASEAN, ERIA. Research Project FY2015 No.01, ISBN: 978-602-8660-89-1.
- Kim JD, Choi BY, Cho MH and Chung MC (2017). An Analysis of Korea's Non-Tariff Measures: Focusing on Link between NTM and HS. Policy Reference 17-3. Korea Institute for International Economic Policy.
- Kim JD, Choi BY, Eom JH and Chung MC (2016). An Analysis of Korea's Non-Tariff Measures: Focused on Data Collection and Classification. Policy Reference 16-11. Korea Institute for International Economic Policy.
- National Law Information Center. Korean Legislative System and Procedures. Available at <http://www.law.go.kr/LSW/eng/engAbout.do?menuId=3> (accessed 2018).
- UNCTAD (2018). The Global Database on Non-Tariff Measures. Available at <https://trains.unctad.org/Default.aspx> (accessed 2018).
- UNCTAD (2012). *Non-Tariff Measures to Trade: Economic and Policy Issues for Developing Countries*. UNCTAD/DITC/TAB/2012/1. United Nations Publication. ISSN 1817-1214 Geneva
- UNCTAD (2016). *Guidelines to Collect Data on Official Non-Tariff Measures*. United Nations Publication. UNCTAD/DITC/TAB/2014/4.
- World Trade Organization (2016). World Trade Statistical Review. Geneva.
-

