Alma Mater Studiorum - Università di Bologna

DOTTORATO DI RICERCA IN

Economics curriculum in Law and Economics

Ciclo 31°

Settore concorsuale di afferenza: 13/A1

Settore scientifico-disciplinare: SECS-P/01

The Persistence of Non-Tariff Measures in ASEAN

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Esame finale anno 2019

The Persistence of Non-Tariff Measures in ASEAN

De volharding van niet-tarifaire maatregelen in ASEAN

Proefschrift ter verkrijging van de graad van doctor aan de
Erasmus Universiteit Rotterdam op gezag van
de rector magnificus
Prof.dr. R.C.M.E. Engels
en volgens besluit van het College voor Promoties

De openbare verdediging zal plaatsvinden op
donderdag 28 februari 2019 om 9.00 uur
door

Gemelee Gavino Hirang
geboren te Quezon City, de Filipijnen

Erasmus University Rotterdam

Erasmus

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This thesis was written as part of the European Doctorate in Law and Economics programme

An international collaboration between the Universities of Bologna, Hamburg and Rotterdam.
As part of this programme, the thesis has been submitted to the Universities of Bologna, Hamburg and Rotterdam to obtain a doctoral degree.

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Acknowledgements

First of all, I would like to thank my supervisors, Emanuela Carbonara and Michael Faure. Thank you for pushing me to go beyond my comfort zone, criticizing me when needed, and always giving me support and encouragement. Truly, I could not have completed this dissertation without the both of you.

Special thanks go to the RILE family for their valuable comments and suggestions, particularly Klaus Heine, Roger Van den Bergh, Louis Visscher, Niels Philipsen, and Elena Kantorowicz-Reznichenko. I am also very grateful to Marianne Breijer. Thank you for all the help and support, as well as your unbounded patience with stressed PhD students.

I am also thankful for the extended EDLE family, namely: Stefan Voigt and the Hamburg Institute of Law and Economics; and Luigi Franzoni and Bologna's Department of Economics. I am also grateful for Lisa Verniti's kind assistance.

I would like to express my gratitude to Jason Alinsunurin. Thank you for your invaluable help in organizing the data, and for the free STATA tutorials.

I am likewise thankful for all the comments I received from the participants of the following: World Economics Association conference on "Public Law and Economics: Economic Regulation and Competition Policies 2017"; EMLE Midterm Meeting 2018, Rotterdam; and "The Future of Law and Economics 2018" Joint Seminar, Paris.

I am thankful for my EDLE friends. To Steve, Maria Carolina, Mostafa, Thiago, Maria Fernanda, Renny, and Max, thank you for making the PhD experience more fun, if not less stressful.

To my parents, Enrique and Gilda, thank you for the boundless support. I would not be where I am today if not for your belief in me.

Finally, thank you Jörn for being my rock and occasional stress ball.

List of Abbreviations

AEC	ASEAN Economic Community
AFTA	ASEAN Free Trade Area
AG	Agriculture, Value Added
AIA	ASEAN Investment Area
AICO	ASEAN Industrial Cooperation Scheme
ASEAN	Association of Southeast Asian Nations
ASEAN-5	Brunei Darussalam, Indonesia, Malaysia, Singapore, and Thailand
ATIGA	ASEAN Trade in Goods Agreement
BULOG	Badan Urusan Logistik (Logistics Bureau, Indonesia)
CEPT	Common Effective Preferential Tariff
CLMV	Cambodia, Lao PDR, Myanmar, and Vietnam
DPI	Database of Political Institutions
Ex	Exports
EXP	Export-related Measure
FDI	Foreign Direct Investment
GDP	Gross Domestic Product
HS Code	Harmonized Commodity Description and Coding System
IDN	Indonesia
Im	Imports
IMF	International Monetary Fund
IND	Industry, Value Added
IPR	Import Penetration Ratio
KHM	Cambodia
Lao PDR	Lao People's Democratic Republic
MAV	Minimum Access Volume
MFN	Most Favored Nation
MYS	Malaysia
NTB	Non-tariff Barrier
NTM	Non-tariff Measure
PHL	Philippines
PR	Proportional Representation
PTA	Preferential Trade Agreement
SGP	Singapore
SPS	Sanitary and Phytosanitary Measure
SVCS	Services, Value Added

TBT	Technical Barrier to Trade
THA	Thailand
TRAINS	Trade Analysis Information System
TRT	Thai Rak Thai
UN COMTRADE	United Nations Commodity Trade
VNM	Vietnam

1 Introduction

International trade continues to be a relevant and contentious topic. While various agreements have substantially reduced the tariffs applied on most traded goods, trade is still burdened by restrictive laws, policies, and regulations. As a result, policymakers have shifted their focus to non-tariff instruments which may potentially block market access and act as barriers to trade. One such example is the Association of Southeast Asian Nations' (ASEAN) efforts to harmonize and reduce non-tariff measures (NTMs), and eliminate non-tariff barriers (NTBs). Nevertheless, NTMs have not only continued to persist in the region, but the incidence of NTMs has even increased in recent decades.

This thesis examines the persistence of NTMs in the ASEAN region. *Section 1* of this introductory chapter begins with a brief overview of NTMs, the ASEAN efforts relating to NTMs, and the NTM regimes of the Member States. *Sections 2* and *3* outline the research questions, and the methodologies used in answering them, respectively. Lastly, *Section 4* provides an overview of the contents of this thesis.

1.1 Motivation

1.1.1 Non-Tariff Measures

NTMs are laws, regulations, and other policy instruments which can affect the quantities and/or prices of internationally traded goods.[1] As such, this term encompasses a broad range of instruments, from price[2] and quantity[3] measures to standards and quality requirements. NTMs become NTBs when they *(i)* are

1. United Nations Conference on Trade and Development, *Non-Tariff Measures to Trade: Economic and Policy Issues for Developing Countries* (Geneva: United Nations, 2013), 2.
2. Such as anti-dumping measures and subsidies.
3. Such as quotas and tariff-rate quotas.

used to discriminate against foreign firms, *(ii)* have protectionist purposes, or *(iii)* are improperly or unjustifiably applied.[4] In other words, NTBs are NTMs that *"are protectionist either by intent or effect."*[5]

This definition of NTBs recognizes the fact that NTMs are generally issued to address market failures. For example, measures such as limits on pesticide levels in food products, and carbon dioxide emissions standards for vehicles, aim to address externalities. Nevertheless, even NTMs with ostensibly legitimate justifications may have protectionist motivations or effects. Notably, quality standards[6] are potentially burdensome for developing countries, as the latter may lack the required infrastructure and resources to comply with requirements. These measures may substantially raise production and trade costs, such as when the requirements exceed generally accepted norms and standards. Exporters may also need to bear significant information costs when importing countries have different NTM regimes in place. Consequently, NTMs have the potential to adversely affect trade flows.

1.1.2 ASEAN Initiatives on Non-Tariff Measures

With the signing of the Bangkok Declaration in 1967, ASEAN was formed by Indonesia, Malaysia, the Philippines, Singapore, and Thailand. Brunei Darussalam joined in 1984. By 1999, ASEAN's membership had expanded to 10, with the addition of Cambodia, the Lao People's Democratic Republic (PDR), Myanmar and Vietnam. Ostensibly, the goal was to *"accelerate economic growth, social progress and cultural development in the region through joint endeavors in the spirit of equality and partnership in order to strengthen the foundation for a prosperous and peaceful community."*[7] The primary focus, however, was on political-security objectives, and economic matters took a backseat.

4. United Nations Conference on Trade and Development, *Non-Tariff Measures to Trade: Economic and Policy Issues for Developing Countries*, 2.

5. United Nations Economic and Social Commission for Asia and the Pacific, *Trade and Non-Tariff Measures: Impacts in the Asia-Pacific Region* (Bangkok, Thailand: United Nations, 2015), 11.

6. Such as sanitary and phytosanitary (SPS) measures and technical barriers to trade (TBTs). SPS measures aim to protect the public's well-being by preventing the spread of diseases, pestsand contaminants. TBTs refer to a broad range of measures, including labeling requirements, which aim to ensure safety and quality, and promote other non-trade objectives.United Nations Conference on Trade and Development, *Non-Tariff Measures to Trade: Economic and Policy Issues for Developing Countries*, 33

7. Article I, Bangkok Declaration.

The earliest efforts to address NTMs date back to 1977. Under the Agreement on ASEAN Preferential Trading Arrangements, the Member States[8] pledged to liberalize NTMs on a preferential basis. In 1987, the Member States[9] signed the Memorandum of Understanding on the Standstill and Rollback on NTBs among ASEAN Countries. This Memorandum contained the dual commitments *(i)* not to introduce new or additional NTMs which would impede intra-regional trade, and *(ii)* to remove any NTMs which impede intra-regional trade. It was not until 1992 that definite schedules for the elimination of NTBs were set under the Agreement on the Common Effective Preferential Tariff (CEPT) Scheme for the ASEAN Free Trade Area (AFTA):

> "1. Member States shall eliminate all quantitative restrictions in respect of products under the CEPT Scheme upon the enjoyment of the concessions applicable to those products.
> 2. Member States shall eliminate other non-tariff barriers on a gradual basis within a period of five years after the enjoyment of concessions applicable to those products."[10]

However, due to a lack of specific implementing plans, the Member States failed to comply with these commitments.[11]

In 2003, the Member States agreed to establish an ASEAN Community by 2020. This Community would be a deeper form of integration than that of a free trade area, and would be built on 3 pillars: *(i)* the ASEAN Political-Security Community; *(ii)* the ASEAN Socio-Cultural Community; and *(iii)* the ASEAN Economic Community (AEC).[12]

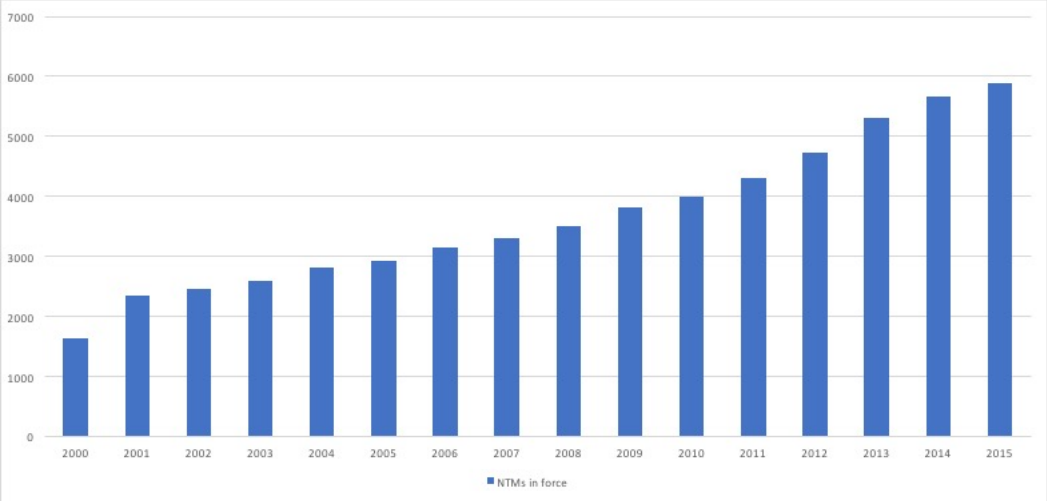
The AEC Blueprint, which contains the commitments and Strategic Schedule for the establishment of the AEC, was adopted in 2007. The aim was to transform the region into a single market and production base characterized by, among other things, the free flow of goods. In order to do so, the Member States committed to, among others: remove all NTBs by 2015; enhance the

8. Indonesia, Malaysia, the Philippines, Singapore, and Thailand.
9. The founding members, including Brunei Darussalam.
10. Agreement on the Common Effective Preferential Tariff Scheme.
11. Myrna S. Austria, "Non-Tariff Barriers: A Challenge to Achieving the ASEAN Economic Community," in *The ASEAN Economic Community: A Work in Progress*, ed. Sanchita Basu Das et al. (Singapore: ISEAS Publishing, 2013), 36.
12. Rodolfo C. Severino and Jayant Menon, "Overview," chap. 1 in *The ASEAN Economic Community: A work in progress*, ed. Sanchita Basu Das et al. (Singapore: Institute of Southeast Asian Studies, 2013), 5.

transparency of NTMs; simplify, harmonize, and standardize trade and customs processes and procedures; establish the ASEAN Trade Repository; harmonize standards, technical regulations, and conformity assessment procedures with international practices; and develop mutual recognition agreements on conformity assessment for specific sectors.[13] These commitments were supplemented by the ASEAN Trade in Goods Agreement (ATIGA), which was signed in 2010. This treaty contained additional trade facilitation measures, and emphasized the commitments regarding the removal of NTBs and the harmonization of NTMs.

Originally scheduled for 2020, the AEC's launch was brought forward to 2015. In November 2015, however, ASEAN recognized its failure to fulfill the NTM-related commitments. For example, the ASEAN Trade Repository was still under construction, and efforts to remove NTBs were still ongoing. As *Figure 1.1* below shows, the number of NTMs has even increased in the region.

FIGURE 1.1: NTMs in Force in ASEAN,2000 to 2015[14].



Nevertheless, ASEAN remained committed to its goal of economic integration. That being so, ASEAN adopted the AEC Blueprint 2025 as the successor to the AEC Blueprint. The aim was to complete those actions that had remained unfinished under the previous Blueprint, namely the elimination of NTBs, the

13. ASEAN Secretariat, *ASEAN Economic Community Blueprint*, Jakarta, 2008.

14. Adapted from Lili Yan Ing et al., "Non-Tariff Measures in ASEAN: A Simple Proposal," in *Non-Tariff Measures in ASEAN*, ed. Lili Yan Ing, Santiago Fernandez de Cordoba, and Olivier Cadot (Economic Research Institute for ASEAN, 2016), 22, `http://asean.i-tip.org`.

convergence of Member States' trade facilitation regimes, and the harmonization of standards and technical regulations.[15]

Given the region's track record vis-à-vis its NTM-related commitments, however, doubts remain as to its ability to achieve the aforementioned goals. The problems may well lie with the underlying instruments themselves, *i.e.* the AEC Blueprint and ATIGA. The instruments' ineffectiveness may be rooted in drafting issues, such as the lack of specificity of stated commitments and obligations.[16] Alternatively, the region's policymakers may have focused on general aims without regard for the Member States' economic and political contexts.[17] Domestic factors may hinder the Member States' compliance with their regional commitments.

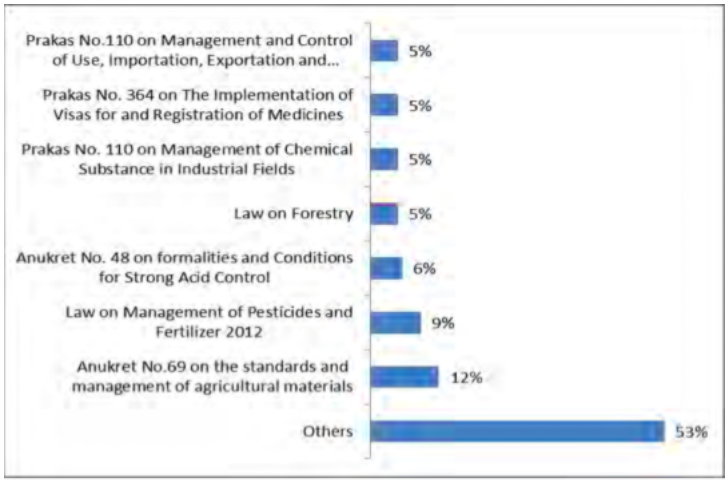
1.1.3 ASEAN Member States and Non-Tariff Measures

NTM regimes are, by their nature, broad and complex. By definition, any instrument can be considered an NTM as long as it can affect the prices and/or quantities of traded goods. As an exhaustive discussion of the Member States' NTM regimes would be unduly long and complex, this sub-section merely outlines their basic features.

Legislation can be in the form of statutes or subsidiary legislation, such as rules, regulations, memoranda, proclamations, and other ministerial or administrative issuances. Statutes provide for the general policies and objectives underlying the measure, while subsidiary legislation fleshes out the administrative and implementing details. The Member States' NTMs are embodied in both types of legislation, although a majority take the form of subsidiary legislation.[18] For example, Cambodia's technical barriers to trade (TBTs) are composed of *anukret*[19], *prakas*[20], and laws, as illustrated by *Figure 1.2*. As legislative instruments, and regardless of their form, NTMs are binding on the public.

15. ASEAN Secretariat, *ASEAN Economic Community Blueprint 2025*, Jakarta, 2015.
16. See *Chapter 2*.
17. See *Chapters 3* and *4*.
18. See Ing et al., "Non-Tariff Measures in ASEAN: A Simple Proposal."
19. These are sub-decrees adopted following a cabinet meeting, and signed by the Prime Minister.
20. These are regulatory proclamations issued by members of the Government.

FIGURE 1.2: Technical Barriers to Trade, Cambodia[21].



A majority of the region's NTMs are quality measures, *i.e.,* sanitary and phytosanitary (SPS) measures and TBTs. Export-related measures are the third most common type of NTM. *Table 1.1* provides a breakdown of the most prevalent types of NTM in the region, as a percentage of total NTMs.

TABLE 1.1: Top NTM Types, as of 2015[22].

Type	%
Technical Barriers to Trade	43.1
Sanitary and Phytosanitary Measures	33.2
Export-related Measures	12.8

The issuance of NTMs is highly decentralized within Member States. NTMs are issued by the ministries, agencies, departments, or bureaus having jurisdiction over the relevant subject matter, objectives, or policy goals. Health and agriculture ministries have issued the majority of NTMs, except in Indonesia and Myanmar. *Table 1.2* shows the top issuing authority in each Member State, as well as the total number of NTMs they have issued, in percentage terms.

21. From Chap Sotharith, c. Ruth Elisabeth L. Tobing, and Anika Widiana, "Classification of Non-tariff Measures in Cambodia," in *Non-Tariff Measures in ASEAN*, ed. Lili Yan Ing, Santiago Fernandez de Cordoba, and Olivier Cadot (Economic Research Institute for ASEAN, 2016), 58, `http://asean.i-tip.org`.

22. Data from Ing et al., "Non-Tariff Measures in ASEAN: A Simple Proposal," 24.

23. Data from ibid., 41, 56, 69, 81, 89, 110, 117, 133, 145, 160.

Table 1.2: NTMs by Issuing Body, as of 2015[23].

Member State	Ministry/Agency	Total, in %
Brunei Darussalam	Ministry of Health	68.8
Cambodia	Ministry of Agriculture, Forestry & Fisheries	30
Indonesia	Ministry of Trade	29.2
Lao PDR	Ministry of Agriculture & Forestry	19.93
Malaysia	Ministry of Health	70.41
Myanmar	Ministry of Livestock, Fisheries & Rural	49
Philippines	Department of Agriculture	36.8
Singapore	Agri-Food & Veterinary Authority	59.92
Thailand	Ministry of Public Health	42.6
Vietnam	Ministry of Agriculture & Rural Development	34.2

1.2 Research Questions

This thesis aims to shed light on the incidence of NTMs in ASEAN by addressing this main research question:

> *Why do NTMs persist in ASEAN, despite the region's legal commitments to harmonize and minimize these instruments?*

In order to arrive at a more nuanced answer, this question is tackled from different perspectives. The logical starting point is an analysis of the region's trade regime, as embodied in both treaty and soft law instruments, and its underlying enforcement mechanisms.[24] In particular, it is necessary to establish whether the Member States are interested in complying with their international law commitments. In other words, the persistence of NTMs is initially examined as a question of international law compliance, as reflected in the first sub-question:

> *i. Does the ASEAN trade regime provide sufficient incentives for compliance with the commitments relating to NTMs?*

Any analysis of State behavior necessarily needs to delve into the underlying motivations of the States concerned.[25] In particular, the ASEAN experience is noteworthy in that the increasing incidence of NTMs coincided with structural changes and deeper integration efforts. The growth of the manufacturing sector

24. See *Chapter 2*.
25. See *Chapter 3*.

and of intra-regional production networks seemingly spurred a paradoxical demand for both liberalized trade and NTMs. This begs the second sub-question of whether societal preferences for certain types of policies, such as NTMs, are linked to economic trends and changes:

> *ii. Can the region's structural changes, such as the increased prominence of industry and production networks, explain the demand for NTMs?*

Additionally, policies cannot be detached from their underlying socio-economic and political contexts.[26] While societal preferences for trade policies may be explained by economic trends, how these preferences are actually translated into laws and regulations depends on the existing political institutions. As such, the link between economic and political factors, on the one hand, and NTM incidence, on the other, bears looking into:

> *iii. Are political and economic factors linked with NTM incidence? Can the former account for the rising incidence of NTMs in ASEAN?*

It is hoped that by investigating the factors underlying the persistence of NTMs in ASEAN, fruitful insights may be gained for the purpose of policymaking at both regional and national levels. This assessment may deepen our understanding of policy-making dynamics by illuminating a wide range of issues, from societal preferences for certain policies, to compliance with multilateral obligations. Consequently, these insights may help policymakers draft more effective and responsive legislation and commitments.

1.3 Methodology and Scope

In answering the above questions, this thesis adapts an interdisciplinary approach and relies on the tools and methods of law and economics. The analysis is guided by the literature on *(i)* compliance with international law, *(ii)* the political economy of trade protection, *(iii)* public choice theories of regulation, and *(iv)* the economic effects of political institutions.

The primary approach is a qualitative analysis of the ASEAN trade regime. This method is useful and appropriate in light of the nature of the research

26. See *Chapter 4*.

questions. Specifically, this thesis aims to make sense of Member States' motives and the resulting increase in NTMs in ASEAN. The qualitative method enables the ASEAN trade regime to be examined in relation to the underlying legal, economic and political contexts. This type of analysis yields insights into both the behavior and underlying motives of the Member States with regard to trade policy.

While the qualitative analysis shows the importance of political and economic factors for trade policy, it fails to establish the actual relationship between these factors and NTM incidence. To supplement the insights of this analysis, this thesis also uses correlation analysis, *i.e.,* Spearman's correlation and independent samples t-tests, to examine the link, if any, between NTM incidence and economic and political factors. Correlation analysis is useful in establishing the link between different variables. Independent samples t-tests can also identify whether there is a significant difference in trade policy, *i.e.,* NTM incidence, among Member States falling into different institutional categories. The present thesis can use these quantitative analyses to identify the possible determinants of NTM incidence.

In general, this thesis focuses on the way in which the ASEAN Member States respond to regional and domestic preferences for trade policies. Considering the region's relative success in its tariff-related commitments,[27] this thesis considers the incidence of NTMs only. While investigations into the trade effects of NTMs (such as the identification of ASEAN NTBs and the determination of changes in trade flows) are undoubtedly timely and important, these are beyond the scope of this study.

Finally, the contents of the ASEAN instruments are taken at face value. Specifically, given that the region's efforts at economic integration comprise a reduction in trade barriers, the literature on federalism and harmonization can be linked to the questions raised in this thesis. For example, the question of whether ASEAN, rather than its Member States, should be responsible for determining which measures are to be considered NTBs, is pertinent to the issue of NTM incidence. The efficiency of the region's trade-related commitments, such as standards harmonization and the use of mutual recognition agreements, is likewise pertinent. However, the scope of this thesis is limited to an examination of

27. By 2014, the average tariff rates for the Member States under the ATIGA was 0.54%. ASEAN Secretariat, *ASEAN Integration Report 2015*, Jakarta, 2015, 9-10

Member States' (non)performance of their trade liberalization efforts, *i.e.* their NTM-related commitments. The goal of this thesis is limited to gaining insights into the incidence of NTMs in the ASEAN region. While the NTM-related commitments do form part of regional integration endeavors, the latter is not the focus of the current research project. Additionally, given the complexity of the issues pertaining to fiscal federalism and harmonization, they merit a separate, in-depth analysis which due to the limited scope of this thesis, is best left for future research.

1.4 Chapter Overviews

This thesis consists of 5 chapters, including this introductory chapter. The subsequent 3 chapters each tackle a specific question, and may be read independently of one another.

Chapter 2 addresses the question of whether the ASEAN trade regime offers sufficient incentives for compliance. The provisions of the applicable legal instruments, together with the region's enforcement institutions, will be analyzed in light of the theories on compliance with international law. This chapter suggests that, because of the vague and general language used in detailing the commitments, the ASEAN's legal instruments have failed to facilitate cooperation and compliance by Member States. This problem may have been exacerbated by the lack of effective enforcement and dispute settlement mechanisms in the region.

Chapter 3 examines the incidence of NTMs in the ASEAN region within the context of the region's structural changes. In particular, it asks whether NTMs were motivated by a desire to protect sectors which have been adversely affected by the growing importance of industry. Alternatively, it asks whether NTMs promote and enhance the Member States' participation in production networks. Guided by scholarship on the political economy of trade protection and public choice theories of regulation, the trends in the imposition of NTMs were examined in relation to the characteristics of the Member States concerned. *Chapter 3* illustrates the fact that NTMs may be motivated not just by protectionist desires, but also by an increased demand for regulatory quality.

The persistence of NTMs may likewise be due to ASEAN's failure to account for the underlying determinants of policy. *Chapter 4* aims to identify the determinants of NTM incidence in the ASEAN region. Possible correlations between NTM incidence on the one hand, and different political and economic characteristics on the other, will be analyzed together with the strength and direction of any such association. The results would seem to indicate that sectoral trends matter. Additionally, the degree of political insulation and accountability may affect how responsive governments are to demands for increased protection.

Lastly, *Chapter 5* summarizes the insights of *Chapters 2* to *4*, and discusses the policy implications of this thesis' findings. It concludes with a brief discussion of possible extensions of this analysis.

2 The Carrot or the Stick: A Question of Compliance[1]

2.1 Introduction

Over the course of recent decades, the commitments of the Association of Southeast Asian Nations (ASEAN) to eliminate non-tariff barriers (NTBs) and increase the transparency of non-tariff measures (NTMs) have been embodied in several instruments, ranging from non-binding declarations to binding treaties. However, the consensus is that the ASEAN's efforts in this regard are still unsuccessful and need to be bolstered. This implies that these legal instruments have failed to influence the behavior of the ASEAN's Member States.

In analyzing the reasons for the persistence of NTMs and NTBs in Southeast Asia, the logical starting point is the effectiveness of the foundational legal instruments. Do Member States have an interest in complying with their international commitments? Specifically, does the ASEAN trade regime sufficiently incentivize compliance with the NTM- and NTB-related commitments? These issues regarding compliance with, and the effectiveness of, ASEAN international law obligations are the main issues dealt with in this chapter. This chapter proposes one explanation for the persistence of NTMs and NTBs in Southeast Asia: that the ASEAN's legal instruments have failed to provide sufficient incentives for compliance.

This chapter begins with an overview of the main compliance theories in the disciplines of international relations, international law, and law and economics, set out in *Section 2.2*. The theories within the law and economics discipline are given particular importance. This discussion is not meant to provide an

1. I would like to thank Emanuela Carbonara, Michael Faure, Klaus Heine, and those participating in the EDLE Fall Seminar at the Erasmus University Rotterdam, for their invaluable comments.

exhaustive review of the literature, but merely to guide subsequent discussions. *Section 2.3* follows with a description of the ASEAN trade regime and enforcement framework. *Section 2.4* continues with an analysis of this trade regime, guided by the law and economics theories on compliance. *Section 2.5* concludes with a summary of the factors affecting the ASEAN Member States' compliance with their obligations to eliminate NTBs and enhance the transparency of NTMs.

As this chapter concerns compliance, the focus is on the Member States. International law directs and informs the conduct of, and interactions between, States. This does not mean, however, that domestic interests and idiosyncratic State characteristics are not important or do not determine trade policy. As such, the role of these intra-State factors on trade policy will be dealt with in separate chapters.

2.2 Theories of Compliance

The key idea underlying the concept of compliance is conformity of behavior with the requirements of legal and regulatory institutions.[2] Thus, compliance in international law refers to:

1. the extent to which signatory States have changed their behavior in accordance with their procedural and substantive obligations under treaties, customary international law and soft law instruments, [3] and
2. whether their actions are in line with the spirit of the agreement.[4]

Implementation and effectiveness are concepts related to compliance. Implementation refers to the actions, such as the enactment of measures or the amendment of existing legal and regulatory institutions, undertaken by States to fulfill their international law obligations.[5] Implementing actions are needed

2. Joan E.Donoghue et al., "Theme Plenary Session: Implementation, Compliance and Effectiveness," *Proceedings of the Annual Meeting (American Society of International Law)* 91 (1997): 52.

3. Such as memoranda of understanding, joint agreements, and declarations, which are non-binding instruments which contain promises or expressions of intent about future State actions

4. E.Donoghue et al., "Theme Plenary Session: Implementation, Compliance and Effectiveness," 59.

5. Ibid.

where the status quo in the signatory States diverges from the norms, obligations and requirements under international agreements. Where the existing regimes already conform to these international obligations and requirements, the signatory State is already compliant. Effectiveness, on the other hand, refers to whether the international agreement has achieved its stated objectives and/or addressed the problems it was intended to resolve.[6] An international regime may be deemed ineffective, despite high compliance rates by signatory States, where the stated goals and objectives remain unattained or where the problems remain unresolved. Nevertheless, widespread noncompliance may be a sign of an ineffective legal regime.[7]

While noncompliance is a sign of ineffectiveness, seemingly compliant behavior does not sufficiently prove the power of international law to influence States. Regularity of behavior among States may occur for reasons unrelated to the obligatory power of international law. Where States share common interests, for example, cooperation can occur even in the absence of law.[8]

Table 2.1 represents a hypothetical one-shot game involving two States, A and B, who share common interests. These might be neighboring States sharing a common border. In this scenario, each State does best if it respects the border. Perhaps neither State has sufficient military and economic resources to launch an effective attack on the other. It is also possible that the costs of any such expansion outweigh the benefits gained from the additional territory. If A attacks B, the former wastes too many resources. B suffers a small loss because its territory will be diminished, but it will suffer a greater loss if it attacks A as well. If both respect the border, the maximum joint payoff is achieved. The dominant strategy of each self-interested State is to respect the border, regardless of the action of the other State. This result would have occurred even in the absence of a treaty or binding legal norm.[9] In other words, the legal rule merely requires the States to do what they would have already done.

6. Ibid.

7. Benedict Kingsbury, "The Concept of Compliance as a Function of Competing Conceptions of International Law," *Michigan Journal of International Law* 19 (1998): 346.

8. Andrew T. Guzman, "A Compliance-Based Theory of International Law," *California Law Review* 90, no. 6 (2002): 1843; Jack L. Goldsmith and Eric A. Posner, *The Limits of International Law* (New York: Oxford University Press, 2007), 27-28; Andrew T. Guzman, *How International Law Works: A Rational Choice Theory* (New York: Oxford University Press, 2008), 25-26.

9. Goldsmith and Posner, *The Limits of International Law*, 28; Guzman, "A Compliance-Based Theory," 1842-1843; Guzman, *How International Law Works*, 29.

Table 2.1: Shared Interests

		State B	
		attack	**respect**
State A	**attack**	-10,-10	-5,10
	respect	10,-5	15,15

Table 2.2: Pure Coordination Game

		State B	
		action X	**action Y**
State A	**action X**	5,5	0,0
	action Y	0,0	5,5

International law can exert more influence when States find themselves in either a coordination game or a prisoner's dilemma. In a pure coordination game, the States have an incentive to cooperate. However, cooperation depends on the successful coordination of actions between the States. As shown in *Table 2.2*, the highest payoffs are seen when the States coordinate their actions, with both converging on either (X, X) or (Y, Y). The problem becomes one of determining the focal point to maximize the total payoffs.[10] One example is the use of harmonized rules and standards for the international carriage of persons and goods by air. A common set of rules and standards benefits States as this decreases the costs associated with air transport. Once a set of rules has been determined, no State has an incentive to deviate. Thus, international law matters as a way of identifying cooperative actions and establishing a focal point for coordination.[11]

Table 2.3: Prisoner's Dilemma

		State B	
		defect	**cooperate**
State A	**defect**	5,5	10,1
	cooperate	1,10	8,8

Cooperation is most difficult when the States find themselves in a prisoner's dilemma. *Table 2.3* presents a bilateral one-shot example of this game, where the States can maximize their joint payoffs through coordination. However,

10. Goldsmith and Posner, *The Limits of International Law*, 32-33; Guzman, *How International Law Works*, 26-27.

11. Guzman, *How International Law Works*, 28.

coordination is not assured as they can each gain at the other's expense through defection.[12] The dominant strategy of each State is defection. The predicted outcome is a failure of coordination, with each State violating its obligations.[13]

This prediction, however, is too bleak and unrealistic. States do comply with their international law obligations, even in prisoner's dilemma situations.

The existing literature on compliance comes from international relations, international law, and law and economics scholarship. The following subsections provide an overview of the main theories, focusing on the law and economics theories of compliance. However, these are not meant to provide a complete review of the compliance literature. Rather, this summary shows that this literature is still developing, and that the most important questions concerning State behavior have not yet been fully answered. The main ideas gleaned from the law and economics compliance theories will guide and inform the discussion presented in *2.4*.

2.2.1 International Relations Theories of Compliance

The theories in this discipline are greatly influenced by political science, international relations, and economics.[14] International relations scholars regard laws as of a directive nature, in that the motivation for most legal regimes is the pursuit of goals and objectives.[15] The main schools of thought are realism, institutionalism, and liberalism.

Realism

Under realism, self-interested States are the primary and unitary actors in international relations. Their pursuit of their own interests and objectives is only constrained by the power and interests of other States.[16] States only comply with international law when doing so is in their own interest. The necessary corollary

12. Goldsmith and Posner, *The Limits of International Law*, 29-32; Guzman, "A Compliance-Based Theory," 1842; Guzman, *How International Law Works*, 29-32.
13. Goldsmith and Posner, *The Limits of International Law*, 30; Guzman, "A Compliance-Based Theory," 1842; Guzman, *How International Law Works*, 32.
14. Guzman, "A Compliance-Based Theory," 1823.
15. Kingsbury, "The Concept of Compliance," 350.
16. Ibid.

is that States with significant power to act will not hesitate to disregard their international law obligations when these conflict with their own interests.[17] Thus, international cooperation is only possible where this promotes the interests of all States concerned.[18] However, this theory is belied by the fact that nations expend considerable resources to create international laws and legal mechanisms, including mechanisms for the resolution of international disputes.[19]

Institutionalism

As with realism, States are the primary, rational, and unitary actors under institutionalism.[20] These self-interested States interact within the framework of international institutions which play a facilitative role. Institutions serve to encourage cooperation by reducing transaction costs and the costs of sanctions. Institutions thus transform one-shot to repeated interactions,[21] stabilize expectations, increase the flow of information, facilitate monitoring, and provide a forum for the settlement of disputes.[22] In this context, institutions can encourage compliance by making noncompliance costly.

A shortcoming of this institutionalist approach is its failure to account for the internal aspect of laws. It disregards the volitional sense of obligation that one must conform to legal rules and norms.[23] Another criticism is that this approach only applies to coordination games, where international law can establish the focal points for cooperation. Institutionalism is inapplicable to multilateral prisoner's dilemmas, as these are characterized by free-riding and collective action problems.[24] Although institutions can further transparency and increase information flows, sanctions still need to be imposed by the compliant States. Since sanctions are costly for both the sanctioned and the sanctioning States, compliant States will prefer to free-ride on the sanctioning acts of others. Thus,

17. Kingsbury, "The Concept of Compliance," 351.
18. Guzman, "A Compliance-Based Theory," 1837.
19. Ibid., 1837-1838.
20. Robert Axelrod and Robert O. Keohane, "Achieving Cooperation Under Anarchy: Strategies and Institutions," *World Politics* 38, no. 1 (2011); Robert M. Axelrod, *The Evolution of Cooperation* (New York: Basic Books, 2006), both cited in Guzman, "A Compliance-Based Theory," 1839-1840.
21. Ibid., 1840.
22. Kingsbury, "The Concept of Compliance," 352.
23. Ibid., 354-355.
24. Goldsmith and Posner, *The Limits of International Law*, 87.

the imposition of sanctions will be sub-optimal, and this institution is ineffective in promoting compliance.

Liberalism

Instead of interstate interactions, liberalism focuses on the dynamics between intra-state actors, such as individuals and interest groups, and the effects these have on state policy.[25] Unlike realism and institutionalism, this theory dispenses with the assumption of unitary state actors.[26] State institutions only serve to represent and regulate intra-state actors, aggregating and channeling the latter's interests and preferences in accordance with their relative weight and bargaining power in society.[27] Liberalism assumes that the heterogeneous interests of intra-state actors[28] define state preferences, which in turn dictate how States act when representing their constituencies.[29] Thus, the domestic political process determines state policy, and a State will only have an interest in international relations if the intra-state actors also do. All international interactions, including entry into international law agreements and obligations, are driven by particular State aims and interests.

Under liberalism, States are disaggregated into its various components which perform representative, regulatory, and other bureaucratic functions.[30] Each State likewise engages in transnational transactions with other States, intergovernmental institutions, and private entities. In this context, compliance is the outcome of aggregated preferences through domestic political processes and transnational interactions.[31] Thus, "*state preferences and policies are interdependent and [that] the strategic games states play matter for policy.*"[32]

However, this focus on individuals, private entities and interest groups makes this theory intractable and complex. While liberalism is useful in shedding

25. Andrew Moravcsik, "Liberal Theories of International Law," in *Interdisciplinary Perspectives on International Law and International Relations: The State of the Art*, ed. Jeffrey L. Dunoff and Mark A. Pollack (New York: Cambridge University Press, 2013), 83-113; Andrew Moravcsik, "The New Liberalism," in *The Oxford Handbook of International Relations*, ed. Christian Reus-Smit and Duncan Snidal (New York: Oxford University Press, 2013), 234-251.
26. Guzman, "A Compliance-Based Theory," 1838.
27. Moravcsik, "Liberal Theories of International Law," 84.
28. Moravcsik, "The New Liberalism," 236-237.
29. Ibid., 237-239.
30. Kingsbury, "The Concept of Compliance," 356-357.
31. Ibid., 357.
32. Moravcsik, "Liberal Theories of International Law," 86.

light on domestic interactions and their effect on international policy and compliance, it fails as a general theory of compliance given its inability to predict the outcomes of intra-state interactions.[33]

2.2.2 International Law Theories of Compliance

Despite the importance of compliance to international law, this discipline has been criticized for neglecting this concept in its research agenda and for failing to provide theories capable of addressing its various nuances.[34] To date, international law's main compliance theories are the legitimacy model and the managerial model. These theories rest on the traditional positivist and rule-based views of law, where the focus is on the differentiation of law from non-law instruments.[35]

Legitimacy

Legitimacy theory rests on the essential assumption that compliance occurs when rules have "*come into being in accordance with the right process.*"[36] Legitimacy is defined as "*a property of a rule or rule-making institution which itself exerts a pull toward compliance on those addressed normatively because those addressed believe that the rule or institution has come into being and operates in accordance with generally accepted principles of right process.*"[37] The four factors which affect the compliance decision are determinacy,[38] symbolic validation,[39] coherence,[40] and adherence.[41] Rules which exhibit these four factors

33. Guzman, "A Compliance-Based Theory," 1839.
34. Ibid., 1830.
35. Kingsbury, "The Concept of Compliance," 348-349; Goldsmith and Posner, *The Limits of International Law*, 15.
36. Thomas M. Franck, "Legitimacy in the International System," *American Journal of International Law*, no. 82 (1988): 706 as quoted in Guzman, "A Compliance-Based Theory," 1834.
37. Thomas M. Franck, *The Power of Legitimacy among Nations* (New York: Oxford University Press, 1990), 24-25 as quoted in Goldsmith and Posner, *The Limits of International Law*, 26.
38. *"Determinacy refers to the clarity of the rule or norm,"* in Guzman, "A Compliance-Based Theory," 1834.
39. *"Symbolic validation refers to the presence of procedural practices or rituals that provide a rule with symbolic importance and legitimacy,"* in ibid.
40. *"Coherence refers to the connection between rational principles and the rule,"* in ibid.
41. *"Adherence refers to the connection between the rule and the secondary rules used to interpret and apply the primary rule,"* in ibid.

generate a strong compliance pull, while the absence of these factors leads to a weaker compliance pull.[42]

However, the assertion that legitimacy generates compliance fails to explain the importance of legitimacy and the reason behind the causal link between legitimacy and compliance. This shortcoming is the main weakness of legitimacy theory.[43]

Managerial Model

Focusing mainly on treaties, Chayes and Chayes (1995) examined the mechanism underlying the compliance of States. Their managerial model eschews the importance of sanctions and other coercive mechanisms, asserting that coercive measures are "*a waste of time*".[44] Instead, they assert that compliance can be achieved through "*a cooperative, problem-solving approach.*"[45] This model assumes that States have a general propensity to comply with international law[46] due to considerations of efficiency, interests and the force of norms:

1. Compliance minimizes transaction costs, as States no longer need to constantly perform cost and benefit analyses for every decision;[47]
2. International agreements and treaties are consent-based, which States would not have agreed to if such instruments failed to serve their interests;[48] and
3. A general compliance norm generates a compliance pull which influences States to comply.[49] In other words, the existence of a treaty itself creates a normative obligation to comply. Given this general propensity to comply, compliance is the expected outcome of international legal regimes.

42. Thomas M. Franck, *Fairness in International Law and Institutions* (New York: Oxford University Press, 1995), 24 as quoted in Guzman, "A Compliance-Based Theory," 1834.
43. Ibid., 1834-1835.
44. Abram Chayes and Antonia Handler Chayes, *The New Sovereignty: Compliance with International Regulatory Agreements* (Cambridge, Massachusetts: Harvard University Press, 1995), 2.
45. Ibid., 3.
46. Ibid., 3-9.
47. Ibid., 4.
48. Ibid., 4-7.
49. Ibid., 8-9.

Considering that States have a general propensity to comply with their treaty obligations, deliberate violations are the exception. Instances of breach can be explained by the following:[50]

1. Ambiguous and indeterminate treaty provisions, which "*produce a zone of ambiguity within which it is difficult to say with precision what is permitted and what is forbidden*".[51] The more general the language used, the greater the range of possible interpretations the signatories can make.

2. The States have a limited capacity to perform their undertakings and obligations. This may be caused by lack of scientific, technical, bureaucratic, and financial resources. States may also lack the capacity to perform when the treaty obligations aim to constrain the actions of individuals and private entities.[52]

3. There is a time lag before the social or economic changes required by treaty obligations can take effect.[53]

Instead of putting too much emphasis on enforcement, efforts and resources should be directed towards management processes which enhance coordination and encourage compliance, such as transparency,[54] dispute settlement,[55] and capacity building.[56]

The main criticism of the managerial model focuses on its limited applicability to treaties and international agreements which only address coordination problems.[57] Another weakness is its inability to explain the mechanism behind, and motivations for, compliance by States. Consent-based theories such as this merely assume that States comply with the law without explaining why mere consent would suffice to generate actual compliance. In reality, consent alone does not provide a strong enough incentive to comply, especially if compliance is costly or against the State's self-interest.[58] And the notion of a compliance norm

50. Chayes and Chayes, *The New Sovereignty*, 9-17.
51. Ibid., 10.
52. Ibid., 14.
53. Ibid., 15.
54. Ibid., 22-24.
55. Ibid., 24-25.
56. Ibid., 25.
57. Guzman, "A Compliance-Based Theory," 1832-1833; Guzman, *How International Law Works*, 16.
58. Guzman, "A Compliance-Based Theory," 1832.

is a mere assumption which fails to explain why a State would comply with burdensome obligations, particularly where international obligations conflict with national interests and objectives.[59]

2.2.3 Law and Economics Theories of Compliance

The main proponents of compliance theories in law and economics scholarship are Goldsmith and Posner (2007),[60] and Guzman (2002, 2008).[61] A common feature of their work is their use of rational choice assumptions, particularly the existence of self-interested and rational States, in explaining how, when and why States comply with international law.[62]

Goldsmith and Posner

The Limits of International Law focuses on States as unitary actors "*acting rationally to maximize their interests, given their perception of the interests of other states and the distribution of state power.*"[63] Unlike the managerial model, Goldsmith and Posner (2007) shun the assumption of State preference for compliance with international law for two reasons:

1. international law compliance will not occur at the expense of other state preferences, such as for security or economic goods;[64] and
2. assuming the existence of a preference for compliance fails to explain the mechanisms underlying actual compliance.[65] Thus, this model rejects the view that States comply with the law for non-instrumental and normative reasons.[66]

59. Ibid.
60. Goldsmith and Posner, *The Limits of International Law*.
61. Guzman, "A Compliance-Based Theory"; Guzman, *How International Law Works*.
62. A recent addition to this literature is *Economic Foundations of International Law* by Posner and Sykes (2013). Similarly with Goldsmith and Posner (2007), Posner and Sykes (2013) discuss the conditions under which international law either fails or succeeds, given the assumption of rational States.
63. Goldsmith and Posner, *The Limits of International Law*, 3.
64. Ibid., 9.
65. Ibid., 10.
66. Ibid., 14-15.

International interactions are modeled as a two-stage game involving States.[67] During the first stage, States can allocate resources among themselves in accordance with a set of rules, *i.e.* international law, which is consistent with their interests and capacities. The second stage arises because of a shock[68] which threatens the stability of the first stage status quo. Due to transaction costs and imperfect information, States are incapable of efficiently adjusting the initial set of rules to accommodate this shock. The resulting patterns of behavior could fall under any, or a combination, of four types:

1. In *coincidence of interest*, the dominant strategy of each self-interested State is to act in accordance with the set of rules, regardless of the actions of the other States. In equilibrium, the States seemingly act in accordance with the rules, whereas in reality they are each acting independently in their own interests.[69]

2. In *coordination*, each State is indifferent to the different possible states of the world. The priority is to create a focal point on which the States can plan their actions, thus avoiding conflict. In this case, States can achieve higher payoffs when they coordinate their actions, and no State has an incentive to defect from the agreed set of rules.[70]

3. The States may find themselves in a repeated prisoner's dilemma. While it may be in the interest of a State to deviate from the initial set of rules, this action may set off retaliatory actions and other sanctions on the part of the other Parties, making all States worse off. Under *cooperation*, self-interested States refrain from seeking short-term benefits in order to preserve medium- and long-run benefits. The prisoner's dilemma may be overcome if: the States are aware of what qualify as cooperative acts; they have sufficiently low discount rates; the game is repeated indefinitely; and the short-run payoffs do not outweigh the long-run payoffs.[71]

4. If a State, or a coalition of like-minded States, is powerful enough to pursue its interests even at the expense of weaker States and in deviation of the set of rules, then a state of *coercion* arises. Weaker States are

67. Goldsmith and Posner, *The Limits of International Law*, 10-11.
68. Whether this shock may be political, economic, technological, or otherwise.
69. Goldsmith and Posner, *The Limits of International Law*, 11-12, 27-28.
70. Ibid., 12, 32-35.
71. Ibid., 12, 29-32.

> forced to sacrifice their interests at the behest of powerful States because the threat of costly punishment from the latter is credible. In equilibrium, the strong and weak States act rationally in accordance with their beliefs regarding the interests and relative power of the other States.[72]

Under the Goldsmith and Posner (2007) model, international law is "*endogenous to state interests*"[73] as it "*emerges from states' pursuit of self-interested policies on the international stage*".[74] Law is the result of the rational pursuit of interests by States, constrained only by the interests and relative power of other States.

Elaborating on the above assertions, Goldsmith and Posner (2007) also discussed treaties and soft law instruments. The basic idea is that States enter treaties in order to reduce uncertainty, thus encouraging cooperation or coordination.[75] In establishing treaty and soft law regimes, States agree on common terms, necessarily distinguishing acts of cooperation from defection. Even in a multilateral setting, States either comply or defect in pairs, with "*each state in a pair complying with the common terms as long as the other state in the pair does*".[76] This implies that any punishment for defection will come from the affected State alone. The corollary to this is that despite the multilateral nature of a regime, there will be heterogeneity in the behavior of States in line with their interests and relative power.[77] Compliance occurs when States "*fear retaliation from the other state or some kind of reputational loss, or because they fear a failure of coordination*".[78] The choice between treaty and soft law regimes is based on three factors:

1. whether the Parties wish to signal the depth of domestic political support for their international commitment;

2. whether they wish to take advantage of default rules and international conventions attendant to treaty regimes to aid interpretation and save on transaction costs; and

72. Ibid., 12, 28-29.
73. Ibid., 13.
74. Ibid.
75. Ibid., 84-85.
76. Ibid., 87.
77. Ibid., 88.
78. Ibid.

3. their conveyance of the seriousness of each Party's commitment to the agreement.[79]

Guzman

Guzman (2002, 2008) presents a compliance theory which shows how international law can affect a State's behavior even in the absence of an effective enforcement system. As with Goldsmith and Posner, this model applies to both treaty and soft law regimes.

International law is defined as those obligations that affect the incentives and behavior of States,[80] making it more likely that a State will act in a manner consistent with its obligations and promises.[81] The scope of this term includes non-binding "*soft law*"[82] instruments such as joint declarations, memoranda of understanding, and executive agreements.[83] Guzman's (2002, 2008) approach differs from traditional international law scholarship, as the latter focuses exclusively on treaties and customary international law. For Guzman (2002, 2008), treaties, soft law, and customary international law merely represent the spectrum of the forms and degrees of commitment[84] that States may choose from in their dealings with each other.

States are assumed to rationally pursue solely their own interests, without any innate preference for compliance and without any regard for the legitimacy of law.[85] The main implication is that cooperation is only likely if this is in the interest of the involved States. In situations where cooperation is easy to achieve, such as games of common interest, pure coordination, and the battle of the sexes, international law requires nothing more than what States would have done even in the absence of law. International law has little effect in these situations.[86] The more interesting cases are those where cooperation is difficult,

79. Goldsmith and Posner, *The Limits of International Law*, 91.
80. Guzman, "A Compliance-Based Theory," 1878.
81. Ibid., 1882.
82. The term "soft law" refers to non-binding rules and instruments which *"interpret or inform our understanding of binding legal rules or represent promises that in turn create expectations about future conduct".* Andrew T. Guzman and Timothy L. Meyer, "International Soft Law," *Journal of Legal Analysis* 2, no. 1 (2010): 174
83. Guzman, "A Compliance-Based Theory," 1879.
84. Guzman, "A Compliance-Based Theory," 1882-1883; Guzman, *How International Law Works*, 144.
85. Guzman, *How International Law Works*, 16-17.
86. Ibid., 25-29.

such as prisoner's dilemma games, as these show that international law does affect state behavior.[87]

In a prisoner's dilemma, while the highest overall payoffs will be achieved through mutual cooperation, the dominant strategy of each party is to defect. In one-shot games, the expected equilibrium is defection.[88] International law is one mechanism used to overcome this dilemma by encouraging mutual cooperation.[89] In one-shot games and without any effective enforcement system, doubts as to the effectiveness of any international law regime are not unwarranted. If the parties are incapable of imposing credible sanctions for defection, the payoff schemes – and ultimately the incentives to defect – are left unchanged. However, it is illusory to think that inter-state relations can be categorized as one-shot games in this age of globalization. The repeated nature of state interactions enables the "*Three Rs of Compliance*" – reciprocity, reputation, and retaliation – to promote cooperation.[90]

Reputational sanctions[91] and reciprocal actions are not intended to penalize a defecting State. Rather, both are adjustments in the compliant States' beliefs and actions, respectively, because of the defection. Specifically, a reputation for compliance "*consists of judgments about the state's past behavior and predictions made about future compliance based on that behavior*".[92] Reciprocity, meanwhile, is the "*adjustment in a state's behavior motivated by a desire to maximize the state's payoffs in light of new circumstances or information*".[93] On the other hand, retaliation refers to "*actions that are costly to the retaliating state and intended to punish the violating party*".[94]

Guzman (2002, 2008) developed a theory of reputation to show how international law can affect behavior in favor of compliance even in the absence of an enforcement mechanism.[95] Reputation is effective, even when neither reciprocity nor retaliation are, because it does not require the compliant States to

87. Ibid., 29-30.
88. Ibid., 30-31.
89. Ibid., 32.
90. Ibid., 33-34.
91. This refers to the costs suffered by a state's reputation in cases of noncompliance.
92. Guzman, *How International Law Works*, 33.
93. Ibid.
94. Ibid., 34.
95. See also Guzman, "A Compliance-Based Theory," 1844-1851.

embark on costly actions.[96] Compliant States need only to assess their potential or current partner's reputation. Specifically, a State's reputation can be regarded as a proxy for its actual willingness to comply with its legal obligations, which is an unquantifiable variable for other States. Habitual compliance with legal obligations will create a good reputation, while noncompliance will create a bad reputation. The former is valuable as this allows States to easily find partners, enter future cooperative agreements, and extract more generous concessions. This is possible because its promises are considered to be credible by these future partners.[97]

States are assumed to be interested in maintaining a good reputation only to the extent that this reputation improves their payoffs.[98] Defection implies that the future gains from the breached agreement are sacrificed in favor of short term gains. In the face of an incentive to defect, reputational sanctions will tilt the scales in favor of compliance only if the costs of noncompliance outweigh the payoffs from defection. In addition, the reputational sanctions also affect payoffs from future agreements. The lessened credibility will make it difficult for the defecting State to enter future agreements. Likewise, defecting States are unlikely to be granted generous concessions from future partners who are doubtful of their willingness to fulfill their commitments. If the parties to an agreement sufficiently value long-term gains over short-term ones, compliance with international law is possible, not because of any enforcement mechanism, but due to the value of reputation as collateral for both current and future agreements.[99]

Reputational costs also explain why States resort to different regime forms, from non-binding soft law commitments to treaties. Legal form functions as a costless signal of a State's willingness to comply with its international legal obligations "*and the amount of reputational collateral they wish to pledge*".[100] More serious commitments, such as treaties, can generate higher payoffs at the risk of greater reputational costs in the event of any breach.

Compliance is also a function of reciprocity. In a prisoner's dilemma, every party to an international law regime has an incentive to defect to take advantage of

96. Guzman, *How International Law Works*, 39-40.
97. Ibid., 35.
98. Ibid.
99. Ibid., 40.
100. Ibid., 59.

possible short term gains. However, this defection will spur reciprocal defections from the other parties, thereby undermining the future stability of the regime. If long-term payoffs outweigh the short-term gains, the mere threat of reciprocal defections may suffice to deter defections if this threat is credible. The concept of reciprocity is also linked with that of reputation in that a breach under a current agreement lessens the credibility of the defecting State with respect to its current partners. These partners are less likely to accept any promises of future compliance with the current agreement and to enter future agreements with the defector.

However, reciprocity may fail to deter defections if the threat of reciprocal defections is not credible or inconsequential to the defecting State.[101] Reciprocity is also problematic in the multilateral setting, particularly where the international law regime aims to address problems pertaining to collective action and public goods. An example of a non-rivalrous good is the environment. The enjoyment by one of clean air does not diminish others' consumption of the same good. If one State breaches an environmental treaty, it is irrational for the other parties to engage in reciprocal defections as this would undermine the purpose of the treaty to the detriment of all. In this context, the threat of reciprocal defections lacks any credibility. Thus, the "*incentive to comply is reduced*"[102] and compliance remains an issue. A common solution is to allow compliant States to engage in reciprocal defections only with respect to the defecting State.[103]

Retaliation plays a role where reputation and reciprocity, either singly or taken together, may not suffice to generate compliance, such as when short-term gains outweigh the costs of defection. Retaliatory actions, which are costly for the retaliating State, are only rational if they generate benefits for the retaliating State. One possible benefit is the creation of a credible reputation for punishing defectors whenever the rights and payoffs of the retaliating State are compromised. This reputation for punishment is valuable, as it induces both current and future partners to comply with their legal commitments. A State may also resort to retaliation to convince defectors to cease ongoing breaches and comply with the current legal regime. Through the imposition of costly sanctions, the retaliating State may sufficiently alter the payoff scheme for the defector by making ongoing breach costlier than future compliance. Thus, even costly

101. Ibid., 45.
102. Ibid., 65.
103. Ibid., 65-66.

retaliatory acts may be in the interest of retaliating States by *(i)* signaling that defections will be punished, and by *(ii)* deterring defections by any future partners.[104]

As with reciprocity, retaliation is less effective in multilateral scenarios involving public goods, due to the free-rider problem. In the event of breach, compliant States have an incentive to free ride on the retaliatory acts of others, and the resulting level of retaliation is sub-optimal. This collective action problem lessens the credibility of the threat of retaliation. A solution, as in the case of reciprocity, is to grant only the injured States the right to impose retaliatory sanctions.[105]

Thus, compliance is a function of reputation, reciprocity and retaliation. By making instances of breach costlier, States are incentivized to comply. International legal regimes are able to affect behavior, regardless of its form.

Another important and related question is why States resort to soft law instead of hard law. Intuitively, treaties and other binding instruments seem preferable. These require greater reputational collateral, thus incentivizing compliance and discouraging breaches. As States are assumed to enter international legal regimes only when these are in their interest, compliance would always be preferable.

Guzman and Meyer (2010) offered four reasons for the use of soft law. Firstly, soft law solves coordination problems by creating a focal point on which behavior can be aligned in a less costly manner than that of treaties and other hard law regimes.[106] Secondly, as the joint losses associated with breaches of hard law[107] are greater, these lessen the net value of the hard law regime. These costs arising from breaches of hard law are zero-sum, as the losses suffered by one State are not gained by the other. This makes soft law regimes less costly and more attractive.[108] Thirdly, it is easier and less costly to amend suboptimal soft law regimes.[109] Lastly, unlike institutional regimes created under hard law, institutions and tribunals functioning under soft law regimes may issue nonbinding decisions, pronouncements, and other instruments which are still

104. Guzman, *How International Law Works*, 46-47.
105. Ibid., 66-67.
106. Guzman and Meyer, "International Soft Law," 176-177, 188-192.
107. These are primarily reputational and retaliatory costs.
108. Guzman and Meyer, "International Soft Law," 177, 192-197.
109. Ibid., 178, 197-201.

capable of shaping and influencing future behavior even in the absence of the unanimous consent of all parties. This may help to encourage long-term cooperation even in the face of explicit opposition to stronger forms of cooperation from other States.[110]

Behavioral Law and Economics

A recent development in the literature is represented by the application of behavioral law and economics to international law. The theories of rational choice and behavioral economics are used together to better explain why States behave the way they do.[111] The rational choice analysis of inter-state interactions can be supplemented with insights into systematic heuristics and biases. Heuristics and biases can explain actions and decisions which seemingly violate the assumption of actors' rationality. Two concepts related to bounded rationality are particularly relevant to the issue of compliance with international law, namely the "status quo bias" and the "endowment effect".[112]

The "status quo bias" and the "endowment effect" can be explained using the concept of reference points. Actors evaluate choices and make decisions by considering a reference point. How reference points are defined can influence outcomes, and the commonly used reference point is the status quo.[113] However, individuals are subject to a "status quo bias". They prefer not to deviate from the status quo "*because the disadvantages of leaving it loom larger than advantages*".[114] A related pattern is the "endowment effect", which causes individuals to demand a higher price for giving something up than they would be willing to pay for it.[115] The outcome depends on how the reference point is presented: individuals would be more reluctant to act if the choice involved a change from the status quo, or if the choice is presented as a loss. Thus, the choice architecture matters.[116]

110. Ibid., 178, 201-207.
111. Anne van Aaken, "Behavioral International Law and Economics," *Harvard International Law Journal* 55, no. 2 (2014): 421-481.
112. Ibid., 427-429.
113. Ibid., 428.
114. Daniel Kahneman, Jack L. Knetsch, and Richard H. Thaler, "Anomalies: The Endowment Effect, Loss Aversion, and Status Quo Bias," *Journal of Economic Perspectives* 5, no. 1 (1991): 197-198.
115. Ibid., 194.
116. Aaken, "Behavioral International Law and Economics," 429.

These concepts have implications for the negotiation, design and implementation of international law obligations. International law instruments, just like contracts, can create reference points by allocating rights, entitlements and obligations. Treaties can have an opt-in default at the first level, where States are required to expressly agree to be bound by the treaty. Specific treaty provisions may be tailored to be opt-in or opt-out, reflecting the signatories' degrees of interest.[117]

The reference point and the choice architecture may affect the degree to which treaty obligations are met, due to the status quo bias and the endowment effect. States may be reluctant to meet obligations requiring substantial changes on their part, such as the abolishment of existing institutions or the amendment of current laws. And the longer a States has "owned" a certain endowment, be it a right or an entitlement, the higher the "price" it would demand for it. Performance may also be a function of the perception of the other States' obligations. Specifically, a State will meet its obligations if there is a strong sense of entitlement to the outcomes provided under the treaty. On the other hand, a State which feels shortchanged will renege on its obligations.[118] Thus, how the treaty terms are drafted can affect the signatory States'perception of the treaty, and this perception can influence their willingness to comply with its terms.

2.2.4 Summary

The literature on compliance with international law is still at the developmental stage, and the debate on why States act the way they do is still ongoing. The various theories may differ in their methodologies, but they all provide insights into why States undertake, and comply with, international commitments. International law deals with inter-state rights and obligations. As such, it is unsurprising that the main actor in most of the theories is the unitary State. Institutionalism and liberalism are the exceptions, given their emphasis on institutions and domestic actors, respectively. Most of the theories, except for the legitimacy theory, assume that States are driven by their pursuit of their

117. Aaken, "Behavioral International Law and Economics," 451.
118. Oliver Hart and John Moore, "Contracts as Reference Points," *The Quarterly Journal of Economics* 1 (2008): 3.

own interests as guided by their preferences, regardless of how these interests are defined.

The theories differ in tackling the issue of whether international law matters in influencing the behavior of States. Realism alone argues that law is an epiphenomenon. The other theories are more optimistic about the role of international law. International law matters in coordination games (institutionalism and the managerial model) and prisoner's dilemmas (Goldsmith and Posner [2007], and Guzman [2002, 2008]). Nevertheless, the rationality assumption has its limits, and the existing theories have limited power in explaining certain cases of breach. As such, it is not unreasonable to supplement the existing theories with concepts from behavioral economics.

In *Section 2.4*, the compliance of the ASEAN Member States with their NTM- and NTB-related obligations is examined in light of the insights gained from the law and economics compliance theories.

2.3 ASEAN International Trade Regime

This section describes the international trade regime in ASEAN. It begins with a brief overview of the ASEAN institution, followed by a discussion of the NTM- and NTB-related commitments and the ASEAN framework for the resolution of economic and trade issues.

2.3.1 The Association of Southeast Asian Nations

ASEAN is not the region's first attempt at establishing an organized body. Earlier attempts included the Southeast Asia Treaty Organization (1954), the Asian and Pacific Council (1966), the Association of Southeast Asia (1959), and the Malaysia-Philippines-Indonesia Association (1964). All of these failed due to a variety of reasons, such as intra-group tensions, conflicting organizational objectives, and the inability to truly reflect and promote regional interests.[119]

119. Diane A. Desierto, "Postcolonial International Law Discourses on Regional Developments in South and Southeast Asia," *International Journal of Legal Information* 36, no. 3 (2008): 419.

ASEAN was formed with the signing of the Bangkok Declaration in 1967. Ostensibly, the Association's goal was to *"accelerate economic growth, social progress and cultural development in the region through joint endeavors in the spirit of equality and partnership in order to strengthen the foundation for a prosperous and peaceful community."*[120] The primary focus, however, was on political-security issues such as the tensions in Indochina, and the post-Vietnam War Communist threat.[121]

ASEAN was modeled after the European Free Trade Area's system of "open regionalism" with a decentralized institutional structure.[122] This structure enabled the organization to pursue its consensus-based approach and its policy of non-interference. Specifically, ASEAN has dealt with regional matters using the "ASEAN Way" of cooperation, using informal rules and consensual decision-making which respects the Member States'sovereignty.[123] The "ASEAN Way" is essentially a diplomatic process, *"in which diplomatic officials initially engage in informal discussions to later facilitate a consensus-based decision at official meetings.[...] Accordingly, ASEAN will adopt only policies to which all member states agree, either because the policy itself has been modified, or member state positions have converged."*[124] Nevertheless, this approach and the corresponding primacy of sovereignty made sense in light of the Member States' colonial past[125] and the importance of nation-building during the post-Second World War years.[126] In this way, regional cooperation and stability was achieved without sacrificing the Member States' pursuit of their domestic goals.

Over the following decades, and in response to calls for a stronger, more effective

120. Art. I, *The ASEAN Declaration (Bangkok Declaration)*, 1967.
121. Paul Bowles and Brian MacLean, "Understanding Trade Bloc Formation: The Case of the ASEAN Free Trade Area," *Review of International Political Economy* 3, no. 2 (1996): 321; Lay Hong Tan, "Will ASEAN Economic Integration Progress Beyond a Free Trade Area?," *The International and Comparative Law Quarterly* 53, no. 4 (2004): 935; Robert J.R. Elliott and Kengo Ikemoto, "AFTA and the Asian Crisis: Help or Hindrance to ASEAN Intra-Regional Trade?," *Asian Economic Journal* 18, no. 1 (2004): 7, doi:10.1111/j.1467-8381.2004.00179.x; Anja Jetschke, "ASEAN," chap. 26 in *Routledge Handbook of Asian Regionalism*, ed. Mark Beeson and Richard Stubbs (London: Routledge, 2012), 328.
122. Jetschke, "ASEAN," 330.
123. Ibid., 329.
124. Lee Leviter, "The ASEAN Charter: ASEAN Failure or Member Failure," *N.Y.U. Journal of International Law and Politics* 43 (2010): 167.
125. Shaun Narine, "Asia, ASEAN and the question of sovereignty: the persistence of non-intervention in the Asia-Pacific," chap. 12 in *Routledge Handbook of Asian Regionalism*, ed. Mark Beeson and Richard Stubbs (London: Routledge, 2012), 155.
126. Ibid., 158.

institution, ASEAN endeavored to reorganize and establish a more centralized structure. This was most notable in the aftermath of the 1997 financial crisis, which culminated in the enactment of the ASEAN Charter. The ASEAN Charter took effect on 15 December 2008, and transformed the organization into a rules-based entity with legal personality.[127]

Economic regionalism began to take center stage during the 1990s. ASEAN became increasingly concerned with the rise of China and India, both of which were seen as potential competitors for foreign investment. The 1997 financial crisis likewise exposed the economic interdependence among the Member States, as well as the region's weak institutional arrangements.[128] These factors prompted the move towards closer economic integration,[129] *i.e.,* the establishment of the ASEAN Economic Community (AEC).

127. Chapter II, Art. 3, ASEAN Secretariat, *The ASEAN Charter*, Jakarta, 2007.
128. Jetschke, "ASEAN," 333.
129. *ASEAN Vision 2020*, 1997, `http://asean.org/?static_post=asean-vision-2020`.

Table 2.4: A Chronology of ASEAN Instruments Regarding NTMs and NTBs

Instrument	**NTM- and NTB-Related Commitments**
1977 ASEAN Preferential Trade Agreement	Liberalization of NTMs on a preferential basis
1987 Memorandum of Understanding on Standstill and Rollback on NTBs among ASEAN Countries	Not to introduce new/additional NTMs; phase out/eliminate NTMs which would impede intra-ASEAN trade
1992 Agreement on the Common Effective Preferential Tariff Scheme for the ASEAN Free Trade Area	Eliminate all quantitative restrictions and all other NTBs within 5 years
2006 ASEAN Free Trade Area Council Roadmap	NTB elimination by: January 1, 2008, 2009 and 2010 for Brunei Darussalam, Indonesia, Malaysia, Singapore, and Thailand; January 1, 2010, 2011 and 2012 for Philippines; and January 1, 2013, 2014 and 2015 for Cambodia, Myanmar, Lao PDR, and Vietnam
2007 ASEAN Economic Community Blueprint	Remove all NTBs by 2015; enhance the transparency of NTMs; harmonize standards and regulations with international practices, where applicable
2009, ASEAN Trade in Goods Agreement	Not to adopt or maintain any NTM or quantitative restriction on intra-regional trade; ensure the transparency of permitted NTMs; review NTMs to identify and eliminate NTBs; harmonize national standards with international standards and practices
2015, ASEAN Economic Community Blueprint 2025	Elimination of NTBs, harmonization of standards and technical regulations

2.3.2 Trade-Related Instruments

ASEAN's efforts to liberalize trade and eliminate trade barriers date from as early as 1977, with the enactment of its first Preferential Trade Agreement. Since then, several hard and soft law instruments on trade liberalization have been enacted. Unlike with the region's tariff liberalization measures, there has been limited success in eliminating NTBs and harmonizing NTMs, due to a lack of specific implementing plans.[130] As such, the region's current focus is on the elimination of border and behind-the-border protectionist practices, other than tariffs, that impede trade.[131]

ASEAN Economic Community Blueprint

In 1997, ASEAN resolved to transform itself into a stable, prosperous, and highly competitive region with equitable economic development and reduced poverty and socio-economic disparities. This marked the move towards closer economic integration. In 2003, the Member States agreed to establish an ASEAN Community by 2020. This Community would constitute a deeper form of integration than that of a free trade area, and would be built on 3 pillars: *(i)* the ASEAN Political-Security Community, *(ii)* the ASEAN Socio-Cultural Community, and *(iii)* the AEC.[132] The AEC Blueprint, which was approved in 2007, contained the guiding principles and main commitments for the creation of the AEC.[133]

The AEC Blueprint states that it will transform ASEAN into a single market and production base with the following core elements: free flow of goods; free flow of services; free flow of investment; free flow of capital; and free flow of skilled labor. The primacy of ensuring the free flow of goods was emphasized.[134] A key component in achieving the free flow of goods is the elimination of NTBs. Under the AEC Blueprint, the Member States are bound to, among other things:

130. Austria, "Non-Tariff Barriers: A Challenge to Achieving the ASEAN Economic Community," 36.
131. ASEAN Secretariat, *AEC Blueprint 2025*, 3.
132. Severino and Menon, "Overview," 4.
133. ASEAN Secretariat, *AEC Blueprint*.
134. Ibid., 6.

1. simplify, harmonize, and standardize trade and customs processes, procedures, and related information flows;[135]
2. establish the ASEAN Trade Facilitation Repository,[136] which shall contain trade-related and NTM-related information. This information will enable the identification and elimination of NTBs;
3. harmonize standards, regulations and conformity assessment procedures, by aligning them with international practices where applicable;[137]
4. develop and implement mutual recognition agreements on conformity assessment for specific sectors;[138] and
5. work towards the complete elimination of NTBs (by 2010 for ASEAN-5[139], by 2012 for the Philippines, and by 2015, subject to a certain flexibility for CLMV[140]), through enhanced transparency, effective surveillance mechanisms, and the establishment of regional rules and regulations that are consistent with international best practices.[141]

ASEAN Trade in Goods Agreement

The ASEAN Trade in Goods Agreement (ATIGA) supersedes, consolidates and streamlines the provisions of preexisting trade agreements into one instrument. The ATIGA took effect on 30 April 2010, and it aims to achieve the free flow of goods in the region, and in particular the removal of existing NTBs. It identifies the specific commitments of the Member States, and also provides for monitoring and implementation mechanisms.

Chapter 4, Article 40 of the ATIGA provides for the NTM-related provisions. Firstly, Member States are bound not to adopt or maintain any NTM on the intra-ASEAN trade of any good, except in accordance with either their WTO rights and obligations, or with the provisions of the ATIGA. Secondly, Member States are bound to ensure *(i)* the transparency of any permitted NTMs, and

135. ASEAN Secretariat, *AEC Blueprint*, 8.
136. Ibid.
137. Ibid., 9.
138. Ibid.
139. This refers to Brunei Darussalam, Indonesia, Malaysia, Singapore, and Thailand.
140. This refers to Cambodia, Lao People's Democratic Republic (PDR), Myanmar, and Vietnam.
141. ASEAN Secretariat, *AEC Blueprint*, 7.

(ii) that these NTMs do not create *"unnecessary obstacles in trade among the Member States"*.[142]

Member States also committed not to adopt or maintain any prohibition or quantitative restrictions on the intra-ASEAN trade of any good.[143] Member States reiterated their commitment to review NTMs, with a view to identifying NTBs, and to eliminate NTBs[144] in accordance with the following 3-tranche schedule under the AEC Blueprint:

1. by 1 January 2008, 2009 and 2010 in the case of Brunei Darussalam, Indonesia, Malaysia, Singapore, and Thailand;
2. by 1 January 2010, 2011 and 2012 in the case of the Philippines; and
3. by 1 January 2013, 2014 and 2015, with degrees of flexibility, in the case of Cambodia, Lao PDR, Myanmar, and Vietnam.

The list of NTBs to be eliminated shall be agreed upon by the AFTA Council, based on the recommendations of a number of ASEAN bodies.[145] Nevertheless, the Co-ordinating Committee for the Implementation of the ATIGA, in consultation with the relevant ASEAN bodies, shall review NTM notifications by the Member States and reports from the private sector in order to determine whether the subject measure is an NTB which should be eliminated by the imposing Member State.[146]

The ATIGA provisions on standards and technical regulations grant Member States greater flexibility by providing the Member States with a range of possible actions in order *"to mitigate, if not totally eliminate, unnecessary barriers to trade"*. Specifically, Member States can opt to harmonize their national standards with international standards and practices, promote the mutual recognition of conformity assessment results in the region, develop and implement Sectoral Mutual Recognition Agreements and Harmonised Regulatory Regimes,

142. *ASEAN Trade in Goods Agreement*, 2009, Chapter 4, Article 40.
143. Ibid., Chapter 4, Article 41.
144. Ibid., Chapter 4, Article 42.
145. These include the Co-ordinating Committee for the Implementation of the ATIGA, the ASEAN Consultative Committee on Standards and Quality, the ASEAN Committee on Sanitary and Phytosanitary, the working bodies under ASEAN Directors-General of Customs, and other relevant ASEAN bodies.
146. *ASEAN Trade in Goods Agreement*, Chapter 4, Article 42.

or adapt a combination of these actions.[147] In the case of standards, harmonization with international standards is the preferred option. In case of the absence of applicable international standards, Member States may align their national standards amongst themselves.[148]

With regard to technical regulations, Member States are required to ensure that these do not create technical barriers to trade. Ideally, technical regulations should be based *"on international or national standards that are harmonised to international standards, except where legitimate reasons for deviations exist"*.[149] Furthermore, before they adopt any technical regulations, Member States are directed to consider alternatives that are the least trade restrictive. Member States are to avoid the adoption of prescriptive standards which act as *"unnecessary obstacles to trade"*.[150] Moreover, Member States must accord intra-regional imports with *"no less favourable"* treatment than that accorded to like products from any other Member State.[151]

ATIGA also contains provisions relating to conformity assessment procedures. In particular, Member States are required to ensure that conformity assessment procedures do not create *"unnecessary technical barriers to trade"*.[152] Furthermore, conformity assessment procedures that apply to suppliers of intra-regional imports, should not be more stringent than those applied to suppliers of like products of national origin.[153]

Regarding sanitary and phytosanitary (SPS) measures, the Member States affirmed their rights and obligations under the *Agreement on the Application of Sanitary and Phytosanitary Measures*, also known as the SPS Agreement.[154] They further committed to apply the principles of the SPS Agreement to the development, application and recognition of SPS measures.[155] The Member States also agreed that the implementation of SPS measures will be guided, where applicable, by international standards, guidelines and recommendations developed by international organisations, and that these measures will be accessible

147. *ASEAN Trade in Goods Agreement*, Chapter 7, Article 73.
148. Ibid., Chapter 7, Article 74.
149. Ibid., Chapter 7, Article 75.
150. Ibid.
151. Ibid.
152. Ibid., Chapter 7, Article 76.
153. Ibid.
154. Ibid., Chapter 8, Article 79.
155. Ibid., Chapter 8, Article 81.

to other Member States.[156]

ASEAN Economic Community Blueprint 2025

Originally scheduled for 2020, the launch of the AEC was brought forward to 2015. However, in November 2015 ASEAN recognized its failure to fulfill key obligations such as the elimination of NTBs. For example, the ASEAN Trade Repository, which includes the NTM database, was still under construction. While the Member States have uploaded NTM lists in the ASEAN website, this information has not been updated and has not been uploaded in a standardized format.[157] Notably, the NTM lists provided failed to offer any rationale for the measures and the applicable enforcement methods. This inadequate information made the identification, and the eventual elimination, of NTBs in the region virtually impossible.[158] Measures to harmonize and standardize other standards and technical regulations are likewise still underway.[159]

ASEAN adopted the AEC Blueprint 2025, the successor instrument to the AEC Blueprint, in November 2015. This instrument reiterates the commitment to transform the region into a highly integrated and cohesive economy, and aims to complete the unfinished actions under the previous Blueprint. This includes the complete elimination of NTBs, the convergence of the Member States' trade facilitation regimes through the harmonization of standards and mutual recognition agreements, the improvement of conformity assessment procedures, and the enhancement of transparency and information flows between Member States.[160]

Thus, the current operative instruments are the ATIGA (treaty) and the AEC Blueprint 2025 (soft law). These aim to transform ASEAN into an economic community characterized by the free flow of goods, through the elimination of unnecessary barriers to trade.

156. Ibid.
157. ASEAN Secretariat, *ASEAN Integration Report 2015*, 15.
158. Austria, "Non-Tariff Barriers: A Challenge to Achieving the ASEAN Economic Community," 39.
159. ASEAN Secretariat, *ASEAN Integration Report 2015*, 15-17.
160. ASEAN Secretariat, *AEC Blueprint 2025*, 3-6.

2.3.3 Dispute Settlement and Enforcement Mechanisms

Enforcement systems can serve an important role in incentivizing States to comply with their obligations. Enforcement in ASEAN comes in the form of dispute settlement mechanisms which rely mainly on voluntary submissions by Member States. Another notable feature is the lack of imposable sanctions or penalties in cases of noncompliance, or insufficient compliance, with obligations.

Table 2.5: ASEAN Dispute and Enforcement Mechanisms

Instrument	**Mode of Enforcement**
Treaty of Amity and Cooperation (1976)	Friendly negotiations, good offices, mediation, inquiry, conciliation
Protocol of Enhanced Dispute Settlement Mechanism (2004)	Consultations, submission to a panel, good offices, conciliation, mediation
ASEAN Charter (2008)	Dialogue, consultation, mediation, good offices, conciliation, mediation
Protocol to the ASEAN Charter on Dispute Settlement Mechanisms (2010)	Consultations, arbitration, good offices, mediation, conciliation

Treaty of Amity and Cooperation

This treaty represents an early attempt by ASEAN to institute a dispute settlement procedure which is "*rational, effective and sufficiently flexible*".[161] Notably, it embodies the region's commitment to abide by the "ASEAN Way", by establishing the following as the guiding principles for intra-ASEAN relations:

> *"a. Mutual respect for the independence, sovereignty, equality, territorial integrity and national identity of all nations;*
>
> *b. The right of every State to lead its national existence free from external interference, subversion, or coercion;*

161. *Treaty of Amity and Cooperation in Southeast Asia*, 1976, Preamble.

c. Non-interference in the internal affairs of one another;

d. Settlement of differences or disputes by peaceful means;

e. Renunciation of the threat or use of force;

f. Effective cooperation among themselves."[162]

This treaty mandates the creation of a High Council, composed of ministerial representatives from the Member States, which shall take cognizance of disputes or situations that may disturb regional peace and harmony.[163] In the case of disputes, Member States are bound to settle the same amicably through friendly negotiations, without resorting to the threat or use of force.[164] If negotiations between the disputing parties fail, the High Council is empowered to recommend the use of the appropriate settlement mechanism, such as good offices, mediation, inquiry, or conciliation, along with other appropriate measures designed to prevent the deterioration of the situation, as is necessary.[165] However, this provision is subject to a consensus requirement, *i.e.,* that all the disputing parties agree to the use of the recommended settlement mechanism.[166]

One glaring characteristic of this Treaty is its failure to provide for monitoring and implementing measures, and for sanctions in cases of noncompliance with the results of the dispute settlement mechanisms.

The Protocol of Enhanced Dispute Settlement Mechanism

This Protocol specifically applies to ASEAN economic agreements,[167] without prejudice to the right of Member States to resort to other available fora.[168] However, only Member States can invoke the provisions of this Protocol. Private individuals or entities cannot initiate its dispute resolution and adjudicatory proceedings.[169]

162. Ibid., Chapter I, Article 2.
163. Ibid., Chapter IV, Article 14.
164. Ibid., Chapter IV, Article 13.
165. Ibid., Chapter IV, Article 15.
166. Ibid., Chapter IV, Article 16.
167. *Protocol on Enhanced Dispute Settlement Mechanism*, 2004.
168. Ibid., Article 1(3).
169. Locknie Hsu, "The ASEAN Dispute Settlement System," in *The ASEAN Economic Community: A Work in Progress*, ed. Sanchita Basu Das et al. (Singapore: ISEAS Publishing, 2013), 390.

Member States may initiate consultations regarding concerns about the implementation, interpretation, or application of any economic agreement,[170] such as: *(i)* when benefits accruing to a Member State are being nullified or impaired; and *(ii)* when the achievement of any economic agreement's objectives is being impeded by a Member State's noncompliance with its obligations.[171] Should a Member State fail to reply to a request for consultation within ten days from the receipt of the request, or fail to engage in consultations within thirty days from the receipt of the request, or should the parties fail to amicably resolve their dispute within thirty days of receipt of the request, the complaining Member State may raise the matter at the Senior Economic Officials Meeting and request that a panel be set up. The Senior Economic Officials Meeting is, however, free to decide by consensus not to constitute a panel.[172] The parties may, at any time during a dispute and even after the constitution of a panel, also submit a request for good offices, conciliation, or mediation procedures.[173] Thus, this Protocol is clearly non-obligatory, with Member States retaining the right of recourse to diplomatic channels.

The panel shall make an objective assessment of the facts and substantive provisions of the disputed economic agreement, and shall submit its findings and recommendations on the basis thereof.[174] All panel deliberations shall be confidential,[175] and the written report shall be submitted to the Senior Economic Officials Meeting within sixty days of its establishment.[176] A panel report may be appealed by any party to the dispute; otherwise, the Senior Economic Officials Meeting shall adopt the report.[177]

Appeals shall be limited to legal issues and interpretations covered in the panel report,[178] and shall likewise be confidential.[179] The Appellate Body may uphold, modify or reverse the panel report.[180] The Senior Economic Officials Meeting

170. *Protocol on Enhanced Dispute Settlement Mechanism*, Article 3(1).
171. Ibid., Article 3(2).
172. Ibid., Article 5(1).
173. Ibid., Article 4.
174. Ibid., Article 7.
175. Ibid., Article 8(5).
176. Ibid., Article 8(2).
177. Ibid., Article 9(1).
178. Ibid., Article 12(6).
179. Ibid., Article 12(9).
180. Ibid., Article 12(12).

shall adopt the Appellate Body's report unless the disputants all agree, not to adopt the same within thirty days after its distribution to the Member States.[181]

The panel or Appellate Body report may recommend that a concerned Member State take actions on any measure that violates the provisions of the economic agreement.[182] However, such recommendation can neither augment nor diminish the existing rights and obligations under the said agreement.[183] Disputants must comply within sixty days of the adoption of the Senior Economic Officials Meeting of the panel report or the Appellate Body's report, unless the parties agree to a lengthier deadline.[184] Implementation shall be monitored by the Senior Economic Officials Meeting.[185]

In the event of noncompliance, the other parties to the dispute may initiate negotiations for compensation. The payment of compensation, however, is purely voluntary. If no agreement is reached on the matter of compensation, any party to the dispute may request for authorization from the Senior Economic Officials Meeting to suspend the concessions or other obligations under the economic agreement.[186] However, these remedies are temporary measures which shall last only until the disputed measure has been removed, or the recommendations of the panel or Appellate Body have been adopted, or a mutually satisfactory solution has been reached.[187]

The ASEAN Charter

The ASEAN Charter is the main legal instrument for the region. It not only established a more encompassing dispute mechanism, but also fleshed out the legal and institutional framework of ASEAN as an organization.

The ASEAN Charter binds the Member States to abide by fundamental principles, such as the renunciation of aggression,[188] the peaceful settlement of disputes,[189] enhanced consultations on matters affecting the common interests of

181. Ibid., Article 12(13).
182. Ibid., Article 14(1).
183. Ibid., Article 14(2).
184. Ibid., Article 15(1).
185. Ibid., Article 15(6).
186. Ibid., Article 16(1)(2).
187. Ibid., Article 16(9).
188. ASEAN Secretariat, *The ASEAN Charter*.
189. Ibid., Chapter 1, Article 2(2)(d).

the region,[190] and adherence to multilateral trade rules and rules-based regimes in ensuring the implementation of economic commitments.[191] It likewise reaffirms the primacy of the "ASEAN Way" through the adoption of the following principles:

1. respect for the independence, sovereignty, equality, territorial integrity and national identity of all Member States;[192]
2. non-interference in the internal affairs of Member States;[193]
3. respect for the right of every Member State to lead its national existence free from external interference, subversion, and coercion;[194] and
4. abstention from participation in any policy or activity which threatens the sovereignty, territorial integrity, or political and economic stability of Member States.[195]

In the event of any disputes, Member States must resolve them peacefully through dialogue, consultation and negotiation.[196] At any time during a dispute, Member States may resort to good offices, conciliation, or mediation[197] which shall be conducted by either the ASEAN's Chairman or its Secretary-General.[198] The applicable dispute settlement mechanism depends on the type of dispute. Disputes arising from, or connected to, specific ASEAN instruments, shall be settled in accordance with the mechanisms and procedures provided for in such instruments.[199] The Treaty of Amity and Cooperation shall apply in case of disputes which do not concern the interpretation or application of any specific ASEAN instrument.[200] In case of disputes arising from or concerning ASEAN economic agreements, the Protocol on Enhanced Dispute Settlement Mechanism is applicable.[201] The Charter also provides for the establishment of dispute settlement mechanisms, such as arbitration, for disputes concerning

190. ASEAN Secretariat, *The ASEAN Charter*, Chapter 1, Article 2(2)(g).
191. Ibid., Chapter 1, Article 2(2)(n).
192. Ibid., Chapter I, Article 2(a).
193. Ibid., Chapter I, Article 2(e).
194. Ibid., Chapter I, Article 2(f).
195. Ibid., Chapter I, Article 2(k).
196. Ibid., Chapter VII, Article 22(1).
197. Ibid., Chapter VII, Article 23(1).
198. Ibid., Chapter VII, Article 23(2).
199. Ibid., Chapter VII, Article 24(1).
200. Ibid., Chapter VII, Article 24(2).
201. Ibid., Chapter VII, Article 24(3).

the interpretation or application of the Charter and other ASEAN instruments where a specific mechanism has not previously been established.[202]

Compliance by Member States with the results of any dispute settlement mechanism shall be monitored by the Secretary-General.[203] Any non-compliance may be referred by any affected Member State to the ASEAN Summit[204] for a decision.[205] However, the Charter does not provide for any definite sanctions in case of noncompliance with or breach of dispute settlement findings and ASEAN instruments. The Charter likewise retains the "ASEAN Way" of decision-making through consultation and consensus,[206] although the ASEAN Summit may opt for a different decision-rule on a case-to-case basis where no consensus can be reached.[207]

ASEAN Economic Community (AEC) Blueprint

To guide and encourage the implementation of its key actions, the AEC Blueprint provides for a strategic schedule[208] which specifies the target implementation dates for Member States' obligations. However, national-level implementation remains in the hands of the relevant government agencies of each Member State.[209] ASEAN Sectoral Ministerial bodies merely monitor the national-level compliance of Member States.[210]

The applicability of the Enhanced Dispute Settlement Mechanism to the AEC Blueprint is also acknowledged by the AEC Blueprint.[211] Recognizing the need for monitoring and dissemination of progress with the implementation of the AEC obligations, the AEC Blueprint recommends the development and maintenance of statistical indicators and AEC scorecards.[212] The ASEAN Secretariat is charged with the overall monitoring and implementation of the AEC

202. Ibid., Chapter VII, Article 25.
203. Ibid., Chapter VII, Article 27(1).
204. The ASEAN Summit is the supreme policy-making body of ASEAN, and is composed of the Heads of State or Government of the Member States. ibid., Chapter IV, Article 7.
205. Ibid., Chapter VII, Article 27(2).
206. Ibid., Chapter VII, Article 20 (1).
207. Ibid., Chapter VII, Article 20(2).
208. ASEAN Secretariat, *AEC Blueprint*, 26.
209. Ibid.
210. Ibid.
211. Ibid., 27.
212. ASEAN Secretariat, *AEC Blueprint*, 27.

Blueprint.[213]

While the monitoring process was intended to be conducted in phases[214], only one AEC Scorecard Report[215] was published in 2012.[216] Instead of providing detailed accounts of the implementation process, it adopted a yes-or-no checklist format. This checklist tracked whether the measures aiming to achieve an overall target, such as the free flow of goods, had been fully implemented by all Member States. Since it merely provided an overview, the Scorecard failed to identify which measures, such as the elimination of NTBs or the creation of national trade repositories, the Member States had failed to enact.

As with other ASEAN instruments, the AEC Blueprint does not provide for any applicable sanctions and penalties in cases of noncompliance with its obligations and other provisions.

ASEAN Economic Community Blueprint 2025

In general, ASEAN only plays a supervisory role vis-à-vis implementation of the AEC Blueprint 2025. The AEC Council, under the supervision of the ASEAN Secretariat,[217] is responsible for overall implementation and compliance monitoring.[218] The actual implementation of commitments is the responsibility of each Member State. Notably, Member States are allowed to use the *"consensus and flexibility approach in the decision-making process [. . .] in certain sensitive aspects."*[219]

The AEC Blueprint 2025 is complemented by a Consolidated Strategic Action Plan (CSAP), which aims to operationalize the AEC Blueprint 2025's key measures. The CSAP's action lines are the responsibility of ASEAN sectoral bodies, in coordination with the relevant government agencies of the Member States.[220] The NTM-related key action lines include the following:

213. Ibid.
214. The intent was to monitor the progress in 4 phases: 2008-2009, 2010-2011, 2012-2013, and 2014-2015.
215. Which covered the first 2 phases only.
216. ASEAN Secretariat, *A Blueprint for Growth ASEAN Economic Community 2015: Progress and Key Achievements*, Jakarta, 2015, 7-8.
217. ASEAN Secretariat, *AEC Blueprint 2025*, 38.
218. Ibid., 36.
219. Ibid., 37.
220. Ibid.

1. to develop procedures and/or guidelines that address NTMs;
2. to explore stronger disciplines vis-à-vis NTMs;
3. to strengthen links with the private sector;
4. to update and review *(i)* NTMs, and *(ii)* the ASEAN NTM database; and
5. to coordinate with other ASEAN working groups and task forces in relation to SPS standards-related activities.[221]

While the AEC Council can enforce compliance of the AEC Blueprint 2025 measures, the Blueprint itself still does not provide for sanctions and penalties in case of noncompliance with, and breach of, its key commitments and provisions.

2.4 ASEAN Compliance with NTB- and NTM-Related Commitments

Given the state of the law in Southeast Asia, it would be logical to expect a reduction in NTMs in the region. However, this expectation is belied by actual data.

FIGURE 2.1: NTMs in Force in ASEAN, 2000-2015[222].

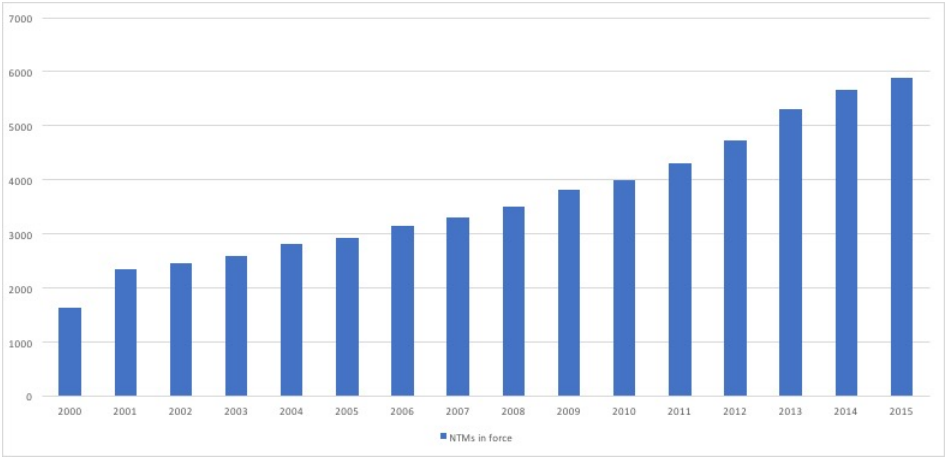


Figure 2.1 illustrates the rising trend in the total number of NTMs in ASEAN. From 2000 to 2015, the number of NTMs rose from 1,641 to 5,877. Indonesia,

221. *ASEAN Economic Community 2025 Consolidated Strategic Action Plan*, `http://asean.org/storage/2017/02/Consolidated-Strategic-Action-Plan.pdf`.
222. Adapted from Ing et al., "Non-Tariff Measures in ASEAN: A Simple Proposal," 22.

Malaysia, the Philippines, and Thailand collectively impose 65% of total NTMs in the region. *Figures 2.2* to *2.5* show the number of NTMs in force in these countries from 2000 to 2015. There is a clear and remarkable increase in the case of Indonesia. The NTMs in both Thailand and the Philippines likewise steadily increased. Malaysia, on the other hand, exhibited a more stable level.

FIGURE 2.2: Indonesia[223].

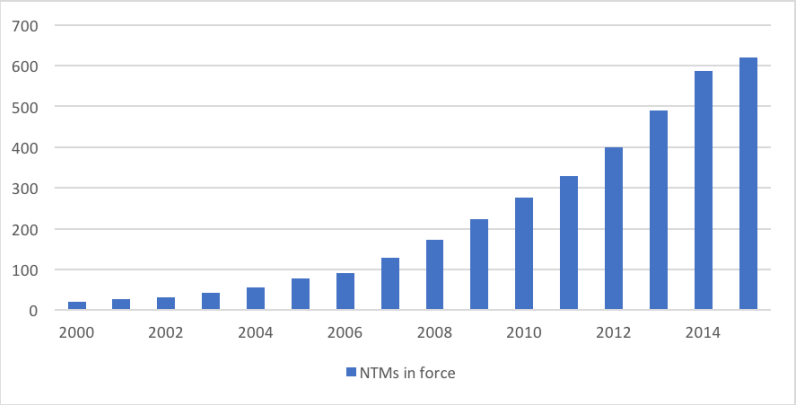


TABLE 2.6: NTMs by Type as of December 2016[227].

	ID	MY	PH	SG	TH	VN
No. of measures (green)	107	22	11	9	17	33
No. of measures (amber)	68	12	3	4	14	18
No. of measures (red)	211	37	8	21	35	64
No. of tariff lines affected by red	968	216	8	7	126	946
No. of sectors affected by red	53	34	6	27	29	43

Table 2.6 presents data from the Global Trade Alert.[228] Indonesia, Malaysia, the Philippines, Singapore, Thailand and Vietnam have all been cited as having implemented measures which almost certainly discriminate against foreign

223. Adapted from ibid., 26.
224. Adapted from ibid.
225. Adapted from ibid.
226. Adapted from ibid., 27.
227. From "Global Trade Alert," accessed December 1, 2016, `http://www.globaltradealert.org`.
228. This database is coordinated by the Center for Economic Policy Research, and provides information on potentially discriminatory state measures such as NTMs and trade policy instruments.

FIGURE 2.3: Malaysia[224].

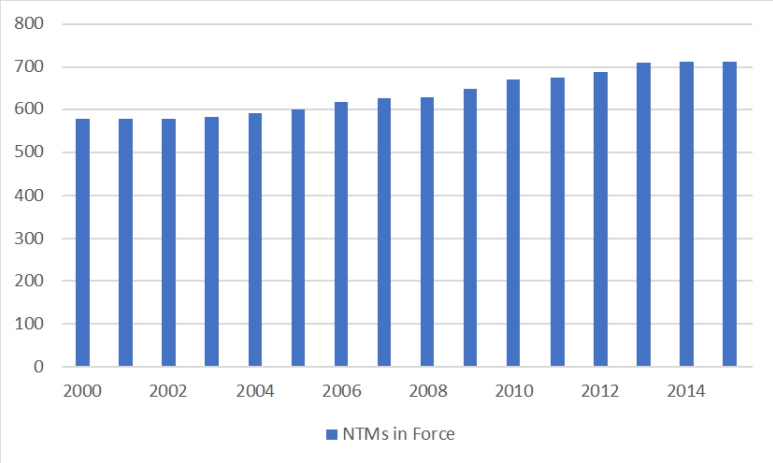


FIGURE 2.4: The Philippines[225].

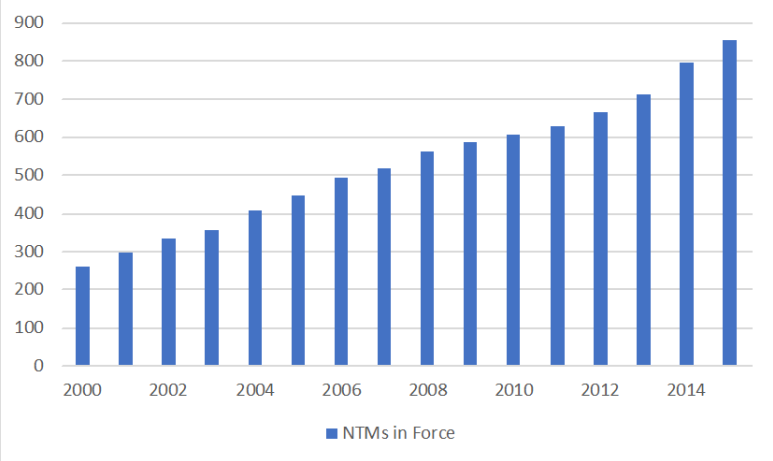
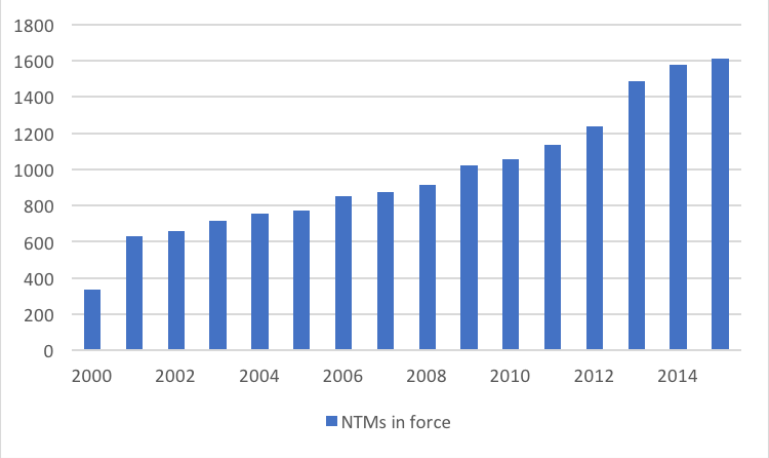


FIGURE 2.5: Thailand[226].



interests.[229] While the Global Trade Alert reports a wide range of state measures, several of the flagged measures are NTMs. This suggests that potentially discriminatory or protectionist NTMs are still in force in the region. In fact, 69 cases involving NTMs/trade barriers have been raised before the Co-ordinating Committee for the Implementation of the ATIGA and the ASEAN Consultative Committee on Standards and Quality from 2012 to 2014.[230] All Member States have been involved in at least 2 of these cases, with Indonesia being cited 18 times. These trends suggest that the Member States have failed to comply with their international law obligations to eliminate NTBs and harmonize NTMs.

The law and economics compliance literature suggests that international law can help tilt the scales in favor of compliance by altering the incentives of States. Law can create focal points for cooperation and make long-term benefits more valuable than short-term gains. International law regimes can also make reputation for compliance a valuable form of collateral for inter-state dealings, providing an additional incentive for compliance. As will be seen in the following discussion, the insights from these theories can also shed light on ASEAN noncompliance. Due to their general and vague language, the ASEAN legal instruments not only failed to create focal points for coordination, but also undermined the effectiveness of reputation, reciprocity and retaliation as incentives for compliance.

Let us assume that States are rational actors who, in their dealings with each other, primarily pursue their own interests and preferences. This implies that the Member States, in vowing to ensure the free flow of goods within the region, believe that free trade is in their common interest. This begs the question: why have the Member States failed to comply with their obligations to harmonize NTMs and eliminate NTBs?

Realists would suggest that the benefits gained from these commitments do not justify the costs involved in honoring them. Thus, non-compliance best serves the interests of the Member States.[231] However, this argument fails to explain why the Member States have repeatedly bound themselves by making such commitments. When confronted with the region's inability to achieve its

229. Red measures.
230. "Matrix of Actual Cases on NTMs/Trade Barriers," accessed December 1, 2016, `http://asean.org/asean-economic-community/asean-free-trade-area-afta-council/other-documents/`.
231. Kingsbury, "The Concept of Compliance," 351.

NTM- and NTB-related goals, ASEAN's response has always been to reaffirm its commitment to the same. It is noteworthy that these developing countries have used significant resources to create this international trade regime and to establish the AEC.[232] It is therefore illogical to conclude that these States are not interested in free trade and the removal of trade barriers when their actions, *i.e.* the creation of international law regimes, would indicate otherwise.

Given this, a closer look at the nature of trade is necessary. International trade has been characterized as a repeated multilateral prisoner's dilemma.[233] The highest payoffs can only be achieved when all States act to ensure the free flow of goods. In this case, all Member States need to comply with their commitments to remove unnecessary trade barriers and harmonize permitted NTMs. However, each Member State can gain at the expense of others by retaining protectionist trade barriers. This way, import-competing producers retain a domestic advantage while exporting producers gain access to foreign markets. Every State therefore has an incentive to defect.

This multilateral prisoner's dilemma is further complicated by the nature of NTMs and NTBs. NTMs encompass a wide variety of measures and regulations, other than tariffs, that can affect the price or quantity of traded goods, whether or not the underlying rationale is protectionist. NTMs include SPS measures, technical barriers to trade (TBTs), labelling and other specification requirements, and quantitative restrictions. Some examples are limits on pesticide levels for food products, carbon dioxide emissions standards for vehicles, product labelling requirements for food items, and certification procedures for chemical and pharmaceutical products.[234] NTMs become NTBs when they are applied in a discriminatory manner against foreign firms, are imposed with a protectionist intent, or when they are unjustified or improperly applied.[235] Thus, NTBs are NTMs that "*are protectionist either by intent or effect.*"[236] This wide range of NTMs means that it is difficult to classify and monitor

232. See Guzman, "A Compliance-Based Theory," 1837.
233. Goldsmith and Posner, *The Limits of International Law*, 145.
234. United Nations Economic and Social Commission for Asia and the Pacific, *Trade and Non-Tariff Measures: Impacts in the Asia-Pacific Region*, 9.
235. United Nations Conference on Trade and Development, *Non-Tariff Measures to Trade: Economic and Policy Issues for Developing Countries*, 2; Austria, "Non-Tariff Barriers: A Challenge to Achieving the ASEAN Economic Community," 33.
236. United Nations Economic and Social Commission for Asia and the Pacific, *Trade and Non-Tariff Measures: Impacts in the Asia-Pacific Region*, 11.

them.[237] For example, States may classify NTMs not as trade measures per se, but as health and safety regulations. Alternatively, States may be unaware that a certain measure, which has legitimate purposes, operates as a trade barrier. This uncertainty makes breach, be it willful or inadvertent, more likely.

These factors may shed some light on the ineffectiveness of the ASEAN institutional enforcement and dispute settlement mechanisms. These mechanisms require clarity on two specific aspects of the question, namely: that Member States know what is expected of them, and that a Member State has failed to comply. From the very outset, enforcement of NTM- and NTB-related commitments would require region-wide knowledge of which measures qualify as NTMs and NTBs. Both the wide scope and ambiguity of NTMs make this identification process unduly burdensome and complicated. Another requirement is the sharing of interests by Member States, *i.e.*, their interest in the elimination of trade barriers. However, the prisoner's dilemma nature of trade means that Member States retain an incentive to defect by not complying with their commitments.

That the Member States are in a multilateral prisoner's dilemma does not mean that international law no longer matters. It is important to note that the Member States do share an interest in ensuring the free flow of goods in the region. This is shown by the region's successful tariff liberalization efforts.[238] For ASEAN, international law can be used to address the uncertainty and information issues plaguing NTMs and NTBs.

The prerequisite for compliance in prisoner's dilemmas is that the States know the distinction between acts of cooperation and defection.[239] Ideally, international law instruments[240] clarify any ambiguities by identifying the focal points for State behavior. However, ASEAN treaties and soft law instruments have consistently used general and vague language in describing commitments, thus leaving room for doubt as to the exact obligations of Member States. Examples of this include the following:

1. Regarding the obligation to ensure the transparency of permissible NTMs,

237. Goldsmith and Posner, *The Limits of International Law*, 148.
238. ASEAN Secretariat, *AEC Blueprint*, 7.
239. Goldsmith and Posner, *The Limits of International Law*, 31.
240. Such as treaties and soft law documents.

the ATIGA requires Member States to ensure that NTMs are "*not prepared, adopted or applied with the view to, or with the effect of, creating unnecessary obstacles in trade among the Member States*".[241] Member States are likewise bound to ensure that standards, technical regulations, and conformity assessment procedures "*do not create unnecessary obstacles to trade*".[242] However, what constitutes an unnecessary obstacle to trade is left undefined. Apart from reaffirming the Member States' rights and obligations under the *Agreement on Technical Barriers to Trade* (TBT Agreement),[243] the specific goals and actions needed to identify and address unnecessary standards are not detailed. Indeed, ATIGA merely echoed the general provisions of the TBT Agreement without addressing how these will be implemented in the diverse political, economic and cultural contexts of the Member States. The result is that the ATIGA has failed to establish effective focal points which Member States may align their legal regimes and practices to.

2. Member States are obliged to review the NTMs reported by the other Member States in the ASEAN Trade Repository Database[244] in order to identify and eliminate NTBs. Member States are likewise obliged to maintain the transparency of NTMs.[245] In view of this, the database should ideally shed light on both the rationale and mode of enforcement of NTMs. However, the binding nature of these commitments are weakened by the ATIGA itself. It establishes that the NTM database is to be based on the submissions and notifications of the Member States.[246] While the ATIGA specifies the information needed for the disclosure of proposed measures, it remains silent on the required information for those NTMs that are already in force. Thus, the ATIGA grants the Member States ample discretion with regard to the manner of their compliance.

   In fact, as of April 2018, the ASEAN Trade Repository Database is merely linked to the individual National Trade Repositories of the Member States.

241. Chapter 4, Article 40(2), *ASEAN Trade in Goods Agreement*.
242. Chapter 7, Article 71, ibid.
243. Ibid., Chapter 7, Article 73.
244. This database is established pursuant to Article 13 of the ATIGA, and can be accessed at `http://atr.asean.org`.
245. *ASEAN Trade in Goods Agreement*, Chapter 4, Article 40.
246. Ibid.

As the latter are maintained by each of the Member States, the information is not presented in a uniform and consistent matter. Specifically, there is incomplete information on the manner of enforcement, the scope, and the rationale of the NTMs, all of which are necessary items of information for the identification of NTBs. In effect, Member States can hinder compliance with their obligations vis-à-vis the elimination of NTBs and the enhanced transparency of NTMs, through their incomplete disclosure of relevant information.

3. Under ATIGA, Member States can choose from different measures, or a combination thereof, "*to mitigate, if not totally eliminate, unnecessary technical barriers to trade*",[247] such as the harmonization of standards and the mutual recognition of conformity assessment results. The broad discretionary power given to the Member States under this provision, along with the absence of any specific timeframes or schedules for compliance, easily enables them to counter any accusations of noncompliance or breach of their obligations.

4. Under both the AEC Blueprint and the AEC Blueprint 2025, Member States are obligated to eliminate NTBs and enhance the transparency of NTMs. However, the implementing details are not specifically defined or explained. There is a dearth of guidance on which measures can be considered as NTBs, which standards shall be used as the benchmark in harmonisation efforts, and which measures shall be adopted to enhance the transparency of NTMs. Also there are no definite deadlines or timeframes in the AEC Blueprint 2025 for the implementation and completion of the strategic measures. This level of generality in the definition of strategic measures makes it difficult to identify cases of noncompliance, breach of or incomplete compliance with their commitments by the Member States.

5. The ATIGA may have adapted the NTB elimination schedules under the AEC Blueprint, and used obligatory language in describing the commitment to eliminate NTBs, *i.e., "shall eliminate* [. . .]".[248] Nevertheless, the list of NTBs for elimination is subject to the agreement of the AFTA Council.[249] It should be pointed out that this body is composed of

247. Chapter 7, Article 73(2), ibid.
248. Ibid., Chapter 4, Article 42(2).
249. Ibid., Chapter 4, Article 42(3).

ministerial-level nominees and the ASEAN Secretary General.[250] Bearing in mind the "ASEAN Way" of diplomacy, it is doubtful whether such a Council will really be able to enforce the elimination of NTBs. That the elimination of identified NTBs is still subject to the discretion of bureaucrats negates the obligatory character of the ATIGA provision.

Ostensibly, the ATIGA, AEC Blueprint, and AEC Blueprint 2025 promote the free flow of goods and the creation of a single market and production base. That the NTB- and NTM-related obligations are contained in both treaty and soft law instruments seems to imply that the Member States are serious about their commitments. Nevertheless, this is belied by the general and vague language used in these instruments, which creates uncertainty as to the precise obligations of the Member States. No instrument appears to delineate which acts are to be considered cooperative, and which are to be deemed acts of defection, making it more difficult for the Member States to overcome this prisoner's dilemma. The seemingly obligatory, unequivocal nature of the commitments is also negated by the ample discretion exercised by the Member States,[251] which effectively allows them to evade their obligations.

Nevertheless, it may be reasonably surmised that considerable political support exists for guaranteeing the free flow of goods within the region. ATIGA, as a treaty instrument, necessarily underwent ratification procedures in the Member States. Legislative consent in the Member States is a credible signal of political support for this treaty.[252] The governments of the different Member States would not have been willing to enter a treaty regime if such had not been the case. On the other hand, domestic support for the removal of protectionist policies is a different matter. While the governments may have an interest in promoting free trade, domestic interest groups[253] have an interest in preserving their payoffs from protectionist policies. The vague provisions of ATIGA, AEC Blueprint, and AEC Blueprint 2025 may be a manifestation and result of such interest groups' opposition to free trade. The importance of interest group pressure on trade policy is therefore an important factor to be taken into consideration.[254]

250. Ibid., Chapter 10, Article 90.
251. For example, in the creation of trade repositories vis-à-vis the elimination of NTBs.
252. Goldsmith and Posner, *The Limits of International Law*, 91-95.
253. Particularly import-competing producers.
254. See *Chapters 3* and *4*.

According to Goldsmith and Posner (2007), cooperation is also possible in repeated prisoner's dilemmas where the game is repeated indefinitely or for a sufficiently long period,[255] and where the payoffs from defection do not outweigh the gains from cooperation.[256] In a repeated game, compliant States can punish a breach during the current period by not cooperating in future periods. For example, a State which imposes increased tariffs this year in violation of its trade agreement risks facing retaliatory tariffs from the other States in coming years. The losses caused by this tariff war may outweigh the defecting State's initial gains from the increased tariffs. Thus, the threat of a trade war may suffice to encourage compliance by the States. In the ASEAN context, is intra-regional trade of sufficient importance for trade agreements to exert a compliance pull on the Member States?

For ASEAN, the amount of extra-regional trade is clearly greater than intra-regional trade. *Table 2.7* shows data on total ASEAN trade during 2014 and 2015, broken down per country and for the whole region. The data is presented in terms of value, expressed in US$ millions, and as a percentage of total trade. Except for Lao PDR, extra-regional trade accounted for more than half of total trade. *Tables 2.8* and *2.9* present figures for exports and imports for the same periods, respectively. Extra-regional exports amounted to 74% of total exports, while extra-regional imports amounted to 78% of total imports. Lao PDR obtained most its imports from within the region and exported its goods mainly to ASEAN Member States. Singapore has the highest levels of trade activity in the region, although its intra-ASEAN trade accounted for only a fourth of its total trade.

At first glance, intra-regional trade is not as important as extra-regional trade. The Member States seem to obtain less value, in the form of traded goods, from within the region than from outside. This is one result of ASEAN's outward-oriented trade policies.[260] It can be argued that the low value of intra-regional trade makes the threat of starting a trade war less credible, as Member States

255. Goldsmith and Posner, *The Limits of International Law*, 31.
256. Ibid., 32.
257. Data from "Intra- and Extra-ASEAN Trade," accessed December 1, 2016, `http://asean.org/?static_post=external-trade-statistics-3`.
258. Data from ibid.
259. Data from ibid.
260. Chia Siow Yue and Michael G. Plummer, "Introduction," in *Realizing the ASEAN Economic Community: A Comprehensive Assessment*, ed. Michael G. Plummer and Chia Siow Yue (Singapore: ISEAS Publishing, 2009), 7.

Table 2.7: ASEAN Total Trade[257].

Intra-ASEAN	2014		2015	
	Value	%, Total	Value	%, Total
Brunei Darussalam	3,860.7	27.2	2,644.9	28.2
Cambodia	7,615.5	25.7	4,462.0	22.7
Indonesia	90,725.3	25.6	63,604.8	21.7
Lao PDR	3,496.3	64.9	4,356.9	64.4
Malaysia	118,965.0	26.9	102,890.5	27.4
Myanmar	11,455.0	42.0	11,294.9	39.9
Philippines	25,370.0	19.6	25,600.8	19.9
Singapore	203,196.4	26.2	182,050.7	27.5
Thailand	102,725.3	22.6	104,820.8	25.1
Vietnam	40,797.7	13.9	41,891.1	12.8
Total	608,207.0	24.1	543,617.5	23.9

Extra-ASEAN	2014		2015	
	Value	%, Total	Value	%, Total
Brunei Darussalam	10,320.1	72.8	6,747.4	71.8
Cambodia	22,039.1	74.3	15,214.2	77.3
Indonesia	263,746.2	74.4	229,372.2	78.3
Lao PDR	1,892.5	35.1	2,406.6	35.6
Malaysia	323,812.9	73.1	272,939.7	72.6
Myanmar	15,801.8	58.0	16,980.5	60.1
Philippines	104,196.9	80.4	103,343.0	80.1
Singapore	572,819.6	73.8	481,058.6	72.5
Thailand	352,800.6	77.4	312,326.6	74.9
Vietnam	252,979.4	86.1	285,852.6	87.2
Total	1,920,408.9	75.9	1,726,241.4	76.1

do not have a lot to lose. This may undermine the compliance pull of the ASEAN trade regime. Nevertheless, a closer examination of the trade figures would suggest otherwise.

Table 2.10 shows the top 10 ASEAN export markets and import origins for 2014 and 2015, expressed as a share of total trade. Intra-ASEAN trade clearly exceeds the trade flow between ASEAN Member States and its other trading partners. China, with a 19% import share in 2015, is the only partner that comes close. The shares among the other partners are markedly small compared to the intra-ASEAN flow. The top traded commodities in the region are

261. Data from "Top 10 Export Market and Import Origins," accessed December 1, 2016, `http://asean.org/?static_post=external-trade-statistics-3`.

Table 2.8: ASEAN Exports[258].

Intra-ASEAN	2014		2015	
	Value	%, Total	Value	%, Total
Brunei Darussalam	2,093.0	19.8	1,239.5	19.5
Cambodia	2,037.9	19.1	819.1	9.3
Indonesia	39,822.2	22.6	33,572.3	22.3
Lao PDR	1,451.3	55.0	2,646.4	71.2
Malaysia	65,238.6	27.9	56,200.4	28.1
Myanmar	4,362.3	39.5	4,289.6	37.5
Philippines	9,211.2	14.9	8,536.9	14.6
Singapore	127,739.2	31.2	118,271.4	32.3
Thailand	59,425.8	26.1	61,925.9	28.9
Vietnam	18,260.5	12.3	18,063.7	11.1
Total	329,642.1	25.5	305,565.2	25.9

Extra-ASEAN	2014		2015	
	Value	%, Total	Value	%, Total
Brunei Darussalam	8,491.1	80.2	5,110.6	80.5
Cambodia	8,643.5	80.9	8,019.4	90.7
Indonesia	136,470.5	77.4	116,710.0	77.7
Lao PDR	1,188.6	45.0	1,067.9	28.8
Malaysia	168,688.7	72.1	143,668.8	71.9
Myanmar	6,668.3	60.5	7,142.2	62.5
Philippines	52,598.7	85.1	50,111.6	85.4
Singapore	282,029.5	68.8	248,072.9	67.7
Thailand	168,147.8	73.9	152,470.3	71.1
Vietnam	129,831.0	87.7	143,950.1	88.9
Total	962,757.7	74.5	876,323.8	74.1

electrical machinery, equipment, and parts.[262] Exports and imports of electrical machinery amounted to 25% and 23% of total exports and imports, respectively, in 2015.[263] These trade patterns are due, among others, to the Member States' increased participation in production networks. In fact, the AFTA has one of the highest intra-regional shares of exports of parts and components (28%).[264]

262. This also includes the following: sound recorders and reproducers; television image and sound recorders and reproducers; and parts and accessories of such articles.

263. "Top 10 ASEAN Trade Commodity Groups," accessed December 1, 2016, http://asean.org/?static_post=external-trade-statistics-3.

264. World Trade Organization, technical report (World Trade Organization, 2011), 67, https://www.wto.org/english/res%7B%5C_%7De/publications%7B%5C_%7De/wtr11%7B%5C_%7De.htm.

Table 2.9: ASEAN Imports[259].

Intra-ASEAN	2014		2015	
	Value	%, Total	Value	%, Total
Brunei Darussalam	1,767.7	49.1	1,405.4	46.2
Cambodia	5,577.6	29.4	3,642.9	33.6
Indonesia	50,903.1	28.6	30,032.6	21.0
Lao PDR	2,045.0	74.4	1,710.5	56.1
Malaysia	53,726.3	25.7	46,690.1	26.5
Myanmar	7,092.6	43.7	7,005.3	41.6
Philippines	16,158.8	23.8	17,063.9	24.3
Singapore	75,457.2	20.6	63,779.3	21.5
Thailand	43,299.5	19.0	42,894.9	21.2
Vietnam	22,537.1	15.5	23,827.4	14.4
Total	278,564.9	22.5	238,052.3	21.9

Extra-ASEAN	2014		2015	
	Value	%, Total	Value	%, Total
Brunei Darussalam	1,828.9	50.9	1,636.8	53.8
Cambodia	13,395.6	70.6	7,194.8	66.4
Indonesia	127,275.7	71.4	112,662.2	79.0
Lao PDR	703.9	25.6	1,338.7	43.9
Malaysia	155,124.2	74.3	129,270.9	73.5
Myanmar	9,133.4	56.3	9,838.3	58.4
Philippines	51,598.2	76.2	53,231.4	75.7
Singapore	290,790.1	79.4	232,985.6	78.5
Thailand	184,652.9	81.0	159,856.2	78.8
Vietnam	123,148.4	84.5	141,902.5	85.6
Total	957,651.3	77.5	849,917.6	78.1

Taken together, these trade trends support the argument that ASEAN non-compliance can be traced to the failure of the trade regime to establish focal points for coordination. Given the importance of production and supply chains in ASEAN, trade links are rather important to the economies of the Member States. Looking at the actual trade shares between ASEAN and its partners, and bearing in mind the role of ASEAN in global value chains, intra-ASEAN trade becomes sizable and significant.[265] This contradicts the notion that the Member States do not reap significant gains from intra-regional trade. As such, trade agreements should exert a compliance pull on these countries.

265. *"But if one controls for the size of the ASEAN economies in global trade, intra-ASEAN trade is actually four times higher than would be the case if these were randomly distributed countries."* Yue and Plummer, "Introduction," 5.

Table 2.10: Top 10 ASEAN Trade Partners[261].

Export Market

Partner	%,2014	%,2015
ASEAN	26.7	25.9
China	12.2	11.3
US	9.9	10.9
Japan	9.7	9.6
EU-28	8.4	N/A
Hong Kong	6.9	6.5
Korea, Rep.	4.2	3.9
Australia	3.7	2.8
India	3.5	3.3
Taiwan	3.2	2.8
Germany	N/A	2.3

Import Origin

Partner	%,2014	%,2015
ASEAN	21.6	21.9
China	16.7	19.4
Japan	8.4	11.4
EU-28	8.2	N/A
US	7	7.6
Korea, Rep.	6.2	7
Taiwan	5.3	5.6
Saudi Arabia	2.8	1.9
UAE	2.8	2
Germany	2.6	2.6
India	N/A	1.8

Given their intent to establish the AEC, the Member States clearly envision increased intra-regional trade and other economic activities. This satisfies the requirement of repeated interactions between the States. The importance of intra-regional trade shows that there are gains in sustaining long-term trade relations between the Member States. Long-term cooperation, which results in the free flow of goods within the region, is more beneficial than short-term gains derived from protectionist trade policies. The Member States' failure to overcome the prisoner's dilemma can thus be reasonably attributed to the general and vague language of ASEAN's legal instruments, which have failed to establish the necessary focal points for cooperation.

The uncertainty generated by such instruments has repercussions on the effectiveness of reputation as a compliance incentive.[266] This is a serious weakness given that neither reciprocity nor retaliation effectively encourage compliance within the region.

The threat of reciprocal defections by compliant Member States is not credible for a number of reasons. Firstly, this threat is not as effective in the context of multilateral prisoner's dilemmas.[267] The endeavour to establish the AEC is precisely such a multilateral setting. Reciprocal defections lack any credibility since they would undermine the creation of the AEC.

Secondly, the lack of widespread compliance among Member States weakens the credibility of reciprocity. ASEAN itself has recognized that significant work still needs to be done to fulfil its NTB- and NTM-related commitments.[268] Threats of reciprocal defections lose credibility where the other Parties themselves are in breach of, or have failed to sufficiently meet, their obligations.

Thirdly, the "ASEAN Way" weakens the effectiveness of reciprocity as a compliance mechanism. Given the importance of flexibility, consultation, and consensus in the region, ASEAN effectively only endorses policies which *"satisfy the 'lowest common denominator'."*[269] Policies, commitments, and even opinions which do not meet the approval of all Member States are seemingly disregarded. Thus, the dissent of a single Member State would suffice to block implementation of measures and policies, and even the release of statements critical of other Member States. This flexibility undermines the obligatory pull of ASEAN commitments. If commitments are no longer obligatory, then there is less scope for reciprocal defections.

The "ASEAN Way's" emphasis on sovereignty, and the resulting primacy of non-interference, further impairs the compliance pull of reciprocity. In particular, the ASEAN Charter binds the Member States not to interfere in other Member States' domestic affairs, be they economic or political. Threats of reciprocal actions may be construed as interfering with the other Member State's exercise of its sovereign powers. This is particularly likely in the context of

266. Guzman, *How International Law Works*, 93-96.
267. Ibid., 65.
268. ASEAN Secretariat, *ASEAN Integration Report 2015*, 15-17.
269. Leviter, "The ASEAN Charter: ASEAN Failure or Member Failure," 161.

NTM-related commitments. Member States need only to claim that the measures or policies are in pursuit of legitimate national interests. That being so, the default ASEAN response is, and has always been, a non-response. For example, neither ASEAN nor any of its Member States criticized Indonesia when forest fires that had been deliberately started resulted in a region-wide environmental hazard, or when Indonesian-backed militias launched attacks in East Timor.[270] During the 2017 ASEAN Summit, neither the Rohingya crisis in Myanmar nor the Philippines' war on drugs and its alleged human rights violations were addressed.[271] Against this backdrop, it is unlikely that breaches of NTM-related commitments would elicit reciprocal actions from the Member States.

As with reciprocity, retaliation is also an ineffective mechanism for compliance. Firstly, the ASEAN enforcement and settlement systems do not even provide for any penalties or sanctions in the event of breach of obligations. The ASEAN Secretariat is not even authorized to punish violations of AEC-related obligations.[272] While compensation in cases of breach is available under the Protocol on Enhanced Dispute Settlement, actual payment is purely voluntary. Thus, ASEAN enforcement systems lack any coercive power, and ultimately they fail to alter the payoff schemes of Member States, since they fail to make breach costlier than compliance.

The weaknesses in the region's enforcement institutions can also be traced back to the "ASEAN Way". The preference for diplomatic processes[273] has resulted in the creation of institutions that are incapable of disciplining the Member States.[274] For example, the Senior Economic Officials Meeting is not even obliged to constitute panels when a Member State initiates proceedings

270. Narine, "Asia, ASEAN and the question of sovereignty," 159.
271. Reuters staff, "Southeast Asia summit draft statement skips over Rohingya crisis," *Reuters*, November 2017, https://www.reuters.com/article/us-asean-summit-myanmar/southeast-asia-summit-draft-statement-skips-over-rohingya-crisis-idUSKBN1DD0CP; JC Gotinga, "ASEAN summit silence on Rohingya 'an absolute travesty'," *ALJAZEERA*, November 2017, http://www.aljazeera.com/news/2017/11/asean-summit-silence-rohingya-absolute-travesty-171114211156144.html.
272. Helen E.S. Nesadurai, "Enhancing the Institutional Framework for AEC Implementation: Designing Institutions that are Effective and Politically Feasible," in *The ASEAN Economic Community: A Work in Progress*, ed. Sanchita Basu Das et al. (Singapore: ISEAS Publishing, 2013), 418.
273. Specifically, for *"non-intrusive, intergovernmental mechanisms for decision-making, enforcement and adjudication.* ibid., 413.
274. Ibid., 412.

under the Protocol on Enhanced Dispute Settlement. In a way, this ineffective enforcement system complements the policy of non-interference and respect for national sovereignty. Furthermore, the "ASEAN Way" discourages the resort to retaliatory actions against policies and decisions enacted pursuant to a Member State's exercise of sovereignty. In fact, no Member State has invoked the provisions of the Protocol on Enhanced Dispute Settlement.[275] Instead, the weak and ineffective enforcement systems encourage Member States to settle their differences through diplomatic inter-governmental channels.

In cases where retaliation and reciprocity are ineffective, reputation may serve to tilt the scales in favor of compliance.[276] However, the influence of reputation is lessened by legal uncertainty. When the legal instruments are vague, ambiguous or incomplete in regard to the nature and content of the obligations, the reputational costs are lessened.[277] As a wide variety of measures can qualify as NTMs, Member States can plausibly claim that they have inadvertently failed to comply with their obligations. For this same reason, it is difficult to assert that another Member State has failed to address problematic NTMs. Instances such as these are not equivalent to intentional and clear-cut violations of international law, resulting in considerable reputational costs. This weakness illustrates the importance of the ASEAN Trade Repository, as this would provide greater transparency. Greater transparency promotes compliance as it is "*less likely that a violation will be perceived as compliant or that compliant behavior will be perceived as a violation.*"[278]

2.5 Conclusion

The compliance decisions of rational, self-interested States with their international law obligations is a multifaceted variable. In the setting of trade policy, it is in the interests of States to pursue cooperative actions in order to ensure attainment of the highest possible payoffs. In ASEAN, this cooperative endeavor is embodied in both treaty and soft law instruments, which would suggest that the Member States are serious about achieving their goal of creating the AEC.

275. ASEAN Public Information, e-mail to author, August 29, 2016.
276. Guzman, *How International Law Works*.
277. Ibid., 93.
278. Guzman, *How International Law Works*, 96.

However, an examination of the language used in these instruments suggests that the mere enactment of such legal instruments may not suffice to guarantee Member States' compliance. In failing to establish the focal points for coordination, these instruments have failed to promote cooperation and compliance.

The rational choice compliance theories suggest that other mechanisms, primarily reputation, reciprocity and retaliation, determine the compliance decisions of States. An examination of the enforcement and dispute settlement mechanisms in ASEAN, however, suggests that these "Three Rs of Compliance" may not suffice to effectively incentivize compliance by the Member States. This discussion thus offers one possible explanation for the persistence of NTMs and NTBs in Southeast Asia.

Nevertheless, trade policy is not solely dependent on international law obligations. The question of why the ASEAN Member States persist in their use of NTMs and NTBs cannot be convincingly answered by merely looking at the compliance issue. For example, the political economy literature suggests that rent-seeking and lobbying activities also play an important role in the setting of trade policy. Thus, an analysis of other forces, such as the Member States' intra-state interactions and other institutional characteristics, is needed in order to identify the factors underlying and motivating the use of NTMs and NTBs in Southeast Asia.[279]

279. See *Chapters 3* and *4*.

3 Motivations Matter: Changing Preferences and Non-Tariff Measures[1]

3.1 Introduction

The ASEAN Economic Community (AEC) represents a shift in the trade policies of Southeast Asia. Its earlier trade initiatives, such as the ASEAN Free Trade Area (AFTA), were shallow agreements[2] focusing exclusively on tariff liberalization. The AEC is a deeper form of integration. Deep integration is *"a process of economic integration that erodes differences in national economic policies and regulations and renders them more compatible for economic exchange."*[3] In the AEC's case, it involves commitments which affect beyond-the-border measures such as non-tariff measures (NTMs). In particular, ASEAN Member States are tasked to remove non-tariff barriers (NTBs) and harmonize NTMs. The aim is to facilitate the free flow of goods in order to transform ASEAN into a single market and production base, with the specific emphasis on enhancing the region's capacity to be part of the global production chain.[4] This change in regional preferences, from shallow to deeper integration, is not

1. This chapter is based on my paper "Structural Change and Protection: Non-Tariff Measures in ASEAN," in *Public Law and Economics: Economic Regulation and Competition Policies* (forthcoming). I would like to thank Emanuela Carbonara, Michael Faure, Roger van den Bergh, the participants of the EDLE Winter Seminar at Erasmus University Rotterdam, and the participants of the World Economics Association conference on "Public Law and Economics: Economic Regulation and Competition Policies 2017" for their valuable comments.

2. World Trade Organization, *World Trade Report 2011*, 110.

3. Soo Yeon Kim, "Deep Integration and Regional Trade Agreements," in *The Oxford Handbook of the Political Economy of International Trade*, ed. Lisa L. Martin (Oxford University Press, 2015), 361.

4. ASEAN Secretariat, *AEC Blueprint*, 6.

surprising in light of the increasingly greater role played by the Member States in production networks.[5]

The distinguishing feature of today's production networks is the unbundling of production stages not only among different firms but also across different countries.[6] This is reflected in the growth of trade in intermediate goods, namely parts and components.[7] Today, production networks encompass multiple countries, and products may entail multiple border crossings up to the final processing stage. Different and conflicting trade-related domestic laws and regulations, such as NTMs, thus have the potential to significantly increase the production costs of production networks.[8] The increased transboundary movement of both intermediate and final goods highlights the importance of deeper integration, as this lowers trade costs through legal and regulatory convergence, and strengthens ties between signatories.[9] Notably, increased production network trade is one of the driving forces behind the surge in deep integration agreements.[10] In fact, the primacy of enhancing production networks in ASEAN is one of the main factors behind efforts to harmonize NTMs and eliminate NTBs.

NTMs include any measure or policy, other than tariffs, that may affect the price or quantity of traded goods.[11] This definition includes statutes, regulations, and policies that on the face of it are unrelated to trade. The existing scholarship generally identifies two types of underlying motivations for the existence of NTMs, namely *(i)* concern for public welfare and *(ii)* political economy goals.[12] Measures prompted by concerns for public welfare address market failures, such

5. AFTA has one of the highest intra-regional shares of exports of parts and components (28%), as noted by the World Trade Organization in the *World Trade Report 2011*

6. Gianluca Orefice and Nadia Rocha, "Deep Integration and Production Networks: An Empirical Analysis," *The World Economy* 37, no. 1 (2014): 106, doi:-0.1111/twec.12076.

7. Prema–Chandra Athukorala and Jayant Menon, "Global Production Sharing, Trade Patterns, and Determinants of Trade Flows in East Asia" (2010), 1, https://www.adb.org/publications/global-production-sharing-trade-patterns-and-determinants-trade-flows-east-asia.

8. World Trade Organization, *World Trade Report 2011*, 111.

9. World Trade Organization, *World Trade Report 2011*; Orefice and Rocha, "Deep Integration and Production Networks."

10. World Trade Organization, *World Trade Report 2011*, 109; Kim, "Deep Integration and Regional Trade Agreements," 360.

11. United Nations Conference on Trade and Development, *Non-Tariff Measures to Trade: Economic and Policy Issues for Developing Countries*, 2.

12. World Trade Organization, technical report (World Trade Organization, 2012), 50, https://www.wto.org/english/res_e/booksp_e/anrep_e/world_trade_report12_e.pdf.

as information asymmetries [13] or externalities. On the other hand, producers and import-competing sectors may lobby for protection against the effects of trade liberalization. Politicians who issue such protectionist measures are thus driven by political economy motives.[14] The motivation for NTMs *"can best be deduced from the type of NTM chosen, from the sector to which it is applied, from its design and implementation, and from its impact."*[15] However, even NTMs with stated legitimate objectives may have unintended consequences on trade flows, or be used to achieve protectionist aims. Furthermore, those NTMs having protectionist or discriminatory effects, whether intentional or otherwise, are NTBs.

There is no one way to categorize or classify NTMs. An easy way to make sense of these measures is to distinguish them based on their effects, such as price measures (subsidies), quantity measures (quotas) or quality measures. Price and quantity measures affect the prices or quantities of traded goods, respectively. Quality measures impose standards and requirements on either the production process or product features.[16] Sanitary and phytosanitary (SPS) measures and technical barriers to trade (TBTs) are the most commonly used quality measures in the world.[17] SPS measures aim to protect human, plant and animal life against contamination and the spread of diseases. TBTs are more general, and refer to measures which impose technical and quality requirements.[18]

The motives and effects of NTMs become especially salient in the context of increased participation in production networks. For example, countries may have different standards for the quality of products and processes. Lower quality intermediate products and processes may compromise the quality of final goods. However, as the actual quality of intermediate inputs is not immediately apparent, total demand for them may be adversely affected. Quality measures such as SPS and TBTs may serve to address this information asymmetry by signaling that the traded goods meet the quality and safety standards of the importing countries, thus stimulating demand for the intermediate inputs.[19]

13. There is an information asymmetry where one party to an exchange or transaction has an informational advantage over the other parties.
14. World Trade Organization, *World Trade Report 2012*, 50.
15. Ibid., 51.
16. Ibid.
17. United Nations Conference on Trade and Development, *Non-Tariff Measures to Trade: Economic and Policy Issues for Developing Countries*, 4-5.
18. Ibid., 4.
19. World Trade Organization, *World Trade Report 2012*, 62.

Alternatively, SPS and TBTs may act as disguised protectionist measures, as when these measures require foreign producers to use costlier, and even unnecessary, production methods. As export costs increase, the market share of domestic firms increase.[20] Thus, NTMs may significantly increase trade costs, and this hinders the further development of intra-regional production networks. Considering the role played by production networks in their economies, the Member States clearly have an interest in minimizing costly trade barriers and harmonizing trade-related domestic policies.

The persistence of NTMs among the Member States despite the region's avowed policy of trade liberalization, is an interesting phenomenon. The increased participation of the Member States in both production networks and deeper integration efforts coincided with a rising incidence of NTMs. Is there a link between participation in production networks and trade liberalization efforts on the one hand, and NTM incidence on the other? Did the promotion of trade in sectors involved in transboundary production networks cause a demand for protection, in the form of NTMs, in other sectors? These questions drive the discussion in this chapter.

As a starting point, the emergence of production networks in the Member States must be placed in due context. From the late 1980s onwards, there was an increase in both the economic importance of production networks and efforts to enhance the region's attractiveness as a production base. Initiatives like the AFTA promoted the intra-regional movement of intermediate goods through the institution of preferential tariff rates for networks operating in the Member States. This contributed to the increased involvement of the Member States in production networks in the last 2 decades, along with the rise of the industrial and manufacturing sectors. Industries and firms involved in production networks are clearly the main beneficiaries and proponents of the AEC and of deeper regional integration. However, the AFTA has also meant the removal of tariff protection for import-competing industries such as agriculture. The rise of industry and manufactures has also diminished the economic importance of agriculture. Agricultural producers therefore have an incentive to lobby, and the complexity and opacity of NTMs makes these measures the ideal form of protection.

20. World Trade Organization, *World Trade Report 2012*, 59-60, 62.

In other words, the structural changes in the economies of the Member States may have influenced the interests of political and economic actors, and these interests are embodied in the enacted instruments, policies, and regulations. This explains the apparent disconnect between the region's stated policy of trade liberalization on the one hand, and the persistence of NTMs and NTBs on the other. Firms involved in production networks are pushing for freer trade in intermediate goods. This has led to efforts at integration geared towards the promotion of the region as a production base. However, producers in import-competing sectors and/or declining industries favor protection. This would cushion them against losses, preserve jobs, and ensure their market share in the face of foreign competition. As the governments are prevented by their international commitments from imposing tariffs and quotas, they resort to less transparent means of protection, *i.e.,* NTMs. Thus, structural and policy changes favoring trade liberalization have created a demand for a more subtle form of protection in the declining sectors.

At this point, it should be said that this analysis does not aim to prove causation. The goal is merely to derive useful insights into the use and incidence of NTMs. This chapter uses a qualitative approach in examining the features of Member States, production networks and NTM usage. Since NTMs are essentially instruments issued by political actors, this examination shall be guided by the literature on the political economy of protection. It is hoped that by looking at the structural characteristics of the Member States, together with the nature of their involvement in production networks, and the trends and features of their NTM usage, useful insights into the use and persistence of NTMs in the region can be gleaned.

Section 3.2 provides a brief discussion of the literature on the political economy of protection. *Section 3.3* examines the trends in ASEAN, guided by the existing scholarship. It begins by looking into the rise of production network trade, as promoted by the region's trade agreements and policies. This is followed by an examination of the data in order to to identify any trends in the incidence of NTMs vis-a-vis the participation of Member States in production networks and the structural changes in their economies. NTM types, regulated product categories, and issuing authorities are also examined to determine whether the trends support the hypothesis that NTM incidence is the result of political economy motives. *Section 3.4* summarizes.

3.2 Structural Change and the Political Economy of Protection

The evolving nature of trade is among the main drivers of structural change. Unbundled production enables more countries, notably those from the developing world, to participate in manufacturing processes. The increased economic importance of manufacturing has significant effects in both the economic and political spheres.

To illustrate, consider the simple case of a country endowed with labor, capital and land. These resources can be used in either agriculture or manufacturing.[21] Labor and land can be used for agricultural purposes, while labor and capital can be employed in manufacturing. A country with limited capital resources, such as the majority of developing countries, will mainly focus on agricultural activities. Agricultural goods will be produced and traded for manufactures.[22] As capital accumulates or flows in from foreign investment, increasingly more labor will be attracted to the manufacturing activities. This increase in capital initiates the switch from agriculture to manufactures. This change is reflected in the changing composition of export goods, from primary agricultural products to manufactured goods.

As a result of this transition: *(i)* the importance of agricultural products as export items tends to decline as the economy shifts in favor of manufacturing activities; and *(ii)* agriculture's economic importance, as measured by labor share and output, will tend to decline relative to manufacturing.[23] These structural changes affect incentives from, and support for, certain kinds of economic

21. Kym Anderson, "Economic Growth, Comparative Advantage, and Agricultural Trade of Pacific Rim Countries," *Review of Marketing and Agricultural Economics* 51, no. 3 (December 1983): 232; Kym Anderson, "Economic Growth, Structural Change and the Political Economy of Protection," in *The Political Economy of Agricultural Protection: East Asia in International Perspective*, ed. Kym Anderson and Yujiro Hayami (Australia: Allen & Unwin, 1986), 7.

22. Anderson, "Economic Growth, Structural Change and the Political Economy of Protection," 7; Anderson, "Economic Growth, Comparative Advantage, and Agricultural Trade of Pacific Rim Countries," 232.

23. Anderson, "Economic Growth, Structural Change and the Political Economy of Protection," 8.

policies. For example, agriculture's lessened economic significance is often accompanied by increased protection relative to export industries.[24] As these policies are nothing but governmental enactments, the political economy theories on regulation help shed light on the underlying processes and motivations for different policies.

One view is that governmental policies, statutes, and regulations are mainly motivated by politicians' desire to promote the "common welfare", "public interest", or "public good". Specifically, the *public interest theory* states that regulations are necessary to protect the public against market failures such as information asymmetry, externalities, imperfect competition, and the like.[25] For example, where market forces alone are incapable of generating sufficient incentives for optimal information disclosure, *i.e.,* on product safety and quality, there is room for disclosure regulations and quality standards.[26]

Critics of the public interest theory have pointed out that regulations often fail to achieve their stated aims, or that they only do so at great cost.[27] This regulatory failure can be traced to the self-interest of politicians and regulators, which is used by private and special interests to influence policies and regulations to their benefit.[28] The *private interest* or *public choice* theories of regulation seek to explain why policies often seem to favor, rather than regulate, their subject sectors and interests. Politicians and regulators are assumed to interact with the private sector within the context of a political market. Laws, policies and regulations are issued only insofar as these can generate public support for the incumbent. Citizens support public officials only to the extent that they benefit from these enactments. Public officials are "captured" by private interests

24. Johan F.M. Swinnen, Anurag N. Banerjee, and Harry de Gorter, "Economic Development, Institutional Change, and the Political Economy of Agricultural Protection: An econometric study of Belgium since the 19th century," *Agricultural Economics* 26 (2001): 29; Johan F.M. Swinnen, "A Positive Theory of Agricultural Protection," *American Journal of Agricultural Economics* 76, no. 1 (1994): 1; Johan F.M. Swinnen, "The Political Economy of Agricultural and Food Policies: Recent Contributions, New Insights, and Areas for Further Research," *Applied Economic Perspectives and Policy* 32, no. 1 (2010): 35-36.

25. Anthony Ogus, *Regulation: Legal Form and Economic Theory* (Hart Publishing, 2004), 29-54; Michael E. Levine and Jennifer L. Forrence, "Regulatory Capture, Public Interest, and the Public Agenda: Toward a Synthesis," *Journal of Law, Economics & Organization* 6 (1990): 167-168.

26. Ogus, *Regulation*, 38-41.

27. Ibid., 55-56.

28. Levine and Forrence, "Regulatory Capture, Public Interest, and the Public Agenda: Toward a Synthesis," 169.

when policies are traded by the former for both pecuniary and non-pecuniary benefits from private interests.

Stigler (1971) presented this political process as a market for regulation. Industries can benefit from certain types of regulation, such as subsidies, price fixing policies, and controls on new entrants.[29] However, these benefits are lower than the social costs imposed on the community. An informed democratic society would reject industries' demands for protection.[30] However, requiring voters to decide on every single issue is expensive, as *"information must be sought on many issues of little or no direct concern to the individual."*[31] Instead, voters rely on representatives, namely political parties and politicians, to act and decide for them. Representatives who are able to act and decide in accordance with the voters' preferences are the ones who get elected.[32]

However, discernment of voter preferences is not an easy task. If a minority group is injured by a certain policy by only a negligible amount, then this group will have no interest in discovering this and opposing such policy. Only *"strongly felt preferences"*[33] are adhered to by representatives. Industries are able to take advantage of this asymmetry. Acting as buyers of regulation, they can offer representatives votes and resources that allow them to stay in power.[34] Nevertheless, larger industries are at a disadvantage as benefits accruing to larger industries impose higher social costs, inciting increased opposition from voters.[35]

Some policies and regulations are issued not by elected representatives, but by bureaucrats and regulators. In this case, it is useful to view capture in the context of a principal-agent model involving a principal (the government), the regulator, and the agent (industry).[36] Let us assume that the government aims to maximize social welfare. To incentivize industry to produce enough to maximize net surplus, the government offers to transfer remuneration to high

29. George J. Stigler, "The Theory of Economic Regulation," *The Bell Journal of Economics and Management Science* 2, no. 1 (1971): 4-6.
30. Ibid., 10.
31. Ibid., 11.
32. Ibid.
33. Ibid., 12.
34. Ibid.
35. Ibid.
36. Ernesto Dal Bó, "Regulatory Capture: A Review," *Oxford Review of Economic Policy* 22, no. 2 (2006): 207.

cost industries. This transfer is ultimately borne by consumers.[37] Industry, however, has private information regarding its costs.[38] Low cost industries have an incentive to misrepresent their costs in order to achieve higher profits. This information asymmetry between the government and industry can be mitigated by the appointment of a regulator tasked with monitoring industry's production costs.[39] As truthful regulators who are informed of the true costs can dissipate industry's profits, the latter has an incentive to buy the former's silence either through positive or negative incentives.[40] Regulatory capture *"depends on the amount of information that the regulator may obtain, and on how easy the environment makes it to bribe regulators."*[41]

As with elected representatives, information and monitoring costs provide regulators with considerable discretion in enacting policies, thus shielding them from public scrutiny.[42] This shield ultimately allows regulators to pursue policies which benefit special interests at the expense of the majority. Regulators may also cite public interest justifications for policies touching on complex subject matter, for which information and monitoring costs are particularly high. This way, regulators can signal that their actions, which are difficult to monitor, are in the general interest and need not be independently verified by the public.[43] Regulators can also take advantage of this information asymmetry by deliberately choosing vague and complex instruments which mask the extent of costs borne by the public.[44] In addition to complex instruments, regulators can also enact complex and burdensome administrative processes, which make the granting of protection to certain industries less conspicuous.[45]

Olson's (1964) seminal work on collective action predicts which interest groups will succeed in influencing political outcomes. Groups aiming for the establishment of a policy which is in the nature of a public good[46] are necessarily plagued by the free rider problem. Specifically, group members are not barred from

37. Ibid., 208.
38. Ibid., 207.
39. Ibid., 209.
40. Ibid., 209, 212-213.
41. Ibid., 210.
42. Levine and Forrence, "Regulatory Capture, Public Interest, and the Public Agenda: Toward a Synthesis," 185.
43. Ibid., 180.
44. Arye L. Hillman, *The Political Economy of Protection* (Harwood Academic Publishers, 1989), 73.
45. Ibid., 75.
46. Such as benefits or outcomes which are non-excludable and non-rivalrous.

enjoying the public good even though they did not contribute to the group's lobbying efforts.[47] The larger the group's membership, the greater this free rider problem will be, resulting in sub-optimal lobbying efforts and contributions from members. This implies that smaller groups, which have fewer members who can enjoy the benefits of the policy aimed for, are more successful in their lobbying efforts.[48] This is possible since *"in some small groups each of the members, or at least one of them, will find that his personal gain from having the collective good exceeds the total cost of providing some amount of that collective good x x x"*.[49] For example, producer groups can more effectively lobby for, and receive, favorable policies than more disperse consumer groups.[50] Groups which provide *"separate and 'selective' incentives"*[51] are likewise able to overcome the free rider problem, by either punishing or rewarding members based on their contributions to the group's lobbying efforts.[52]

The prediction of the effectiveness of small lobby groups is contradicted by the ability of some sizable industries, namely agriculture, to successfully obtain favorable policies. Posner (1974) was among the first to offer an explanation for this. He argued that lobby groups can be likened to cartels, as favorable policies can maintain group profits close to monopoly prices.[53] Nevertheless, while a large group size may be detrimental for cartels, this characteristic may actually encourage lobbying efforts.[54] Firstly, the fact that a sizable group is constrained from pursuing other options, *i.e.,* organizing a cartel, actually stimulates demand for favorable regulations.[55] Secondly, government intervention can take many forms, ranging from clear-cut quotas and tariffs to more subtle requirements and standards. A heterogenous group will necessarily be composed of members with asymmetric political power and influence. More powerful and influential members will have an interest in lobbying for the type of regulation that will benefit them more than other members.[56] Lastly, larger groups

47. Mancur Olson, *The Logic of Collective Action: Public Goods and the Theory of Groups* (Harvard University Press, 2002), 11.
48. Ibid., 35-36.
49. Ibid., 33-34.
50. Ogus, *Regulation*, 71.
51. Olson, *The Logic of Collective Action*, 51.
52. Ogus, *Regulation*, 51.
53. Richard A. Posner, "Theories of Economic Regulation," *The Bell Journal of Economics and Management Science* 5, no. 2 (1974): 345.
54. Ibid., 347.
55. Ibid., 345.
56. Ibid., 346.

have voting power, which is an important determinant of political influence in democratic systems.[57]

Declining industries have also been identified as a *"natural candidate"*[58] for protection. Competitive industries which enjoy protection derive economic benefits therefrom. However, these same benefits can stimulate entry into the industry. New entrants can dissipate these profits, which will necessarily reduce the industry's support for the protectionist government. On the other hand, new entrants will not be attracted to protected declining industries. Thus, there is only a given set of beneficiaries from protection, which will remain inclined to support the government.[59]

The existing literature supports the idea that structural changes incentivize adversely affected industries and firms to lobby for beneficial regulation. In fact, previous studies have shown that policies have shifted in favor of agriculture as a response to certain structural changes that have affected the political incentives for, and costs and benefits of, protection.[60] For one, consumption patterns in growing economies shift from food to other commodities. This means that consumers are less affected by any price hikes caused by protectionist agricultural policies, and will offer little to no opposition.[61]

Secondly, as agricultural incomes grow relatively slowly compared to other sectors, farm workers and fishermen are pressured to look for other sources of income and lobby for increased government support.[62] Politicians can increase support for the agricultural sector in light of this income gap, as this will have less marginal welfare effects on (higher) manufacturing wages.[63]

Lastly, the transition from an agricultural to a manufacturing economy is accompanied by a decrease in agriculture's relative and absolute labor share. As

57. Ibid., 347.
58. Hillman, *The Political Economy of Protection*, 26.
59. Ibid.
60. Swinnen, "The Political Economy of Agricultural and Food Policies," 36; Swinnen, Banerjee, and Gorter, "Economic Development, Institutional Change, and the Political Economy of Agricultural Protection," 27.
61. Swinnen, "The Political Economy of Agricultural and Food Policies," 36; Anderson, "Economic Growth, Comparative Advantage, and Agricultural Trade of Pacific Rim Countries," 15.
62. Anderson, "Economic Growth, Comparative Advantage, and Agricultural Trade of Pacific Rim Countries," 15-16; Swinnen, "The Political Economy of Agricultural and Food Policies," 37.
63. Swinnen, "A Positive Theory of Agricultural Protection," 4.

there are fewer farmers and fishermen in relative terms, the per unit costs of protection shouldered by taxpayers also decline.[64] The lower labor share also translates to lower political organization costs. Following Olson's theory, this reduced membership should make their lobbying efforts more effective.[65]

The following section will look at the development of, and patterns characterizing, the Member States, in an attempt to determine how closely they conform to the theory.

3.3 The ASEAN Experience: A Closer Look

The ASEAN experience began with tentative tariff liberalization efforts in the 1970s. The regionalization of trade and the growth of production networks stimulated the creation of new rules and institutions designed to address the needs of the changing economies. The increased importance of production networks and intra-industry trade led to structural changes in the economies of the Member States, which transitioned from agriculture to industry, manufactures, and even services.

This economic transformation created a demand for deeper integration in order to maintain the region's centrality in the global economy. The focus has now shifted to measures, *i.e.,* NTMs and NTBs, which affect the free flow of goods within the region. Paradoxically, however, it seems that the growth of production networks itself stimulated the use of NTMs among the Member States.

This section begins with an overview of the growth of production networks in the region. *Section 3.3.2* examines the incidence of NTMs in the context of the structural changes affecting the Member States.

3.3.1 Changing Trade Patterns

ASEAN's early regional economic projects were mainly unsuccessful.[66] During the 1960s, the Member States felt little need to pursue regional integration and

64. Swinnen, "A Positive Theory of Agricultural Protection," 5; Swinnen, "The Political Economy of Agricultural and Food Policies," 36.
65. Swinnen, "The Political Economy of Agricultural and Food Policies," 37.
66. Bowles and MacLean, "Understanding Trade Bloc Formation," 321-322.

trade initiatives. Their individual trade policies were mainly protectionist, with restrictions on the import of manufactures and a strong emphasis on import substitution.[67]

A number of political and economic factors during the 1980s contributed to the formation of AFTA. The changing global political economy, coupled with a regional economic downturn, forced the largest Member States[68] to move from import-substitution to outward-oriented policies, *i.e.,* the promotion of exports and foreign direct investment (FDI).[69] These policies served to attract, among others, a significant portion of Japanese FDI.[70] This period also saw the rise of intra-industry, particularly intra-firm, trade in the region. From 1979 to 1988, intra-industry trade rose by 91% in the Philippines, 90% in Indonesia, 85% in Thailand, and 64% in Malaysia.[71] Trade in parts and components rose from 2% of intra-regional trade in 1967 to 18% in 1992.[72] The growing political clout of private business interests within ASEAN, which favored trade liberalization, also played a role in the creation of AFTA.[73] Since much of the intra-industry trade stemmed from the intra-ASEAN activities of multinational corporations, the idea of the creation of a regional trading area became more appealing.[74]

In 1992, the Member States[75] embarked on the creation of the AFTA. The underlying motivation was *"to increase ASEAN's competitive edge as a production base geared for the world market."*[76] The primary aim was to integrate[77] the region into the global economy by reducing trade costs and making the Member

67. Ian Coxhead, "Southeast Asia's Long Transition," in *Routledge Handbook of Southeast Asian Economics*, ed. Ian Coxhead (New York: Routledge, 2015), 9.

68. Namely Indonesia, Malaysia, the Philippines, and Thailand.

69. Bowles and MacLean, "Understanding Trade Bloc Formation," 332.

70. Bowles and MacLean, "Understanding Trade Bloc Formation," 333; Walter Hatch, Jennifer Bair, and Günter Heiduk, "Connected Channels: MNCs and production networks in global trade," chap. 13 in *The Oxford Handbook of the Political Economy of International Trade*, ed. Lisa L. Martin (New York: Oxford University Press, 2015), 237; Masahiro Kawai and Ganeshan Wignaraja, "Trade Policy and Growth in Asia" (Tokyo, 2014), 7, `http://www.adbi.org/working-%20paper/2014/08/15/6375.trade.policy.growth.asia/`.

71. Bowles and MacLean, "Understanding Trade Bloc Formation," 334.

72. World Trade Organization, *World Trade Report 2011*, 147.

73. Bowles and MacLean, "Understanding Trade Bloc Formation," 337-339.

74. Ibid., 334.

75. During this time, ASEAN was composed of Brunei Darussalam, Indonesia, Malaysia, the Philippines, Singapore, and Thailand. Vietnam joined in 1995, Lao People's Democratic Republic and Myanmar in 1997, and Cambodia in 1999.

76. ASEAN Secretariat, "AFTA Reader," accessed January 3, 2017, `http://asean.org/?static_post=afta-reader-volume-1-november-1993-table-of-contents`.

77. Bowles and MacLean, "Understanding Trade Bloc Formation," 333.

States more appealing to foreign investors. AFTA implements a sectoral Common Effective Preferential Tariff (CEPT) Scheme which covers all manufactured products, including capital goods, and agricultural products which originate[78] from the Member States.[79] Under the CEPT Scheme, tariffs on covered goods were scheduled to be reduced to a 0-5% range by January 2003.

The AFTA is supplemented by two initiatives, the ASEAN Investment Area (AIA) and the ASEAN Industrial Cooperation Scheme (AICO). AIA aims to give investors *"a framework highly conducive to regional integrated production activities, procurement, manufacturing and resources based investment activities."*[80] AICO caters specifically to vertically integrated firms engaged in production networks in the region, *i.e.,* at least two companies operating in different Member States. The output of these companies under AICO-approved projects are entitled to preferential tariff rates of 0-5% and access to the markets of participating Member States.[81] As of 2007, 140 regional supply projects have been approved under the AICO program.[82]

Outward-oriented trade policies such as these played a role in the structural changes experienced by the Member States.[83] As tariffs and trade costs declined during the 1990s, intra-regional trade and production network-related trade were stimulated. For example, during the 1990s the composition of traded goods in ASEAN shifted from primary and natural-resource intensive goods to manufactures such as electronics, machineries, and transport equipment.[84] From 1992/1993 to 2005/2006, AFTA's exports of parts and components as a

78. A product is deemed to have originated from a Member State if at least 40% of its contents originates from a Member State.

79. *Agreement on the Common Effective Preferential Tariff (CEPT) Scheme for the ASEAN Free Trade Area (AFTA)*, 1992.

80. Tan, "Will ASEAN Economic Integration Progress Beyond a Free Trade Area?," 942.

81. Ibid.

82. Asian Development Bank, *Emerging Asian Regionalism: A Partnership for Shared Prosperity*, technical report (Philippines, 2008), 62.

83. Yue and Plummer, "Introduction," 2; Masahiro Kawai and Kanda Naknoi, "ASEAN Economic Integration through Trade and Foreign Direct Investment: Long-Term Challenges" (Tokyo, 2015), 3,10, http://www.adb.org/publications/asean-economic-%20integration-through-trade-and-foreign-direct-investment-long-term/; Kawai and Wignaraja, "Trade Policy and Growth in Asia," 6.

84. Prema-chandra Athukorala, "Production Networks and Trade Patterns in East Asia: Regionalization or Globalization? ADB Working Paper Series on Regional Economic Integration" (2010), 5, https://aric.adb.org/pdf/workingpaper/WP56%7B%5C_%7DTrade%7B%5C_%7DPatterns%7B%5C_%7Din%7B%5C_%7DEast%7B%5C_%7DAsia.pdf; Yue and Plummer, "Introduction," 4.

percentage of total manufactured goods exported increased from 29% to 44%.[85] By 2005, *"the concentration of component trade in electronics is much larger in AFTA (over 60%) compared with the regional average."*[86] Today, trade in parts and components, as a share of GDP, *"is among the highest in the world in the ASEAN."*[87]

Elliott and Ikemoto (2004) used a gravity model to analyze intra- and extra-regional trade flows in ASEAN to assess the effects of AFTA on intra-regional trade. Using data from 1982 to 1999, they found that while trade flows were not significantly affected immediately after the CEPT Scheme was launched, there was evidence of a positive but gradual AFTA effect.[88] Intra-regional trade only began to increase after the Asian financial crisis of 1997, suggesting that this economic shock stimulated regional integration efforts.[89] However, this study did not distinguish trade in final goods from trade in intermediate goods.

Pomfret and Sourdin (2009) estimated trade cost functions in terms of exogenous country characteristics to determine whether trade facilitation efforts in the region worked to reduce trade costs.[90] They used the data for Australian imports from 1990-2007 at the 6-digit Harmonized Commodity Description and Coding System (HS Code) level.[91] Asian countries' trade costs were examined vis-a-vis the costs of other countries to discern any temporal trends.[92]

They found that *ad valorem* trade costs from the ASEAN Member States decreased from 10.3% in 1990 to 3.9% [93] in 2007.[94] The average costs for Indonesia, Malaysia, the Philippines, Singapore, and Thailand fell by more than 50% from

85. Athukorala and Menon, "Global Production Sharing, Trade Patterns, and Determinants of Trade Flows in East Asia," 9.

86. Athukorala and Menon, "Global Production Sharing, Trade Patterns, and Determinants of Trade Flows in East Asia," 10; Athukorala, "Production Networks and Trade Patterns in East Asia," 7.

87. Asian Development Bank, *Emerging Asian Regionalism*, 64.

88. Elliott and Ikemoto, "AFTA and the Asian Crisis," 20-21.

89. Ibid., 17.

90. The term "trade costs" was defined as the gap between free-on-board (FOB) values when a good reaches the port in the exporting country and import values that include cost, insurance and freight (CIF).

91. The authors opined that Australia would be a good indicator of the trade costs of its trading partners, as it is a large economy with little geographically discriminatory policies and limited transport modes for imports.

92. Richard Pomfret and Patricia Sourdin, "Have Asian trade agreements reduced trade costs?," *Journal of Asian Economics* 20, no. 3 (May 2009): 256.

93. This is bigger than the drop from 8% to 5% in the *ad valorem* trade costs on all other exports to Australia.

94. Pomfret and Sourdin, "Have Asian trade agreements reduced trade costs?," 262.

1990 to 2007.[95] The significant decline occurred between 1994-2003, with average trade costs converging to 4-5.5% in 2007.[96] For Indonesia, the Philippines, Malaysia, Singapore, and Thailand, the decline occurred before 2002.[97] The trade costs for Myanmar and Vietnam fell after they joined ASEAN in the late 1990s.[98] The authors concluded that the period of the decrease in trade costs *"corresponds to the period during which AFTA was being established and suggests that the importance of AFTA lies in the environment for trade facilitation."*[99] They also raised the possibility that both the rise in Asian preferential trade agreements (PTAs) and the decline in trade costs may be linked to the emergence of production networks, which created a demand for reduced trade costs.[100]

Orefice and Rocha (2014) specifically focused on the role played by production networks in trade. They found dual links between PTAs and production networks, *i.e.,* that PTAs generated increases in production network trade, and that countries involved in production networks were more likely to sign deeper agreements. They also examined the impact of production network trade on the probability of Asian countries to sign deeper agreements. For Asian countries, production networks had a positive and significant effect on the probability of signing deeper PTAs. Production networks had an insignificant effect on the same probability for Europe, South and Central America, and Africa.[101]

Table 3.1 presents the main production network-related industries per Member State.[102] The wholesale and retail trade tops the list, followed by computers and electronics. Cambodia, Indonesia, Thailand and Vietnam are exporters of agricultural inputs in production networks.

95. Pomfret and Sourdin, "Have Asian trade agreements reduced trade costs?," 262.
96. Ibid., 263-264.
97. Ibid., 265.
98. Ibid., 263.
99. Ibid., 265.
100. Ibid.
101. Orefice and Rocha, "Deep Integration and Production Networks," 125-126.
102. As there was no available data for Lao People's Democratic Republic (PDR) and Myanmar, these countries were excluded.
103. "*S*" denotes that the Member State is a "seller" within the context of production networks, *i.e.,* its domestic value added is exported as intermediates. "*B*" denotes that the Member State is a "buyer", *i.e.,* an importer of foreign intermediates to produce exports of both intermediate and final goods. Data from World Trade Organization, "Trade in Value-Added and Global Value Chains: Statistical Profiles," accessed January 3, 2017, `https://www.wto.org/english/res_e/statis_e/miwi_e/countryprofiles_e.htm`.

Table 3.1: Production Network Industries[103].

	BN	KH	ID	MY	PH	SG	TH	VN
Mining	S,B		S,B	S				S
Transport, storage	S,B	S,B			S,B	S,B		
Other business services	S							
Construction	B							
Agriculture		S	S				S	S
Textiles		B						B
Wholesale, retail		S,B	S	S	S	S	S	S
Basic metals			B		B			
Chemical products			B	B			S	
Computers, electronics				S,B	S,B	S,B	B	B
Food, beverages				B				B
Petroleum products						B		
Motor vehicles							B	
Machinery and equipment							B	

3.3.2 Structural Change and Non-Tariff Measures

The evolving nature of ASEAN trade has stimulated and enhanced the structural changes that have been underway since the 1950s. These structural changes are reflected in the indicators for output, employment and trade, among others. *Tables 3.2* and *3.3* illustrate the increased significance of industry and services for the economies of the Member States, as measured by their contribution to gross domestic product (GDP). In the cases of Indonesia, Malaysia, the Philippines and Thailand, the shift from agriculture to industry which began during the 1950s and 1960s continued during the 1980s and thereafter.[104] While agriculture made up around a quarter of those countries' total output in 1980, by 2015 it contributed between 8 to 14% of their total GDP.

The structural change is more dramatic in the newer Member States. Before Vietnam joined ASEAN, agriculture comprised more than a third of its GDP. By 2015, agriculture represented only 16% of its GDP. Agriculture's share in the GDPs of Cambodia, Lao People's Democratic Republic (PDR), and Myanmar dropped from around 50 - 61% to just over 25%. Services currently constitute the most important sector within the region.

104. Anne E. Booth, *Colonial Legacies: Economic and Social Development in East and Southeast Asia* (University of Hawai'i Press, 2007), 168-170.

TABLE 3.2: Value Added as % of GDP[105].

COUNTRY	INDICATOR	1980	1985	1990	1995	2000	2005	2010	2015
Brunei	Agriculture	0.63	1.21	0.97	1.16	1.02	0.95	0.73	1.10
Darussalam	Industry	84.82	71.81	61.56	54.27	63.67	71.56	68.66	61.36
	Services	14.54	26.98	37.48	44.57	35.31	27.49	30.61	37.54
Indonesia	Agriculture	25.80	23.76	20.93	17.14	15.60	13.13	13.93	13.52
	Industry	44.90	36.71	42.17	41.80	45.93	46.54	42.78	40.01
	Services	36.93	41.93	44.71	41.06	38.47	40.33	40.67	43.32
Malaysia	Agriculture	23.03	20.28	15.22	12.95	8.60	8.26	10.09	8.45
	Industry	41.79	39.23	42.20	41.40	48.32	45.93	37.80	36.43
	Services	35.18	40.48	42.59	45.65	43.08	45.81	52.11	55.12
Philippines	Agriculture	25.12	24.58	21.90	21.63	13.97	12.66	12.31	10.27
	Industry	38.79	35.07	34.47	32.06	34.46	33.83	32.57	30.77
	Services	36.10	40.35	43.62	46.31	51.58	53.50	55.12	58.96
Singapore	Agriculture	1.57	0.96	0.34	0.16	0.10	0.06	0.04	0.04
	Industry	36.23	33.44	32.34	33.75	34.83	32.36	27.63	26.40
	Services	62.20	65.60	67.32	66.09	65.07	67.58	72.33	73.56
Thailand	Agriculture	23.24	15.81	12.50	9.08	8.50	9.20	10.53	9.14
	Industry	28.68	31.84	37.22	37.53	36.84	38.63	40.03	35.72
	Services	48.08	52.35	50.28	53.39	54.66	52.17	49.44	55.14

TABLE 3.3: Value Added as % of GDP[106].

COUNTRY	INDICATOR	1990	1995	2000	2005	2010	2015
Cambodia	Agriculture		49.62	37.84	32.40	36.02	28.25
	Industry		14.83	23.03	26.37	23.25	29.42
	Services		35.55	39.13	41.23	40.73	42.33
Lao PDR	Agriculture	61.23	55.68	45.17	36.18	31.45	27.38
	Industry	14.51	19.24	16.61	24.61	32.29	30.95
	Services	24.26	25.08	38.23	39.21	36.26	41.67
Myanmar	Agriculture			57.24	46.69	36.85	26.75
	Industry			9.69	17.51	26.47	34.54
	Services			33.07	35.80	36.68	38.71
Vietnam	Agriculture	38.74	27.18	22.73	19.30	18.38	16.99
	Industry	22.67	28.76	34.20	38.13	32.13	33.25
	Services	38.59	44.06	43.07	42.57	36.94	39.73

105. Data from World Bank, "World Development Indicators," accessed January 14, 2017, `http://databank.worldbank.org/`.

The declining economic importance of agriculture is also seen in the decreasing agricultural labor force. *Table 3.4* shows the percent of the Member States' population employed in agriculture, industry and services.[107] Despite the structural changes in the Member States, and with the exception of Malaysia and Cambodia, the agricultural sector still ranks second to services in terms of employment. In the case of Cambodia, most of its population is still engaged in agricultural work. As of 2009, 67% and 64% of the economically active populations in Myanmar and Vietnam, respectively, were in agriculture.[108]

106. Data from ibid.
107. Brunei Darussalam is excluded due to lack of data.
108. Food and Agriculture Organization, "Food and Agriculture Country Profiles," accessed January 16, 2017, `http://www.fao.org/faostat/en/#home`.

Table 3.4: % of Total Employment[109].

COUNTRY	SECTOR	1980	1985	1990	1995	2000	2005	2010
Cambodia	Agriculture					73.70		54.10
	Industry					8.40		16.20
	Services					17.9		29.60
Indonesia	Agriculture	56.40	54.70	55.90	44	45.30	44	38.30
	Industry	13.1	13.4	13.7	18.4	17.4	18.70	19.30
	Services	30.4	31.80	30.20	37.60	37.30	37.20	42.30
Lao PDR	Agriculture				85.4			71.30
	Industry				3.5			8.30
	Services				11.1			20.20
Malaysia	Agriculture	37.2	30.4	26	20	18.4	14.6	13.30
	Industry	24.1	23.8	27.5	32.3	32.2	29.7	27.60
	Services	38.7	45.8	46.5	47.7	49.5	55.6	59.2
Myanmar	Agriculture	67.1	66.1	69.7				
	Industry	9.8	10.6	9.2				
	Services	23.1	23.3	21				
Philippines	Agriculture	51.80	50	45.20	44.10	37.10	36	33.20
	Industry	15.4	13.8	15	15.6	16.20	15.6	15.00
	Services	32.80	36.5	39.70	40.30	46.70	48.5	51.80
Singapore	Agriculture	1.3	0.7	0.4	0.2		1.1	
	Industry	35.7	35.2	37.9	31		21.7	30.40
	Services	62.6	63.9	61.7	68.8		77.3	68.90
Thailand	Agriculture	70.80		63.30	51.60	48.5	42.60	38.20
	Industry	10.3		13.6	18.9	17.9	20.20	20.60
	Services	18.9		23	29.4	33.60	37.10	41
Vietnam	Agriculture					65.30		
	Industry					12.4		
	Services					22.30		

Except for Brunei Darussalam and Indonesia,[110] the increased importance of

109. Data from World Bank, "World Development Indicators."

110. Neither Brunei Darussalam nor Indonesia show any obvious shifts in the composition of their traded goods. Brunei Darussalam is mainly an exporter of fuels and mineral products, and an importer of manufactures. In general, Indonesia's trade in agricultural items, fuels and minerals, and manufactures have increased during the past decades. A majority of its imports are manufactures. ibid.

industry, specifically the manufacturing sector, is also reflected in the composition of the exports and imports of the Member States. *Figures 3.1* to *3.6* depict the trends in the exports and imports of the Member States by commodity.[111]

The trends for Cambodia and Vietnam are shown in *Figures 3.1* (Cambodia) and *3.2* (Vietnam). These newer Member States trade mainly in manufactures, and this trade intensified shortly after their entry into ASEAN.[112] Cambodia's leading traded products are textiles and clothing.[113] The textile industry is also the country's leading importer of foreign inputs for items which are subsequently exported as intermediate products, *i.e.,* items which are meant for further processing. It is reasonable to suppose that this sector's involvement in production networks is one reason for the increasing textile imports. Starting from the early 2000s, Cambodia's imports of machinery and transport equipment also began to increase. One possible explanation for this is Cambodia's increased participation in transport industry production networks.[114]

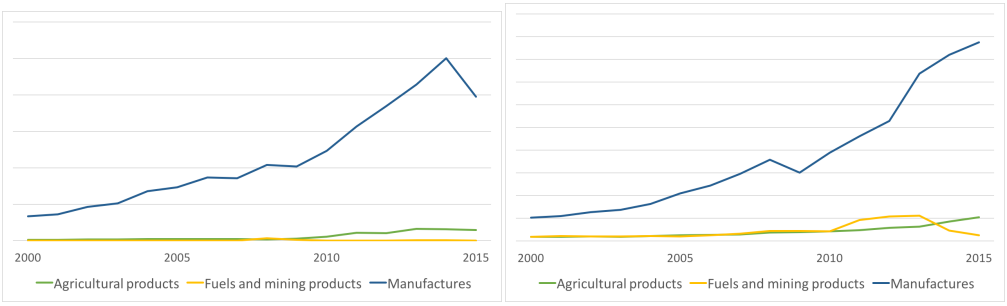


FIGURE 3.1: Cambodia Exports and Imports[115].

Vietnam's exports and imports of manufactures steadily rose during the early 2000s, following its joining ASEAN in 1995. By 2015, trade in manufactures greatly surpassed trade in agricultural, fuel and mining products. Vietnam's leading export industries are food and beverages, wholesale and retail trade, and textiles. However, exports and imports of machineries and transport equipment, including parts and components thereof, are considerably greater than its trade

111. Due to insufficient data, Lao People's Democratic Republic and Myanmar are excluded.
112. Cambodia and Vietnam joined ASEAN on 1999 and 1995, respectively.
113. World Trade Organization, "Time Series on International Trade," accessed January 3, 2017, `https://stat.wto.org`.
114. World Trade Organization, "Trade in Value-Added and Global Value Chains: Statistical Profiles."
115. Data from World Trade Organization, "Time Series on International Trade."

in other products.[116] This may be due to the country's involvement in computers and electronics production networks. In fact, this industry is the top importer of foreign inputs for exported intermediate items.[117]

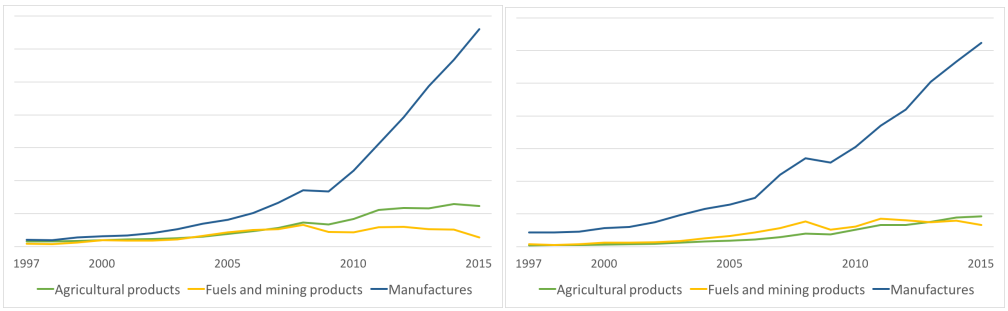


FIGURE 3.2: Vietnam Exports and Imports[118].

Trends in exports and imports for the remaining Member States can be seen in *Figures 3.3* (Malaysia), *3.4* (the Philippines), *3.5* (Singapore) and *3.6* (Thailand). These Member States' trade in manufactures noticeably increased during the early 1990s. This coincided with the launch of the AFTA. While this is not conclusive proof of causality, it is likely that the AFTA stimulated and contributed to this trade growth. These Member States are also active participants in production networks, most notably in the information and communication technology sector.[119] The active trade in machineries, particularly of electronics parts and components,[120] reflects the importance of this sector in these Member States.

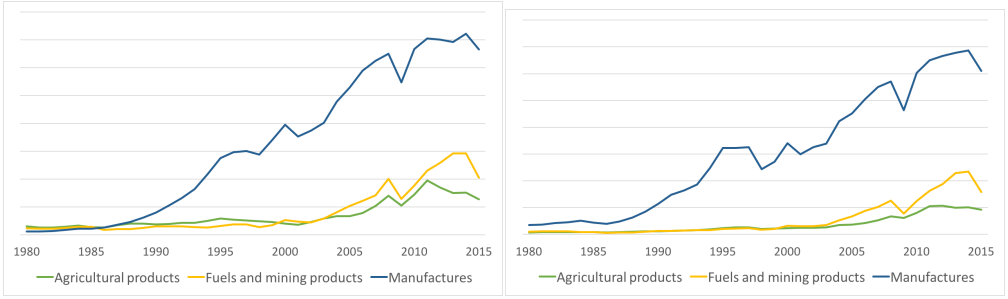


FIGURE 3.3: Malaysia Exports and Imports[121].

116. World Trade Organization, "Time Series on International Trade."
117. World Trade Organization, "Trade in Value-Added and Global Value Chains: Statistical Profiles."
118. Data from World Trade Organization, "Time Series on International Trade."
119. Kawai and Naknoi, "ASEAN Economic Integration through Trade and FDI," 3.
120. World Trade Organization, "Time Series on International Trade."
121. Data from ibid.

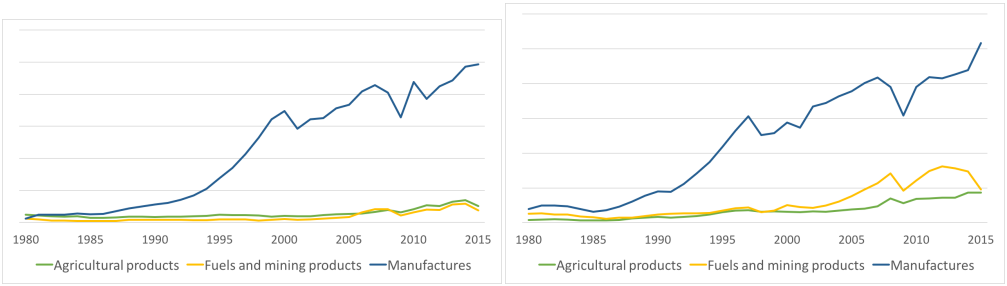


FIGURE 3.4: Philippines Exports and Imports[122].

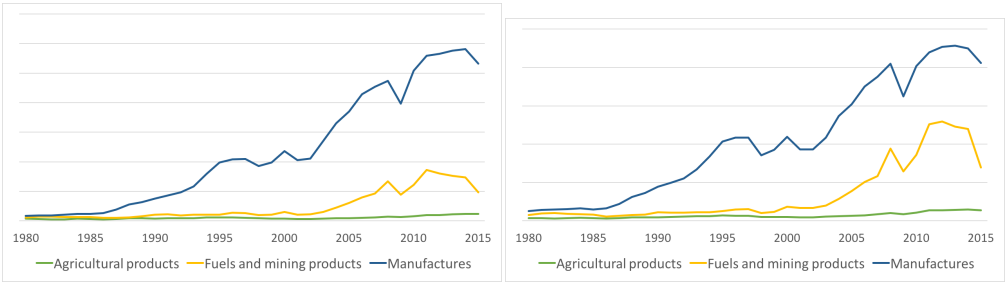


FIGURE 3.5: Singapore Exports and Imports[123].

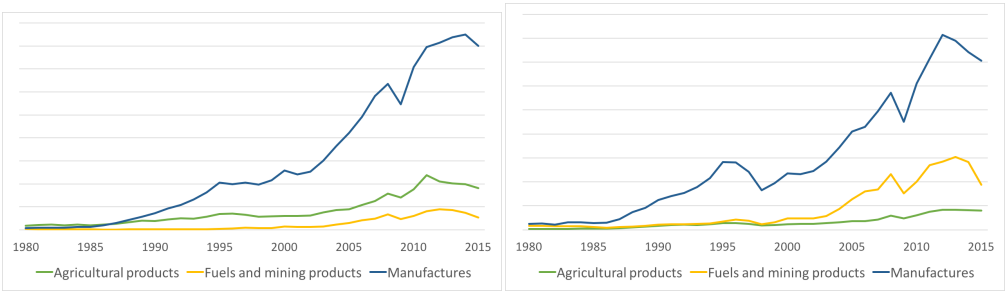


FIGURE 3.6: Thailand Exports and Imports[124].

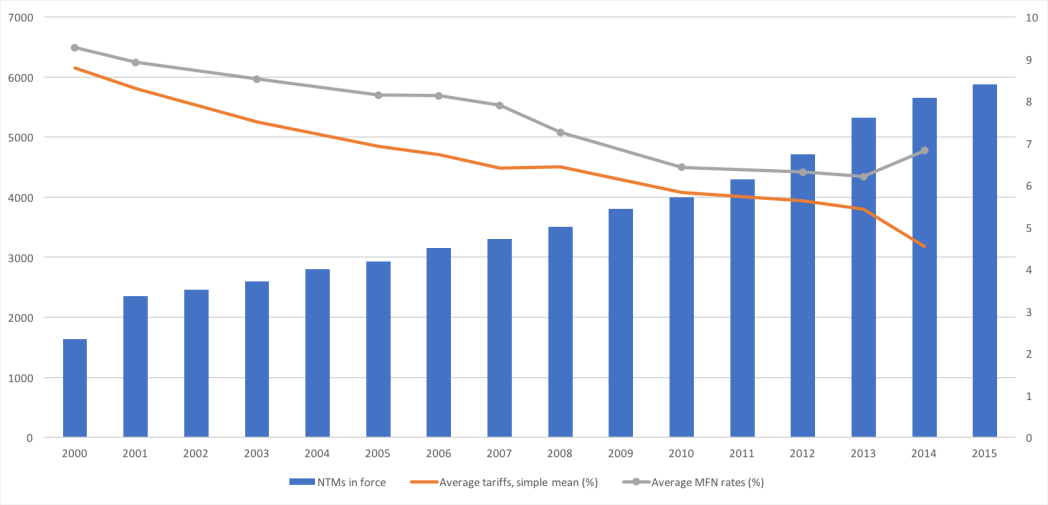
This increasing trade in manufactures coincided with an increased involvement in production networks. These trends imply that the region's trade policies promoted increased participation in production networks. In particular, liberalized tariffs within the context of the region's trade agreements coincided with increased trade in parts and components. The decision to pursue a deeper form of integration in ASEAN was also reached in this context. With increased intra-regional trade links, it is now in the Member States' common interest to reduce

122. Data from ibid.
123. Data from ibid.
124. Data from ibid.

trade costs between one another. In this way, they became more amenable to trade liberalization.[125]

The lessened role of agriculture, however, also coincided with the rising incidence of NTMs. *Figure 3.7* illustrates the trends in both tariffs and NTMs in the region. The bars indicate the number of NTMs which are in force per year in the region. The averages of both applied and most favored nation (MFN) tariff rates are indicated by the two lines. It is apparent that the decline in average tariff rates coincided with the increasing incidence of NTMs. This begs the question: are NTMs used as a substitute for tariffs as a source of protection?

FIGURE 3.7: NTMs Initiated, 2001-2015[126].



The idea that NTMs are used in lieu of tariffs is not new.[127] The theory is *"that treaties that remove or reduce one type of distortion may lead to the use of other policies that are even worse"*,[128] such as NTBs. In the ASEAN case, however, the analysis of this issue must be conducted bearing in mind that tariff liberalization was pursued in order to foster regional production networks. The question then becomes: are NTMs used to protect domestic industries that although unconnected with production networks, were affected by the structural changes brought about by tariff liberalization?

125. World Trade Organization, *World Trade Report 2011*, 145; Orefice and Rocha, "Deep Integration and Production Networks," 107; Kim, "Deep Integration and Regional Trade Agreements," 367.
126. Adapted from Ing et al., "Non-Tariff Measures in ASEAN: A Simple Proposal," 22.
127. Ibid.
128. Simon P. Anderson and Nicolas Schmitt, "Nontariff Barriers and Trade Liberalization," *Economic Inquiry* 41, no. 1 (January 2003): 80.

Alternatively, rising NTM incidence may be due to an increased demand for regulations in an increasingly modernized and globalized economy. Rising incomes lead to increased demand for both product variety and quality. In other words, *"trade liberalization leads to import-quality heterogeneity which itself causes regulatory controls."*[129] In the context of production networks, NTM use may be the outcome of increased demand for both process and product quality. As production processes become increasingly unbundled, countries involved in production networks are driven to impose high quality standards. Quality measures in particular may serve to address information asymmetries, by signaling that products and processes comply with generally accepted international standards. This serves the dual purpose of: *(i)* ensuring that intermediate and final goods are compliant with the standards and regulations of the ultimate consumers, *i.e.,* developed countries; and *(ii)* enabling producers to signal the quality of their production processes and products to their buyers. In this context, are NTMs used to promote and enhance production networks?

If the use of NTMs was due to an increased regulatory demand, there would be a greater incidence of measures dealing with the quality of products and processes, *i.e.,* SPS and TBTs.[130] The regulatory demand hypothesis may also be supported by the issuance of NTMs by governments' health and environmental agencies, as there is a presumed public welfare motive for these measures. Still, the possibility that these ministries are vulnerable to capture and lobbying should not be discounted.[131] The use of health, safety, and other welfare justifications may merely be a ruse to *"generate general support or tolerance for actions or policies that cannot be fully monitored".*[132] On the other hand, NTMs which affect *"declining industries"*[133] and which were issued by trade or industry agencies[134] may evidence protectionism. Declining industries have a greater incentive to lobby for protection from industry or trade agencies in order to protect them against further losses. Additionally, since new entrants

129. Ing et al., "Non-Tariff Measures in ASEAN: A Simple Proposal," 23.
130. Ibid.
131. Ibid., 28.
132. Levine and Forrence, "Regulatory Capture, Public Interest, and the Public Agenda: Toward a Synthesis," 180.
133. Richard E. Baldwin and Frédéric Robert-Nicoud, "Entry and Asymmetric Lobbying: Why Governments Pick Losers," *Journal of the European Economic Association* 5, no. 5 (2007): 1065-1066, http://www.jstor.org.proxy.library.cornell.edu/stable/40005032%7B%5C%%7D5Cnhttp://www.jstor.org.proxy.library.cornell.edu/stable/pdfplus/10.2307/40005032.pdf?acceptTC=true.
134. Ing et al., "Non-Tariff Measures in ASEAN: A Simple Proposal," 28.

are unlikely in declining industries, incumbent industry players are the sole recipients of the benefits of protection. Industry's support for the government is preserved.

The identity of the issuing authorities is thus enlightening. *Table 3.5* shows a breakdown of total ASEAN NTMs based on the issuing authorities. Regional health ministries are the leading issuing authority, being responsible for 31.3% of total NTMs. However, more than 60% of NTMs have been issued by bodies which either cannot rely on a presumed public welfare motivation, or which may be susceptible to capture by local interests. This warrants a closer look at the trends in each of the Member States.

TABLE 3.5: ASEAN NTMs By Issuing Authority, as of 2015[135].

Ministry/Agency	Number of NTMs	Percentage of NTMs
Ministry of Health	1868	31.3%
Ministry of Agriculture (including forestry, plantation, fisheries)	1865	31.2%
Other institutions	759	12.7%
Ministry of Trade	468	7.8%
Ministry of Industry	425	7.1%
Ministry of Environment	178	3.0%
Cabinet Office, State Secretary	175	2.9%
World Trade Organization	87	1.5%
Ministry of Finance	86	1.4%
Ministry of Energy	64	1.1%

A number of characteristics suggest that the use of NTMs in Brunei Darussalam, Malaysia and Singapore can be supported by the regulatory demand hypothesis.[136] Firstly, the number of NTMs in Brunei Darussalam and Malaysia have been relatively stable in recent years. It is true that the number of NTMs in Brunei Darussalam increased noticeably from 2000 (74 NTMs) to 2001 (424). However, by the end of 2013, Brunei Darussalam had 516 NTMs in force. In the case of Malaysia, the number of NTMs rose from 579 in 2000 to 713 by 2014. These numbers show that increased participation in production networks

135. Adapted from Ing et al., "Non-Tariff Measures in ASEAN: A Simple Proposal," 29.
136. "Non-Tariff Measures Based on Official Regulations, ASEAN," accessed January 3, 2017, `http://asean.i-tip.org/`.

did not coincide with the increased incidence of NTMs. Secondly, a majority of the NTMs in Brunei Darussalam and Malaysia have been issued by health ministries. 68.6%[137] and 70.41%[138] of the NTMs in Brunei Darussalam and Malaysia, respectively, were issued by their Ministries of Health. It can be assumed that these NTMs were issued by health ministries acting in accordance with their mandate, *i.e.,* to promote public health. Nevertheless, it is equally possible that public health motivations were used merely as a ruse to justify possibly protectionist policies.

Thirdly, the high incidence of TBTs and SPS measures in foodstuffs and agricultural products in Brunei Darussalam, Malaysia and Singapore suggests that the aim is to enhance the quality of these products, thus supporting the regulatory demand hypothesis. It is also worth noting that some of the mosthighly regulated products[139] are used in production network trade. Since production network trade in these Member States does not appear to have been adversely affected, the NTMs could be functioning as a signal of product quality and safety.

For the other Member States,[140] however, a number of characteristics indicate that there may be underlying political economy motives. These motives may have resulted from their increased participation in production networks. Firstly, the increasing trend in NTMs coincided with their enhanced participation in production networks. *Figures 3.8* to *3.11* show the time trends of NTMs in Cambodia, Indonesia, Thailand, and Vietnam. For these Member States, there is a clear upward trend in the incidence of NTMs. This trend is more noticeable in countries[141] which, until recently, were not as involved in production networks as the other Member States. This suggests that there is a link between increased participation in production networks and the use of NTMs.

137. Christina Ruth Elisabeth, "Classification of Non-tariff Measures in Brunei Darussalam," in *Non-Tariff Measures in ASEAN*, ed. Lili Yan Ing, Santiago Fernandez de Cordoba, and Olivier Cadot (Economic Research Institute for ASEAN, 2016), 41, `http://asean.i-tip.org`.

138. Evelyn S. Devadason, V.G.R. Chandran, and Tang Tuck Cheong, "Non-tariff Measures in Malaysia," in *Non-Tariff Measures in ASEAN*, ed. Lili Yan Ing, Santiago Fernandez de Cordoba, and Olivier Cadot (Economic Research Institute for ASEAN, 2016), 89, `http://asean.i-tip.org`.

139. These are machineries and electrical products, for Singapore, and foodstuffs and chemical products, for Malaysia.

140. Lao PDR and Myanmar were excluded from this analysis due to insufficient information regarding their participation in production networks.

141. Namely Indonesia, Cambodia, and Vietnam.

FIGURE 3.8: Cambodia NTMs, 2000-2015[142].

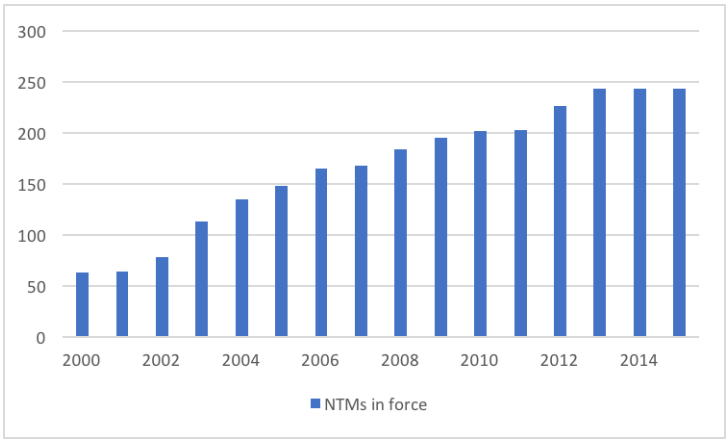


FIGURE 3.9: Indonesia NTMs, 2000-2015[143].

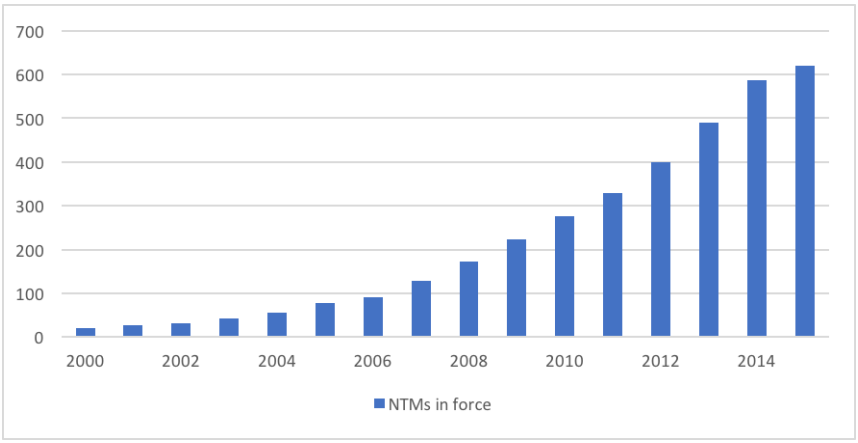
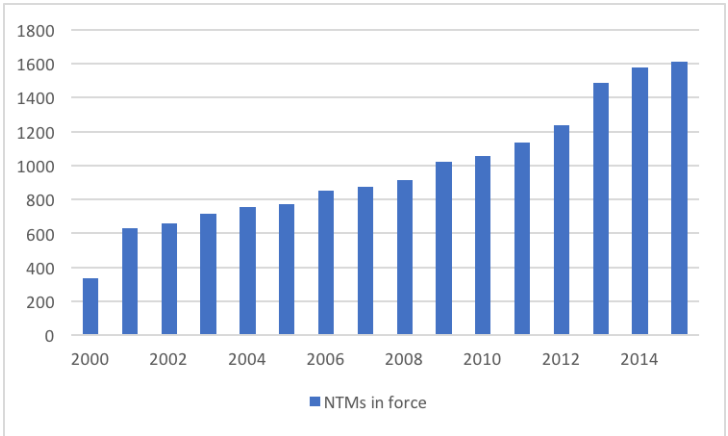
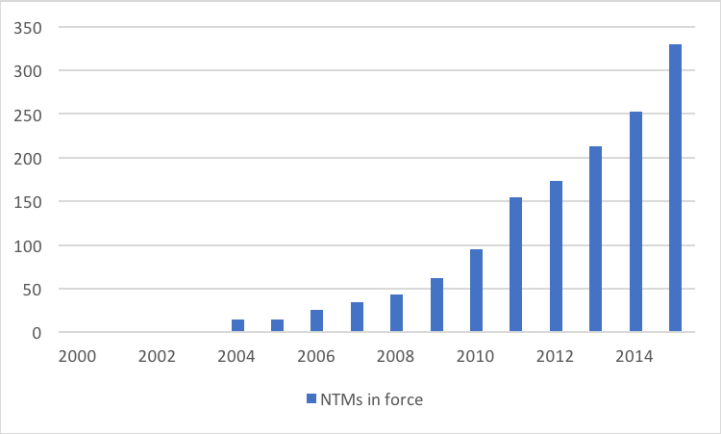


FIGURE 3.10: Thailand NTMs, 2000-2015[144].



142. Adapted from Ing et al., "Non-Tariff Measures in ASEAN: A Simple Proposal," 25.
143. Adapted from ibid., 26.

FIGURE 3.11: Vietnam NTMs, 2000-2015[145].



Secondly, the NTMs in these Member States mainly affect agricultural products and foodstuffs. *Table 3.6* shows the total NTMs affecting different industries, expressed as a percentage of total NTMs, in Cambodia (KHM), Indonesia (IDN), the Philippines (PHL), Thailand (THA), and Vietnam (VNM). 62% of the NTMs in these Member States affect agricultural and food products. Machineries are the second most regulated product category, with 12% of total NTMs. Among these Member States, Indonesia's NTMs are mainly focused on agricultural and food products.

TABLE 3.6: NTMs per Industry, as a %[146].

	IDN	KHM	PHL	THA	VNM	Overall
Agricultural, Food	95	32	28	9	47	62
Chemicals	3	19	16	30	12	11
Light manufactures	1	23	22	12	23	9
Metals	0	4	9	6	5	3
Machineries	0	18	21	36	10	12
Others	0	3	5	8	3	3

Agricultural and food products are also among the most intensely regulated products in these countries. All the traded products in Cambodia, including

144. Adapted from ibid.
145. Adapted from ibid.
146. Data from "Non-Tariff Measures Based on Official Regulations, ASEAN."

agricultural products, are subject to at least 3 NTMs.[147] In Indonesia, 9% of the tariff lines of animal and animal products are subject to 3 or more NTMs.[148] Agricultural products and foodstuffs are likewise subjected to at least 3 NTMs in Thailand.[149] The most regulated products in these Member States include a number of their main crops, such as rice, sugar cane, vegetable varieties, coffee, sweet potatoes and other tubers, and tobacco. Edible meats, fish and different kinds of seafoods, along with preparations thereof, are also among the most regulated animal products.[150]

While most of the measures aim to ensure the quality and safety of agricultural products, others seem motivated by non-quality concerns. *Table 3.7* shows the breakdown of NTMs by type, expressed as a percentage of total NTMs, in these Member States. A majority of NTMs are quality measures, *i.e.,* SPS (43%) and TBTs (31%). However, more than 25% of NTMs fall under other NTM types such as pre-shipment inspections and other formalities (PSI), quantity measures (QTY), price control measures (PCE), finance measures (FIN), measures affecting competition (COMP), and export-related measures (EXP). Cambodia, the Philippines, and Vietnam all impose export-related measures (EXP) on a number of products.[151]

147. Sotharith, Ruth Elisabeth L. Tobing, and Widiana, "Classification of Non-tariff Measures in Cambodia," 60-61.
148. Ernawati Munadi, "Indonesia's Non-tariff Measures: An Overview," in *Non-Tariff Measures in ASEAN*, ed. Lili Yan Ing, Santiago Fernandez de Cordoba, and Olivier Cadot (Economic Research Institute for ASEAN, 2016), 71, `http://asean.i-tip.org`.
149. Chedtha Intaravitak, "Non-tariff Measures in Thailand," in *Non-Tariff Measures in ASEAN*, ed. Lili Yan Ing, Santiago Fernandez de Cordoba, and Olivier Cadot (Economic Research Institute for ASEAN, 2016), 146-148, `http://asean.i-tip.org`.
150. "Non-Tariff Measures Based on Official Regulations, ASEAN."
151. Export-related measures include, but are not limited to, quotas, export prohibitions, licensing requirements, and quantitative restrictions.

Table 3.7: NTMs by Type, in %[152].

	IDN	KHM	PHL	THA	VNM	Overall
SPS	70	14	12	6	31	43
TBT	19	29	8	89	29	31
PSI	10	0	3	0	0	6
QTY	0	9	1	1	0	1
PCE	0	5	10	1	13	3
FIN	0	0	3	0	0	1
COMP	0	0	24	0	12	5
EXP	1	43	37	3	14	11

A closer look at these NTMs shows that they do not primarily aim to promote quality and safety. For example, a price control measure in Cambodia provides that the value-added tax on the importation of certain agricultural items, such as vegetables and cereal seeds, shall be borne by the State.[153] Indonesia can postpone the importation of meat products if the domestic price of beef is lower than the reference price of the former.[154] The import of fish and other kinds of seafood is only allowed in the Philippines if needed for food security[155] or, in the case of institutional buyers, if these items are not endemic in the country[156]. And a regulation in Vietnam discourages imports of items which can be sourced domestically, such as sugar, fish and seafood.[157]

Given the high incidence of NTMs on agricultural goods, their corresponding trade patterns also bears looking into. With the exception of the Philippines, these Member States are exporters of agricultural inputs for production networks.[158] However, agricultural exports are greatly outnumbered by manufactures exports. On the other hand, for the Philippines, Thailand, and Vietnam,

152. Data from "Non-Tariff Measures Based on Official Regulations, ASEAN."
153. Prakas No. 303 on the Implementation of the Value Added Tax on the Importation and the Supply on Certain Goods.
154. Ministry of Trade Regulation No. 46/M-DAG/PER/8/2013.
155. Fisheries Administrative Order No. 195, series of 1999, *Rules and Regulations Governing Importation of Fresh/Chilled/Frozen and Fishery Aquatic Products.*
156. Fisheries Memorandum Order No. 001, series of 2000, *Guidelines in the processing of applications for importation for fresh/chilled/frozen fish and fishery/aquatic products.*
157. "Non-Tariff Measures Based on Official Regulations, ASEAN."
158. See *Table 3.1.*

trade in machineries[159] and chemicals is seemingly unaffected by the high number of NTMs affecting these products. Cambodian and Vietnamese trade in light manufactures[160] are likewise unaffected.[161] As *Table 3.1* shows, these Member States are involved in production network trade in these industries. It can be surmised from this that NTMs on machineries, manufactures, and chemicals serve to promote production network trade, that is, as a signal of quality.

As NTMs fail to promote trade (including production network trade) in agriculture, the possibility that these have underlying protectionist motivations cannot be denied. The decrease in the number of people employed in agriculture may have made lobbying by the agricultural sector easier and more effective. That there is still a sizable agricultural workforce despite this fall in numbers, implies that this sector has much to gain by lobbying for, and gaining, protection. In addition, the agricultural workforce can deliver much-needed votes at elections.

The demand for NTMs in favor of agriculture may also come from landowning entities, such as corporations and cooperatives. A recent agricultural census in Cambodia identified 101 agricultural holdings of legal entities operating over 806,628 hectares.[162] Compared to the 2.13 million household agricultural holdings, working 3.30 million hectares,[163] the number of legal entity holdings is small. However, while around 90% of agricultural households conducted their activities on less than 4 hectares,[164] legal entities operated on large plantation areas of at least 1000 hectares, with 5 entities operating on 47% of those 806,628 hectares.[165]

Vietnam also has a pattern of legal entities operating larger agricultural holdings. *Table 3.8* shows the structure of agricultural units in Vietnam according to land use. As with Cambodia, household units are mainly smallholders, with 84% of households operating only 2 hectares or less. Holdings of legal entities,

159. Including transport products, computers, and electronics.
160. Including clothing and textiles.
161. World Trade Organization, "Time Series on International Trade."
162. National Institute of Statistics, *Census of Agriculture in Cambodia 2013: National Report on Final Census Results*, technical report (2015), 35, `www.fao.org/world-census-agriculture/wca2020/wca2010/countries2010/en/`.
163. Ibid., 28.
164. Ibid.
165. Ibid., 35.

including both enterprises and cooperatives, operate the larger holdings.[166]

Table 3.8: Agricultural Units in Vietnam, 2011[167].

	0-2 hectares	10 hectares or more
Enterprise	10.58%	38.95%
Cooperative	2.4%	22.68%
Households	83.76%	0.53%

Data from the Philippines provide information on the size, structure and legal status of agricultural holdings. *Table 3.9* shows the percentage of holdings and agricultural area that operate small[168] and large[169] holdings. It is noteworthy that while large holdings account for only 2% of total holdings, these operate 21% of total agricultural area in the Philippines.

Table 3.9: Structure of Land Holdings in the Philippines, 2002[170].

	0-2 hectares	10-50 hectares
Holdings	68%	2%
Agricultural Area	26%	21%

Tables 3.10 and *3.11* show the structure of agricultural units in the Philippines based on the legal status of rights holders and the type of tenure. As with Cambodia, the number of agricultural holdings of legal entities is small. Moreover, less than half of the holdings are owned by the rights holders. A majority of holdings are under other forms of tenure, such as rentals or tenancy arrangements. This implies that while 99% of all holdings are operated by civil persons, such as agricultural households, these holdings are not necessarily owned by them.

166. General Statistics Office, *Results of the 2011 Rural, Agricultural and Fishery Census*, technical report (2012), 269, `www.fao.org/world-census-agriculture/wca2020/wca2010/countries2010/en/`.
167. Data from ibid.
168. Measuring 2 hectares or less.
169. Measuring 10 to 50 hectares.
170. Data from Sarah K. Lowder, Jakob Skoet, and Terri Raney, "The Number, Size, and Distribution of Farms, Smallholder Farms, and Family Farms Worldwide," *World Development* 87 (2016): Appendix Table 3.

TABLE 3.10: Legal Status of Holdings in the Philippines, 2002[171].

	Number of Holdings	Area(ha)
Civil persons	4,782,541	9,325,164
Corporation	7,590	214,316
Cooperative	13,629	68,133
Government	2,673	7,413
Others	16,306	55,767
Total	4,822,739	9,670,793

TABLE 3.11: Tenure of Holdings in the Philippines, 2002[172].

	Number of Holdings	Area(ha)
Under 1 Form of Tenure	3,322,411	6,565,776
Owned	2,292,666	4,896,765
Rented	989,885	1,573,815
Under other single forms	27,267	72,650
Not reported	12,593	22,546
Under More Than 1 Form of Tenure	1,500,328	3,105,017
Total	4,822,739	9,670,793

The apparent trend is for agricultural households to operate small holdings, while legal entities operate large holdings, *i.e.,* plantations. It is reasonable to suppose that, given their similar interests, this small group of legal entities can organize and lobby for regulations in their benefit. As the agricultural sector has been declining in recent decades, no beneficial policies and regulations in favor of this sector will be sufficient to entice new entrants. Possible variations in the issued NTMs also make it possible to tailor regulations in order to limit any benefits to certain beneficiaries only, *i.e.,* large plantations and corporate entities.

The identity of the issuing authorities in these countries is also telling. *Table 3.12* below indicates the percent of total NTMs attributable to the main issuing

171. Data from Food and Agriculture Organization, "2000 World Census of Agriculture: Main Results and Metadata by Country (1996-2005)," accessed January 16, 2017, `http://www.fao.org/docrep/013/i1595e/i1595e.pdf`.
172. Data from ibid.

authorities in these Member States. Agriculture ministries are the most prolific, issuing a majority of the NTMs. Thailand stands out for having the most active health ministry in terms of NTM issuances. Industry ministries also figure prominently in Indonesia, Thailand, and Cambodia.

TABLE 3.12: % of NTMs, by Issuing Authority[173].

	Agriculture	Industry	Health	Trade
Cambodia	30	14	12	
Indonesia	14.4	21.8		29.2
Philippines	36.8			
Thailand	29.1	14.5	42.6	
Vietnam	34.2		16.62	

Unlike NTMs issued by health ministries, those issued by trade, industry, and other government bodies do not have the underlying presumption of promoting public health. NTMs issued by agriculture ministries could support either the regulatory demand hypothesis[174] or the political economy hypothesis. However, bearing in mind that the agricultural sector has a lot to gain from lobbying for protection, agriculture ministries might be captured by lobby and interest groups. NTMs issued by trade and industry ministries are equally likely to have a protectionist intent. Considering that Cambodia, Thailand and Vietnam are buyers of imported intermediate inputs which are subsequently exported within the context of production networks,[175] these ministries might be aiming to protect domestic industries that feel threatened by the influx of imports.

Another factor to consider is that, unlike tariff legislation, measures issued by these regulatory agencies are not subject to review and revision by newly elected

173. Sotharith, Ruth Elisabeth L. Tobing, and Widiana, "Classification of Non-tariff Measures in Cambodia," 54-55; Munadi, "Indonesia's Non-tariff Measures: An Overview," 67-69; Loreli C. de Dios, "An Inventory of Non-tariff Measures in the Philippines," in *Non-Tariff Measures in ASEAN*, ed. Lili Yan Ing, Santiago Fernandez de Cordoba, and Olivier Cadot (Economic Research Institute for ASEAN, 2016), 117, `http://asean.i-tip.org`; Intaravitak, "Non-tariff Measures in Thailand," 145; Vo Tri Thanh, Nguyen Anh Duong, and Tran Binh Minh, "Non-tariff Measures in Viet Nam," in *Non-Tariff Measures in ASEAN*, ed. Lili Yan Ing, Santiago Fernandez de Cordoba, and Olivier Cadot (Economic Research Institute for ASEAN, 2016), 161, `http://asean.i-tip.org`.

174. In particular, that these NTMs aim to enhance product quality.

175. World Trade Organization, "Trade in Value-Added and Global Value Chains: Statistical Profiles."

officials.[176] This imbues these NTMs with more permanence, making them more attractive for lobbyists as it becomes cheaper to lobby for protection. More importantly, much of the processes within these ministries are shielded from public scrutiny. Society relies on the expertise of specialized bodies, such as ministries for agriculture and trade, and the stated objectives of regulations, for due assurance that such regulations are in the interests of public welfare. At the same time, regulators can take advantage of their concurrent, overlapping jurisdictions, and of complex bureaucratic processes, to obscure the special interests underlying their actions. Given the nature of regulatory and political institutions, the information and monitoring costs needed to identify those protectionist objectives underlying NTMs outweigh any possible gains from such a process.

Specifically, the political institutions of Indonesia, the Philippines, and Thailand are known for their endemic rent-seeking and corruption. This makes the apparently legitimate justifications for the issuance of NTMs in these countries questionable. The political institutions of these countries are notably susceptible to pressures from economic forces to tilt policies and regulations in the latter's favor. Indonesia and Thailand are both characterized by some form of state capitalism, where state power and machineries are employed to further the interests of public and private elites.[177] The Philippines, on the other hand, is known for a form of booty or crony capitalism, which allows private elites to influence the bureaucracy.[178]

From the 1950s to the 1980s, Indonesia evolved to become a centralized state under an authoritarian government. Under the banner of economic nationalism, the Soeharto regime had a heavy hand in the management of the economy. A number of protectionist trade policies were enacted, such as the establishment of an approved traders program, the creation of both private and public

176. World Trade Organization, *World Trade Report 2012*, 66.
177. Paul D. Hutchcroft, "Obstructive Corruption: The Politics of Privilege in the Philippines," in *Rents, Rent-Seeking and Economic Development: Theory and Evidence in Asia*, ed. Mushtaq H. Khan and Jomo Kwame Sundaram (New York: Cambridge University Press, 2000), 212; Richard Robison and Vedi R. Hadiz, "Indonesia: Crisis, Oligarchy, and Reform," in *The Political Economy of South-east Asia: Markets, Power and Contestation*, ed. Garry Rodan, Kevin Hewison, and Richard Robison (South Melbourne: Oxford University Press, 2006), 111.
178. Hutchcroft, "Obstructive Corruption," 212.

import monopolies,[179] and the selective granting of licenses and government contracts.[180] Badan Urusan Logistik (BULOG), Indonesia's logistics agency, had sole rights over the trade in primary commodities such as sugar and rice.[181] This political climate created and nurtured *"powerful corporate conglomerates and politico-business families"*[182] which used state power to protect and develop their empires.

Despite deregulation during the 1980s, politically-backed cartels still dominated the economy. Some *"public monopolies simply became private monopolies still backed by the authority of an authoritarian state."*[183] This period's policy reforms were limited to export-competitive sectors, while the status quo of state capitalism prevailed in the domestic markets. For example, Tommy Soeharto was awarded a monopoly in the clove trade. Cloves being the vital, distinctive ingredient in *kretek*, the local type of cigarettes, Soeharto thus had access to the lucrative cigarette industry.[184]

After the 1997 financial crisis, the International Monetary Fund (IMF) made Indonesia dismantle the machineries of state protection, *i.e.,* to abolish state trading monopolies in sugar, soy beans, and other commodities.[185] However, the rent-seeking relations between public and private actors still dominated the political scene. After the formal end of the Soeharto regime, the politico-business oligarchies simply adapted to the new political environment. The void left by the former centralized state machinery has since been filled by political brokers and fixers who mediate between political and economic actors.[186] Rent-seeking now occurs within the context of money politics, between the well-entrenched politico-business interests and politicians who need funding for their electoral campaigns.[187]

As with Indonesia, Thai state capitalism is rooted in a centralized authority. Modern Thailand emerged in 1855 after the signing of the Bowring Treaty.

179. Robison and Hadiz, "Indonesia: Crisis, Oligarchy, and Reform," 118-119.
180. Michael T. Rock, *Dictators, Democrats, and Development in Southeast Asia: Implications for the Rest* (Oxford University Press, 2017), 54.
181. Robison and Hadiz, "Indonesia: Crisis, Oligarchy, and Reform," 130.
182. Ibid., 119.
183. Ibid., 120.
184. Ibid., 121.
185. Ibid., 125.
186. Ibid., 126.
187. Ibid., 114.

Thereafter, the majority of the population was engaged in subsistence agriculture. Royalty and the nobility derived power from their control of land, labor and trade.[188] By the 1920s, Thai society was composed of 3 main elements: *(i)* a centralized bureaucracy; *(ii)* a peasantry which cultivated the land; and *(iii)* Chinese and European traders who mainly dealt in rice.[189] A bureaucratic polity[190] emerged when the military took control after World War II. Military and state officials began to use state enterprises and private capital for their own interests.[191] For example, bureaucrats required a share of the Chinese traders' profits in exchange for licenses, government contracts, and other concessions.[192] Factionalism, favoritism, and nepotism pervaded the bureaucracy. Bureaucrats used opaque, complex processes in order to abuse their office and engage in rent-seeking activities.[193] Additionally, a number of agencies had overlapping jurisdictions on economic matters.[194] This fragmentation enabled powerful bureaucrats to *"use sectoral policies to satisfy the demands of their supporters".*[195] Policies, such as tariff protection and subsidized credit, benefited only a select group of large firms with ties to the right *"big men"* in the bureaucracy.[196]

By the 1980s, this bureaucratic polity had weakened and was replaced by *"liberal corporatism".*[197] Business interests organized themselves into associations in order to lobby, and cooperate with, the State. The business community gained their own power and influence, separate from that of the bureaucracy. With this newfound independence, business was able to direct and influence policies in ways designed to protect its own interests.[198] This system transformed the bureaucratic polity into a *"broker polity"*, where the prime minister acted as a

188. Kevin Hewison, "Thailand: Boom, Bust, and Recovery," in *The Political Economy of South-east Asia: Markets, Power and Contestation*, ed. Garry Rodan, Kevin Hewison, and Richard Robison (South Melbourne: Oxford University Press, 2006), 81-82.
189. Michael T. Rock, "Thailand's Old Bureaucratic Polity and Its New Semi-democracy," in *Rents, Rent-Seeking and Economic Development: Theory and Evidence in Asia*, ed. Mushtaq H. Khan and Jomo Kwame Sundaram (New York: Cambridge University Press, 2000), 183.
190. In this political system, power was located within the bureaucracy.
191. Hewison, "Thailand: Boom, Bust, and Recovery," 84.
192. Harold Crouch, *Economic Change, Social Structure and the Political System in Southeast Asia: Philippine Development Compared with the Other ASEAN Countries* (Institute of Southeast Asian Studies, 1985), 20.
193. Rock, "Thailand's Old Bureaucratic Polity and Its New Semi-democracy," 184.
194. Ibid., 185.
195. Ibid., 186.
196. Rock, *Dictators, Democrats, and Development in Southeast Asia*, 56.
197. Rock, "Thailand's Old Bureaucratic Polity and Its New Semi-democracy," 191.
198. Rock, *Dictators, Democrats, and Development in Southeast Asia*, 152.

broker for business interests.[199]

After the 1997 economic crisis, the IMF granted Thailand a support package in exchange for wide-ranging reforms.[200] As the recession worsened, public opposition against the seemingly ineffective reforms grew.[201] The common sentiment was that the reforms came at the expense of Thai sovereignty and public welfare, for the benefit of foreign investors only. The threat against their established dominance prompted domestic business interests, as represented by Thaksin Shinawatra's Thai Rak Thai Party (TRT), to enter the political realm. Campaigning on nationalist sentiments and making promises to the rural poor, TRT won a decisive victory in 2001.[202] Shinawatra's administration did deliver on their promises to the rural poor. Nevertheless, this administration was notably composed of representatives from the most powerful business interests and families. Not unexpectedly, the administration disregarded the country's commitments to the IMF and hindered liberalization and privatization efforts, all under the guise of economic nationalism.[203]

Unlike Indonesia and Thailand, private vested interests have historically controlled policy in their favor in the Philippines.[204] The rise to power of a small, land-owning elite began with the commercialization of, and trade in, agriculture in the late 1800s.[205] Unlike in Indonesia and Thailand, where the State itself was the source of power for the elites, the landed Philippine elite derived its economic power from outside the public machinery.[206] The most influential member of that elite were the sugar growers. They were able to exploit loopholes in the 1902 Public Land Act not only to amass large tracts of land, but also to gain protection against the entry of foreign landowners.[207] They also benefited from the preferential access to the United States market during the American colonial era. By the 1920s, due to their economic successes, these

199. Rock, "Thailand's Old Bureaucratic Polity and Its New Semi-democracy," 193.
200. Hewison, "Thailand: Boom, Bust, and Recovery," 95-96.
201. Ibid., 98.
202. Ibid., 99.
203. Ibid., 100.
204. Jane Hutchison, "Poverty of Politics in the Philippines," in *The Political Economy of South-east Asia: Markets, Power and Contestation*, ed. Garry Rodan, Kevin Hewison, and Richard Robison (South Melbourne: Oxford University Press, 2006), 39.
205. Ibid., 42.
206. Hutchcroft, "Obstructive Corruption," 218; Crouch, *Economic Change, Social Structure and the Political System in Southeast Asia*, 10.
207. Crouch, *Economic Change, Social Structure and the Political System in Southeast Asia*, 13.

sugar barons became a formidable and influential lobby group.[208] Their wealth allowed landowners to send their children to universities in Manila and Europe. The major political players in the pre- and post-independence years emerged from this educated generation.[209]

Subsequent industrialization merely reinforced the oligarchy, as industrialists came from this land-owning class as well. In fact, these elites used their political connections to invest in finance, real estate, and other sectors, thus creating *"diversified family conglomerates".*[210] The agricultural sector also underwent structural changes, and became characterized by *"high levels of corporate involvement and contract farming, often through vertically integrated, transnational agribusinesses."*[211]

The Marcos regime, which lasted from 1965 to 1985, was known for its crony capitalism. The cronies, who mostly came from outside the traditional land-owning class, were adept at using their access to, and connections with, the presidential family to amass their own fortunes and expand their businesses.[212] The Marcos family financially benefited from its dealings with these cronies as well. While this period saw the rise of new elites, the traditional oligarchy *"had already created a relatively strong economic base of its own and could not be simply pushed aside by the government."*[213] The traditional oligarchy returned to power after the fall of the Marcos regime. The winners of the 1987 elections mostly hailed from traditional political and land-owning families.[214]

The landowning elites, using their financial resources, have been able to dominate the legislative and executive branches of the State in the Philippines since the 1950s. It is this group, and not the bureaucracy, that controls legislative and policy-making processes from outside the political system.[215] The bureaucracy itself is relatively weak. For example, Congress exercises significant influence on

208. Booth, *Colonial Legacies*, 55.
209. Crouch, *Economic Change, Social Structure and the Political System in Southeast Asia*, 14.
210. Hutchison, "Poverty of Politics in the Philippines," 49.
211. Ibid., 51-52.
212. Ibid., 49-50.
213. Crouch, *Economic Change, Social Structure and the Political System in Southeast Asia*, 27.
214. Hutchison, "Poverty of Politics in the Philippines," 57.
215. Ibid., 54-55.

appointments and promotions within the bureaucracy.[216] Regulatory agencies also remain tied to departments and offices under the Office of the President.[217]

Rent-seeking is thus historically and socially entrenched in the political and economic institutions of these Member States. This kind of environment makes regulators easily susceptible to pressures from interest groups. This political context, coupled with the opaque nature of NTMs and the complex regulatory processes, makes NTMs the ideal instrument for protection. Industries which have been adversely affected by structural changes are the most likely beneficiaries: with rice, the region's staple food, and other agricultural products being the products most likely to benefit from the use of NTMs.

For example, a 2014 issuance[218] by the Indonesian Ministry of Trade concerning the rice trade has been flagged as a potentially discriminatory measure.[219] This regulation revoked the eligibility of private importers, who held a general import license, to import rice. Such importers are only allowed to import rice subject to the following conditions:[220]

1. as a Producer Importer of Rice, for rice which cannot be produced domestically and which shall be used as raw material for industry; and
2. as a Registered Importer of Rice, for special rice varieties, *i.e.,* glutinous and japonica rice.

This regulation likewise granted BULOG the right to import medium quality rice in order to stabilize rice prices, meet emergency demands, and maintain food security. However, BULOG is prohibited from importing rice for a period stretching from 1 month before to 2 months after the rice harvest period.[221]

216. Hutchcroft, "Obstructive Corruption," 219.
217. Hutchison, "Poverty of Politics in the Philippines," 62.
218. Ministry of Trade Regulation No. 19/M-DAG/PER/3/2014
219. Global Trade Alert, *Indonesia: Import and Export Provisions for rice*, March 2014, http://www.globaltradealert.org/state-act/7556.
220. Public Relations Center, *Ministry of Trade Issues Ministry of Trade Regulation Number 19/M-DAG/PER/3/2014 Concerning Provisions of Rice Export and Import*, 2014, http://www.kemendag.go.id/files/pdf/2014/04/30/kemendag-terbitkan-permendag-nomor-19m-dagper32014-tentang-ketentuan-ekspor-dan-impor-beras-en0-1398846442.pdf.
221. USDA Foreign Agricultural Service, *GOI New Regulation on Rice Exports and Imports*, 2014, http://gain.fas.usda.gov/Recent%20GAIN%20Publications/GOI%20New%20Regulation%20on%20Rice%20Exports%20and%20Imports_Jakarta_Indonesia_5-6-2014.pdf.

In the case of the Philippines, the imports of rice, maize, certain meats, and cane or beet sugar are subject to its minimum access volume (MAV) rules.[222] The MAV is essentially a tariff-rate quota. Imports of goods within the MAV enjoy lower in-quota tariff rates, while quantities over and above the MAV are subject to higher out-quota rates. This system is jointly implemented by the heads of the departments of agriculture, agrarian reform, finance, science and technology, and trade and industry. Their duties include the issuance of import licenses. As of 2017, the MFN in-quota and out-quota tariff rates for rice are 35% and 50%, respectively. For cane sugar, however, the rates are 50% and 65%.[223]

In 1998, Thailand's Ministry of Commerce imposed a price control measure on imports of maize, fish meal, and soybean meal.[224] Imports of these items were subject to a special fee, the amount of which depended on World Trade Organization membership, for the stated purpose of protecting the domestic industry.[225] Maize imports from AFTA members can be through the Public Warehouse Organization, a state-trading enterprise, or through private entities. However, private entities can only import maize in the period from 1 February to 31 August of each year. The Public Warehouse Organization is not subject to any similar limitation.[226]

These regulations have the potential to limit the inflow of agricultural imports. It is undeniable that these Member States have an interest in protecting their domestic producers. The Thai regulations are ostensibly motivated by these nationalistic preferences, perhaps as a way to mollify the hard-hit smallholders and rural poor in the aftermath of the economic crisis. Nevertheless, the underlying intent is admittedly protectionist. In Indonesia's case, BULOG's right to import rice is a potential source of rents. And considering how this agency has been used by politically well-connected interests to capture rents in the past, this scenario does not seem unlikely. For the Philippines, the in-quota and out-quota tariff rates for cane sugar, which are higher than those for rice, are also notable. Considering how well-connected the sugar industry is with the

222. Department of Agriculture Administrative Order No. 08, series of 1997, as amended by Administrative Order No. 01, series of 1998.
223. Tariff Commission, *Philippine Tariff Finder*, July 2017, `http://finder.tariffcommission.gov.ph`.
224. Issue 19, series of 1997.
225. "Non-Tariff Measures Based on Official Regulations, ASEAN."
226. Ibid.

country's political forces, it is not unlikely that these rates resulted from the industry's political machinations.

3.4 Summary

The increased participation of ASEAN Member States in production networks coincided with the region's efforts at trade liberalization, which began in the 1990s. This shift in trade is one of the main factors which drove the structural changes, specifically the shift from agriculture to manufacturing, in the Member States. The current primacy of production network trade is one of the motivations for deeper integration in the region. The premise is that deeper integration, through the harmonization of regulations and the removal of trade barriers, will promote and strengthen production network links in the region.

While this premise seems clear and irrefutable, the reality may be more complex. For one, the structural changes in the Member States also coincided with an increased incidence of NTMs. For some, these NTMs do not adversely affect production network trade. In fact, they may even stimulate it by serving as signals of quality and safety. For others, NTM use seems to be driven by political economy considerations, such as support for certain declining industries. However, a more focused analysis is needed in order to achieve a fuller analysis of the incidence and persistence of NTMs in ASEAN.

Nevertheless, the idea that NTMs need to be harmonized, or even eliminated in order to promote trade, needs to be reexamined. It is possible that these instruments, which are nothing but governmental issuances, may be motivated by private interests and considerations. However, it is also possible that they are motivated by legitimate goals which actually promote the public interest. For example, quality-promoting measures may increase demand and stimulate trade in both intermediate and final goods. Thus, a broad and general rule, such as a blanket prohibition of these measures, might be ineffective and unnecessary.

4 Determinants of Non-Tariff Measures[1]

4.1 Introduction

As part of its regional integration efforts, the Association of Southeast Asian Nations (ASEAN) Members States committed to reduce, if not eliminate completely, both border[2] and behind-the-border trade barriers such as non-tariff measures (NTMs) and non-tariff barriers (NTBs).[3] This is undoubtedly a difficult task, given the complex nature of NTMs and NTBs.

NTMs are instruments, other than tariffs, which can affect the prices, quantities, or both of traded goods.[4] Any law or regulation can thus be classified as an NTM as long as these effects are produced, including instruments which are not necessarily intended to affect trade. This includes, but are not limited to, sanitary and phytosanitary measures,[5] technical barriers to trade,[6] labelling and specification requirements, and quantitative restrictions. For example, a health standard imposing minimum quality requirements on food products, whether produced domestically or abroad, can be considered an NTM if this can affect

1. I would like to thank Emanuela Carbonara, Michael Faure, Bertrand Crettez, the participants of the EDLE Third Year Seminar held at the University of Bologna, the participants of the EMLE Midterm Meeting held at Erasmus University Rotterdam, and the participants of "The Future of Law and Economics" Joint Seminar held at Université Paris II Panthéon Assas for their valuable comments. I am likewise grateful for the assistance of Jason Alinsunurin in organizing and setting up the data on non-tariff measures, and in the computation of the frequency ratios.

2. Such as tariffs and quotas.

3. ASEAN Secretariat, *AEC Blueprint 2025*, 3.

4. United Nations Conference on Trade and Development, *Non-Tariff Measures to Trade: Economic and Policy Issues for Developing Countries*, 2.

5. This refers to measures which aim to protect consumers by preventing the spread of diseases, pests, or contaminants. ibid., 33.

6. This refers to measures which aim to protect the environment, ensure product safety and quality, and promote other non-trade objectives. ibid.

the price or quantity of imported items. NTMs become NTBs when *(i)* they are applied in a discriminatory manner against foreign firms, *(ii)* are imposed with a protectionist intent, or *(iii)* when they are unjustified or improperly applied.[7] In other words, NTBs are NTMs that *"are protectionist by either intent or effect."*[8]

This uncertainty and ambiguity regarding the nature of, and classification of instruments as, NTMs and NTBs may explain the seeming inability of Member States to comply with their NTM-related obligations. Alternatively, the persistence of NTMs may be due to the Member States' and ASEAN's short-sighted view of the underlying determinants of policy. The political economy of trade protection literature posits that both economic and political factors are influential in the policy-making process. On the one hand, certain economic shocks may lead to increased demand for protectionist policies. On the other hand, the underlying political institutions may affect how societal preferences for either free trade or protection are translated into policy. In order to effectively address the problem of NTMs and NTBs, the Member States need to first identify and understand these underlying determinants.

This chapter aims to identify the determinants of the incidence of NTMs in the ASEAN region. In particular, it asks whether political and economic factors can illuminate the rising incidence and persistence of NTMs. Firstly, is there a relationship between certain economic trends, such as unemployment and structural change, and the imposition of NTMs? Secondly, is there a significant difference in the incidence of NTMs among countries with different types of political institutions? Relationships between NTM incidence, on the one hand, and different political and economic characteristics, on the other, are duly analyzed to discover *(i)* any possible links between them, and *(ii)* the strength and direction of this association.

Frequency ratios were generated to measure NTM incidence for each Member State. This variable indicates the percentage of a country's imported products which are subjected to at least 1 NTM. Spearman's correlation analyses were used to determine the correlation between frequency ratios and economic indicators. Independent samples t-tests were used to identify differences in NTM

7. United Nations Conference on Trade and Development, *Non-Tariff Measures to Trade: Economic and Policy Issues for Developing Countries*, 2.

8. United Nations Economic and Social Commission for Asia and the Pacific, *Trade and Non-Tariff Measures: Impacts in the Asia-Pacific Region*, 11.

incidence based on the political characteristics of the Member States. The results indicate that sectoral trends do in fact matter. Additionally, the degree of political insulation and accountability may affect how governments react to demands for increased protection.

Section 4.2 provides an overview of the current literature on the political economy of trade protection. This is followed by a description of the data and methodology in *Section 4.3*. *Section 4.4* discusses the results of the correlation analyses and the independent t-tests. *Section 4.5* summarizes the key results, and discusses possible areas for future research.

4.2 The Political Economy of Trade Protection

It is useful to look at NTMs within the context of a market for trade policy. In this market, trade policy is determined by *(i)* the goals and preferences of policymakers (supply), *(ii)* the interests and efforts exerted by gainers and losers from policies (demand), and *(iii)* the economic and political institutions where these interactions occur.[9] The theory of endogenous trade protection emphasizes that industry's demand for protection increases as a result of certain economic shocks. The supply of protection depends on the interests and preferences of policymakers, *i.e.,* whether they value general welfare over self-interest. In light of these, trade policy cannot be detached from its socio-economic and political contexts, since they shed light on why certain industries and sectors are protected. These underlying determinants of policy are among the main focal points of the political economy of trade protection literature.

This section presents a brief overview of the current literature, both theoretical and empirical, on the political economy of trade protection. This discussion is not meant to provide an exhaustive inventory of the scholarship on this topic. Rather, it merely serves as a guide for the analysis set out in *Section 4.4*. This section ends with a discussion of this chapter's analytical framework and hypotheses.

9. Hillman, *The Political Economy of Protection*, 3.

4.2.1 The Interest Group Approach

The interest group approach currently dominates the literature. Its main schools of thought are the tariff formation function, the political support function, and the political contributions model. While these models may differ in certain aspects, common key determinants of protection have emerged such as lobby group size, the ratio of outputs against imports, and import demand elasticity.

The tariff formation function is based on Findlay and Wellisz (1982). In a two-sector specific factor economy, opposing groups will compete by lobbying the government either for or against protection.[10] Firms aim to raise the domestic prices of the goods they produce and to lower the prices of the goods they consume.[11] The tariff either increases or decreases, based on the lobbying efforts of the different firms.[12] The government trades off the lobbying contributions from the different firms, and will settle on a tariff based on the tariff formation function:[13]

$$\frac{t_i}{1+t_i} = \frac{(1-\alpha_i)(b_i-1)}{\alpha_i b_i + (1-\alpha_i)} \left(\frac{z_i}{e_i}\right), i = 1, ..., n \tag{4.1}$$

where t_i represents the tariff, α_i is the proportion of the population that owns sector-specific inputs in sector i, b_i is the government's marginal rate of substitution between the level of lobbying spending for protection and for free trade. z represents the inverse import penetration ratio[14], and e denotes the absolute import demand elasticity.[15]

A lobby group gains protection only if $b_i > 1$, *i.e.,* if its contributions are more effective than those of the other lobby group. If the marginal lobbying spending of both groups is equally effective ($b_i = 1$), there is free trade.[16] The tariff is

10. Ronald Findlay and Stanislaw Wellisz, "Endogenous Tariffs, the Political Economy of Trade Restrictions, and Welfare," chap. 8 in *Import Competition and Response*, ed. Jagdish N. Bhagwati (Chicago: University of Chicago Press, 1982), 224.

11. Ibid., 225.

12. Ibid., 226.

13. Kishore Gawande and Pravin Krishna, "The Political Economy of Trade Policy: Empirical Approaches," chap. 8 in *Handbook of International Trade*, ed. E. Kwan Choi and James Harrigan (MA, USA: Blackwell Publishing Ltd., 2003), 224.

14. This refers to the ratio of domestic output to imports.

15. Elhanan Helpman, "Politics and Trade Policy" (1995), 12, `http://www.nber.org/papers/w5309`; Gawande and Krishna, "The Political Economy of Trade Policy," 224.

16. Helpman, "Politics and Trade Policy," 12; Gawande and Krishna, "The Political Economy of Trade Policy," 224.

higher when the lobby group is small[17], its output level is high, and the demand elasticity for imports is low.[18] High output levels mean that the stakes are higher for this industry, making tariffs more profitable. The excess burden of a tariff is lessened if import demand is inelastic.[19]

Hillman (1982) proposed a political support function. In choosing trade policies, the Government trades off industry's political support against consumer welfare and satisfaction. On the one hand, protectionist policies increase domestic prices, leading to increased industry support. On the other, free trade policies lower domestic prices and increase consumer welfare and support.[20] The government settles for the policy that maximizes aggregate political support.[21] The predicted trade policy is expressed as:

$$\frac{t_i}{1+t_i} = \frac{1}{\alpha_{pi}}\left(\frac{z_i}{e_i}\right), i = 1, ..., n \tag{4.2}$$

where α_{pi} denotes the government's marginal rate of substitution between aggregate welfare and industry profits in sector i. Organized and politically active sectors (*i.e.,* α_{pi} is finite) are protected. As with the tariff formation function, the tariff is higher with greater output and inelastic import demand.[22]

The tariff formation and political support functions have been criticized for being short-sighted. It has been argued that these two models can be seen as mirror-images of one another,[23] with each focusing on just one side of the picture. The tariff formation function focuses on the demand-side for protection, without accounting for supply-side considerations such as the objective functions and preferences of policymakers.[24] The political support function, however,

17. The more concentrated the ownership of the sector-specific factor is.
18. Helpman, "Politics and Trade Policy," 13.
19. Ibid., 6.
20. Arye L. Hillman, "Declining Industries and Political-Support Protectionist Motives," *The American Economic Review* 72, no. 5 (1982): 1183.
21. Helpman, "Politics and Trade Policy," 7; Gawande and Krishna, "The Political Economy of Trade Policy," 225; Hillman, "Declining Industries and Political-Support Protectionist Motives," 1184.
22. Helpman, "Politics and Trade Policy," 8-9; Gawande and Krishna, "The Political Economy of Trade Policy," 225.
23. Dani Rodrik, "Political Economy of Trade Policy," chap. 28 in *Handbook of International Trade*, ed. Gene M. Grossman and Kenneth Rogoff (The Netherlands: Elsevier Science B.V., 1995), 1465.
24. Ibid., 1464.

only accounts for the objective function of policymakers.[25] Another criticism is that neither model is directly testable as they contain elements[26] which are not observable and measurable.[27]

Unlike the tariff formation and political support functions, the political contributions approach considers the dynamics between the demand for and supply of protection. The focus is on the role of political contributions of interest groups which aim to influence either *(i)* the outcome of elections or *(ii)* the policy choices of the incumbent government. These different perspectives are embodied in Magee, Brock and Young (1989) and in Grossman and Helpman (1994), respectively.

Magee, Brock and Young (1989) envisage an economy with two lobbies and two political parties. The parties are either for or against trade. The lobbies represent either capital or labor, and each contributes funds to a certain party. A party's probability of winning increases with the number of contributions received, but decreases with the level of policy intervention it commits itself to.[28]

The timing is as follows: during the first stage, the parties choose their respective trade policies; during the second stage, the lobbies make their campaign contributions based on the declared party platforms. Thus, contributions are intended solely to influence election outcomes, and not the policy choice of officials.[29]

While this model is useful, it has received its own share of criticism, particularly from those who believe that it is more likely that contributions aim to influence policy choice, rather than to impact the outcome of an election.[30]

Policy influence as the underlying motive for contributions is embodied in the

25. Rodrik, "Political Economy of Trade Policy," 1465.
26. Notably the marginal rate of substitution of the government between different lobby groups for the tariff formation function (b_i), and between industry interests and consumer welfare in the political support function (α_{pi}).
27. Gawande and Krishna, "The Political Economy of Trade Policy," 225.
28. Helpman, "Politics and Trade Policy," 14-15; Rodrik, "Political Economy of Trade Policy," 1467.
29. Helpman, "Politics and Trade Policy," 14-15; Rodrik, "Political Economy of Trade Policy," 1467.
30. Helpman, "Politics and Trade Policy," 16-17.

Grossman and Helpman (1994) model.[31] On the supply-side, this model assumes the presence of an incumbent government. As the decision-maker, the Government aims to maximize a weighted sum of total political contributions and aggregate welfare.[32]

On the demand-side, the different economic sectors are represented by lobby groups. These lobby groups present the Government with a contribution schedule, where contribution levels correspond to, and depend on, the implemented trade policy.[33] In this case, the lobbies pledge contributions before policies have been chosen by the Government. Thus, lobbying aims to directly influence the policy choices of the Government. Each lobby aims to maximize the total utility of its members, given other lobbies' contributions, the anticipated policy choices of the Government, and domestic prices.[34] A sector gets more protection if *(i)* it is organized into a lobby, *(ii)* its total output is greater than competing imports, and *(iii)* the import elasticity of demand is low.[35]

The timing is as follows: during the first stage, the lobbies present their contribution schedules; during the second stage, the Government determines its trade policies in view of these contribution schedules.[36] The cross-industry pattern of protection is represented as:

$$\frac{t_i}{1+t_i} = \frac{I_i - \alpha_L}{\alpha + \alpha_L}\left(\frac{z_i}{e_i}\right), i = 1, ..., n \tag{4.3}$$

where I_i indicates whether the sector is organized into a lobby or not, α_L is the fraction of the population organized into lobbies, and α is the constant weight placed by the government on total welfare relative to total contributions.[37]

Organized import-competing and export-competing industries ($I_i > 0$) will be able to obtain protection in the form of tariffs and subsidies, respectively ($t_i > 0$). Unorganized import-competing and export-competing industries, on the other hand, will be subjected to an import subsidy and export tax, respectively

31. Gene M. Grossman and Elhanan Helpman, "Protection for Sale," *The American Economic Review* 84, no. 4 (1994): 833.
32. Ibid., 836.
33. Ibid.
34. Ibid., 838.
35. Ibid., 841-842.
36. Ibid., 838.
37. Ibid., 842.

($t_i < 0$). Industries characterized by higher output (high z_i) and lower import elasticities of demand (e_i) enjoy higher levels of protection. And if all industries were organized ($I_i = 1$ and $\alpha_L = 1$), their lobbying activities would cancel one another out, resulting in free trade ($t_i = 0$).[38]

There are 2 reasons for the lower rates of protection in industries (i) with high import demand (low z_i). First, the deadweight loss from protection translates to a political cost for the Government. Second, members of lobbies will also have to bear the social cost of this deadweight loss. Thus, the lobby groups *"in industries other than* i *will bid more to avoid protection in sector* i *the greater is the social cost of that protection."*[39]

Despite its current popularity, the Grossman and Helpman (1994) model is not without its critics. The assumption that lobbyists only aim to buy protection has been questioned. Lobby contributions may also buy other things, such as access to policymakers. The model's key prediction vis-à-vis import penetration ($1/z_i$) has also been called *"unintuitive"*.[40] It is more logical for protection to be positively related to a change in import penetration, as reported by Trefler (1993). That is, *"industries where import penetration used to be low and has increased tend to be those where a comparative advantage existed but has been eroded"*.[41]

4.2.2 Political Institutions and Trade

Current scholarship also aims to illuminate the relationship between political institutions, namely electoral rules and forms of government, and economic policy. The premise is that different kinds of political institutions may generate different types of incentives for both governmental and non-governmental actors. This variety in incentives may help explain the resulting economic policy. For example, electoral rules determine how voters are linked to their representatives,[42] and how voters' preferences are aggregated within governmental

38. Grossman and Helpman, "Protection for Sale," 842-843.
39. Ibid., 842.
40. Susumu Imai, Hajime Katayama, and Kala Krishna, "Is Protection Really For Sale? A survey and directions for future research," *International Review of Economics and Finance* 18 (2009): 181.
41. Ibid., 181-182.
42. Stephanie J. Rickard, "Electoral Systems and Trade," in *The Political Economy of International Trade*, ed. Lisa L. Martin (New York: Oxford University Press, 2015), 280.

systems.[43] How a government functions, *i.e.,* how policy-making powers are acquired and exercised, depends on the form of government.[44] Thus, political institutions may determine how well a government can respond to demands for a certain kind of policy.

The seminal work on the effect of political institutions on economic policy is Persson and Tabellini (2003, 2004). According to Persson and Tabellini (2003), the different dimensions of electoral rules matter. For example, district magnitude[45] affects the nature of electoral competition. Larger districts, which elect more representatives, cater to broader constituencies. Electoral success in large districts depends on the candidates' ability to capture votes from a wider constituency. Party platforms in these systems tend to feature broad-based projects and general public goods. Smaller districts, however, have narrower constituencies. Thus, candidates tend to cater to voters by targeting district-specific interests and preferences.[46]

The electoral formula[47] is likewise potentially determinative of economic policy. When voters elect individual candidates (as in plurality or majoritarian systems) rather than parties (as in proportional representation [PR] systems), the politicians are held more accountable for their actions. In other words, *"individual accountability under plurality rule strengthens the incentives of politicians to please the voters and is conducive to good behavior."*[48]

The form of government also matters, as this affects the allocation and exercise of power within a government.[49] Presidential systems are characterized by: *(i)* the election of the President by the citizenry; *(ii)* the separation of powers and a system of checks and balances between the branches of government; and *(iii)* a term which does not depend on the continued support and confidence of the legislative assembly. These characteristics incentivize good behavior as the President is not only directly accountable to voters, but any inclinations

43. Torsten Persson and Guido Tabellini, *The Economic Effects of Constitutions* (MIT Press, 2003), 11.
44. Ibid., 11-12.
45. District magnitude refers to the number of representatives per electoral district.
46. Persson and Tabellini, *The Economic Effects of Constitutions*, 17.
47. This refers to how the cast votes are translated into legislative seats.
48. Torsten Persson and Guido Tabellini, "Constitutions and Economic Policy," *Journal of Economic Perspectives* 18, no. 1 (2004): 82; Persson and Tabellini, *The Economic Effects of Constitutions*, 22.
49. Persson and Tabellini, "Constitutions and Economic Policy," 79.

to abuse power are also curbed by the other branches of government. In parliamentary systems, the legislative body appoints the executive, but executive and agenda-setting powers are concentrated in the hands of Government.[50] This concentration of power may allow legislators to better *"collude with each other at the voters' expense"*.[51]

On the other hand, the confidence requirement in parliamentary systems stimulates *"legislative cohesion"*[52] in policy proposals and decisions. This stable majority of legislators in parliamentary systems can better pursue broad-based programs and provide public goods. Meanwhile, the lack of a confidence requirement in presidential systems incentivizes different groups to lobby for legislative influence, and legislators tend to favor targeted programs which only benefit their own constituencies.[53]

Grossman and Helpman (2005) were the first to develop a model specifically linking electoral rules to trade policy. Using a 3-stage model of political campaigns, elections, and policy-making, they showed that a protectionist bias emerges in majoritarian systems. They take the example of a small country where 1/3 of the citizens live in 1 of 3 geographically distinct districts. The districts have distinct and separate economic interests, *i.e.,* in a specific industry.[54] Each district is represented by a single legislator, who may come from either party A or party B.[55]

At the first stage, each party chooses a platform which will allow it to win a majority of the legislative seats.[56] Given the heterogenous economic interests present in the 3 districts, the parties promise district-specific protection.[57] At the second stage, the citizens vote for a single representative. Each voter's objective is to maximize his expected utility given the uncertainty of the outcomes in the other districts.[58] At the last stage, the majority party sets policy, with

50. Persson and Tabellini, "Constitutions and Economic Policy," 79-80.
51. Persson and Tabellini, "Constitutions and Economic Policy," 84; Persson and Tabellini, *The Economic Effects of Constitutions*, 23-24.
52. Persson and Tabellini, *The Economic Effects of Constitutions*, 24.
53. Persson and Tabellini, "Constitutions and Economic Policy," 92; Persson and Tabellini, *The Economic Effects of Constitutions*, 24-25.
54. Gene M. Grossman and Elhanan Helpman, "A Protectionist Bias in Majoritarian Politics," *The Quarterly Journal of Economics* 120 (2005): 1243-1244.
55. Ibid., 1245.
56. Ibid., 1249.
57. Ibid., 1257.
58. Ibid., 1253.

legislators setting *"trade policy to maximize aggregate welfare of residents of the districts they represent net of any penalties they will suffer by deviating from their party's platform."*[59]

If a party wins in all 3 districts, free trade will prevail as this maximizes aggregate welfare. If the majority party only represents 2 districts, which is the more probable outcome in majoritarian systems, a positive tariff will be enacted. This policy benefits only those districts represented by legislators from the majority party.[60] Unlike majoritarian systems, PR systems are more likely to have a governing party which represents all electoral districts. Thus, a protectionist bias is foreseen in majoritarian systems.

4.2.3 Empirical Evidence from Previous Studies

The empirical scholarship aims, among others things, to determine the link between certain economic and political characteristics on the one hand, and protection levels on the other. Early works offered a range of hypotheses explaining the structure of protection, primarily tariff levels.[61] The emergence of formal theories, notably the Grossman and Helpman (1994) model, provided later scholarship with testable hypotheses and solid micro-foundations.

Ray (1987) is among the notable early works. He analyzed the patterns of tariffs and NTBs in the United States vis-à-vis the interaction of industry's lobbying efforts and political (both domestic and foreign) objectives.[62] It is generally assumed that lobbying efforts influence policy. However, it is difficult to trace the resulting trade policy back to individual industry interests.[63] Moreover, national objectives may play a significant role in policy deliberations. Ray (1987) argued that trade policy is determined by this *"interaction of self-promoting economic interest groups with national economic and political policies."*[64] A free trade policy emerges when both national interests and industry prefer free trade. When national interests favor free trade but industry lobbies for protection, the

59. Ibid., 1249.
60. Ibid., 1259.
61. Gawande and Krishna, "The Political Economy of Trade Policy," 214-216.
62. Edward John Ray, "Changing Patterns of Protectionism: The Fall in Tariffs and the Rise in Non-Tariff Barriers," *Northwestern Journal of International Law & Business* 8, no. 2 (1987): 286.
63. Ibid., 288.
64. Ibid., 289.

resulting policy will be ambiguous. Governments therefore act in accordance with national interests while being subject to industry pressure. This is borne out in the historical trends of protection in the United States.[65]

Trefler (1993) estimated the impact of NTBs, as measured by coverage ratios[66], on American manufacturing imports in 1983. Accounting for the endogeneity of protection levels and trade flows, he simultaneously estimated the NTB and import equations.[67] Increased import penetration levels led to increased protection levels.[68] Furthermore, increased protection levels negatively affected import penetration.[69] This simultaneous estimation also showed that NTBs reduced imports by $49.5 billion, which is more than had been previously estimated.[70] Regarding the determinants of protection, comparative advantage variables (such as the increase in import penetration and number of exports) were highly significant. These variables were at least 5 times as important as business-related variables (such as the number of firms, firm concentration, scale and capital stock).[71]

Following Trefler (1993), Lee and Swagel (1997) also simultaneously estimated the determinants of NTBs, as measured by coverage ratios, and trade flows. They used 1988 data on various political and economic determinants for a group of both developed and developing countries.[72] They found that sectoral factors affected the incidence of NTBs. NTBs tended to protect import competing[73] and declining[74] industries.[75] On the other hand, exporting industries[76] received

65. Ray, "Changing Patterns of Protectionism," 292.

66. The coverage ratio measures the number of products or tariff lines that are subject to any type of NTB.

67. Daniel Trefler, "Trade Liberalization and the Theory of Endogenous Protection: An Econometric Study of U.S. Import Policy," *Journal of Political Economy* 101, no. 1 (1993): 143.

68. Ibid., 144.

69. Ibid., 149.

70. Ibid., 139.

71. Trefler, "Trade Liberalization and the Theory of Endogenous Protection," 146-147; Gawande and Krishna, "The Political Economy of Trade Policy," 217.

72. Jong-Wha Lee and Phillip Swagel, "Trade Barriers and Trade Flows Across Countries and Industries," *The Review of Economics and Statistics* 79, no. 3 (1997): 373.

73. As measured by the share of imports.

74. As measured by the change in wage per worker.

75. Lee and Swagel, "Trade Barriers and Trade Flows Across Countries and Industries," 378.

76. As measured by the share of exported industry output.

less protection.[77] Large industries[78], which may be politically important by virtue of their size, also received protection.[79] The observed trends suggest that tariffs and NTBs are used as complements,[80] and that NTBs can negatively affect imports.[81]

Mansfield and Busch (1995) viewed protectionist policies as the result of the interaction of 2 sets of factors: *(i)* those that give rise to industry demands for protection, and *(ii)* those that regulate the supply of protection, *i.e.,* political and institutional factors.[82] On the one hand, trade policy is influenced by industry's and other non-state actors' lobbying activities.[83] Certain macroeconomic conditions, such as rising unemployment and currency appreciation, can spur these groups to demand greater protection.[84] On the other hand, national interests and domestic institutions can regulate the provision of protection. In particular, public officials' degree of autonomy and insulation from pressure may affect policymaking processes.[85]

Mansfield and Busch (1995) conducted a cross-country analysis using the following model:

$$\begin{aligned} NTB_{t+1} = A + B_1 SIZE_t + B_2(logCONST)_t + \\ B_3(SIZE * logCONST)_t + B_4 UNEM_t + \\ B_5(UNEM * logCONST)_t + B_6(UNEM * SIZE * logCONST)_t + \\ B_7 REER_t + B_8(REER * logCONST)_t + \\ B_9(REER * SIZE * logCONST)_t + B_{10} TARIFF_t + e_t \end{aligned} \tag{4.4}$$

where:

77. Lee and Swagel, "Trade Barriers and Trade Flows Across Countries and Industries," 378.
78. As measured by the industry share of value added.
79. Lee and Swagel, "Trade Barriers and Trade Flows Across Countries and Industries," 378.
80. Ibid., 379.
81. Ibid., 380.
82. Edward D. Mansfield and Marc L. Busch, "The Political Economy of Nontariff Barriers: a cross-national analysis," *International Organization* 49, no. 4 (1995): 723.
83. Ibid., 724.
84. Ibid., 725-727.
85. Ibid., 727-728.

1. NTM_{t+1} denotes the number of imports subject to NTBs in year $t+1$;
2. $SIZE_t$ is the economic size of the State in year t;
3. $CONST$ is the number of parliamentary constituencies, which proxies[86] for state insulation and autonomy;[87]
4. $UNEM_t$ is the unemployment rate;
5. $REER_t$ is the index of the real exchange rate;
6. $TARIFF_t$ is the average national post-Tokyo Round tariff rate; and
7. e_t is the error term.[88]

High unemployment rates and appreciated currencies were strongly linked with pronounced pressures for protection and high NTB incidence. The highest values of NTBs[89] occurred in larger States where policymakers were autonomous and well-insulated from societal pressures, as in PR systems.[90] NTBs are thus likelier *"when deteriorating macroeconomic conditions generate widespread demands for protection, a state is sufficiently large to give policymakers incentives to impose protection, and public officials are vested with the institutional capacity necessary to act on these preferences and resist pressures exerted by groups with an interest in lower trade barriers"*.[91]

Saksena and Anderson (2008) reevaluated Mansfield and Busch's (1995) conclusion on the relationship between political insulation and the incidence of NTBs. They argued that the finding that political insulation from social pressures, as in PR systems, leads to higher protection is debatable. The implication is *"that a state's national interest is for protectionism [. . .] and that insulated politicians are able to pursue this because they are protected from societal pressures for free trade."*[92] If this is true, then the national preference is for protectionist policies, while interest groups prefer free trade. However, this position is

86. A high number of constituencies leads to a smaller average constituency size. A small constituency would enable interest groups to gain more power in that district.
87. Mansfield and Busch, "The Political Economy of Nontariff Barriers," 730.
88. Ibid., 735-736.
89. As measured by trade coverage ratios.
90. Mansfield and Busch, "The Political Economy of Nontariff Barriers," 739.
91. Ibid., 747.
92. Jyotika Saksena and Liam Anderson, "Explaining Variation in the Use of NTBs in Developed Countries: The Role of Political Institutions," *International Politics* 45 (2008): 483.

counter-intuitive and improbable, as shown by the need for treaties safeguarding free trade.[93] Using a pooled time series[94] and a cross-sectional analysis[95], Saksena and Anderson (2008) found that:

1. NTBs are higher in larger states which are more dependent on trade;
2. NTBs are higher in countries where interest groups are institutionalized within the policy-making process; and
3. NTBs are higher in majoritarian systems than in PR systems.[96]

Evans (2009) considered the impact of a country's electoral system, *i.e.,* majoritarian/plurality or proportional,[97] on its trade policies. The hypothesis is that legislators in majoritarian countries had a greater incentive to enact policies which favoring their own districts, including protectionist tariffs. On the other hand, legislators with a wide electoral base pursued more egalitarian policies, *i.e.,* they were in favor of free trade. Using data from 147 countries from 1981 to 2004,[98] she found that majoritarian countries had higher average tariffs than those seen in proportional system countries.[99] This supported the hypothesis that majoritarian countries were biased in favor of protection.

A subsequent study by Rickard (2012), which focused on subsidies, found that this majoritarian bias is also present for NTMs. Looking at a sample of 68 countries from 1990 to 2006, budgets for subsidies were higher in majoritarian countries than in PR countries.[100]

93. Ibid.
94. For the years 1988, 1993, and 1996.
95. The authors used data from Austria, Australia, Canada, Finland, Iceland, Japan, New Zealand, Norway, Sweden, Switzerland, and USA.
96. Saksena and Anderson, "Explaining Variation in the Use of NTBs in Developed Countries," 491.
97. Evans (2009) classified countries into these 2 main groups. A majoritarian/pluralitarian country is one characterized by a winner-take-all system. The country is usually divided into districts, each of which elects only 1 representative to the legislature. The winner is the one who receives the most votes. A country following the proportional system has multiseat constituencies, and the allocation of seats depends on the votes received by the parties. Carolyn L. Evans, "A Protectionist Bias in Majoritarian Politics: An Empirical Investigation," *Economics & Politics* 21, no. 2 (2009): 280
98. Ibid., 285.
99. Ibid., 293.
100. Stephanie J. Rickard, "A Non-Tariff Protectionist Bias in Majoritarian Politics: Government Subsidies and Electoral Institutions," *International Studies Quarterly* 56 (2012): 782.

Kono (2009) examined the effects of intra-industry trade[101] and electoral rules on trade protection[102]. Kono argued that intra-industry trade may generate stronger protectionist policies.[103] With new varieties (entrants) in the market, economies of scale lead to a smaller number of specialized domestic producers (and varieties).[104] Any protectionist measure regarding a specific variety would then benefit a smaller group. Thus, intra-industry trade lessens the collective action problem, which can incentivize producers to lobby for protection.[105]

Market structure and electoral rules must be examined together, and constituency size is an important factor. In particularist systems, electoral rules are more personality-based and candidates appeal to a narrow constituency in order to be elected. Success then hinges on candidates' ability to appeal to their constituencies' preferences. Protection is expected to be higher. On the other hand, party-oriented systems are characterized by larger constituencies. A candidate's success is linked to his party's. As a party needs to appeal to a broader constituency, the interests of narrow groups are not decisive, and thus there is a lower level of protection.[106]

Using data from approximately 4,400 sectors in non-European Union countries, Kono found that intra-industry trade indeed led to increased protection. This effect was insignificant in systems characterized by low and moderate levels of particularism. However, it became larger and significant in highly particularist electoral systems.[107] This supports the hypothesis that increased intra-industry trade allows firms to overcome collective action problems in lobbying for protection.

4.2.4 Analytical Framework

Guided by the aforesaid literature, the present study proceeds to examine the relationship between economic and political factors, on the one hand, and the

101. Intra-industry trade is characterized by an exchange of different varieties of the same product.
102. As measured by tariffs, NTBs, and subsidies.
103. Daniel Yuichi Kono, "Market Structure, Electoral Institutions, and Trade Policy," *International Studies Quarterly* 53, no. 4 (2009): 886.
104. Ibid., 887.
105. Ibid., 888.
106. Ibid., 889-890.
107. Ibid., 898-899.

incidence of NTMs in ASEAN Member States, on the other. This analysis is mainly guided by Grossman and Helpman (1994), Persson and Tabellini (2003, 2004), and Grossman and Helpman (2005).

Grossman and Helpman (1994) posit that the relationship between trade flows and NTM incidence depends on whether the affected industry is organized or not. In organized industries, *(i)* high demand for imports, that is, a high import penetration ratio, is expected to be associated with a lower NTM incidence; and *(ii)* a larger domestic output vis-á-vis import demand, *i.e.,* lower import penetration ratio, is associated with a higher NTM incidence.[108] Therefore, in ASEAN Member States' larger sectors, in terms of output and political influence, are expected to be associated with high levels of NTM incidence. Sectors characterized by high demand for imports, on the other hand, are expected to be associated with low levels of NTM incidence.

Empirical studies also suggest that economic size and unemployment are both positively related to NTM incidence. Larger economies wield greater market power, are more able to tailor trade policy to reap gains at the expense of smaller economies, and are less vulnerable to retaliation.[109] Increased imports would make it harder for displaced workers to secure employment, creating a demand for protection.[110] Thus, there is an expected positive relationship between the Member States' economic size and NTM incidence. Rising unemployment rates in the Member States are also expected to coincide with greater NTM incidence.

There are opposing views on the relationship between NTM incidence and political institutions. Grossman and Helpman (2005) argue that plurality and majoritarian States are going to have a higher incidence of NTMs than PR States.[111] Persson and Tabellini (2003, 2004), however, emphasize the fact that the degree of political representation and accountability matters. Given such contradictory views, the present chapter is non-committal in regard to the link between political institutions and NTM incidence.

108. Pinelopi Koujianou Goldberg and Giovanni Maggi, "Protection for Sale: An Empirical Investigation," *The American Economic Review* 89, no. 5 (1999): 1146.
109. Mansfield and Busch, "The Political Economy of Nontariff Barriers," 728; Saksena and Anderson, "Explaining Variation in the Use of NTBs in Developed Countries," 489.
110. Mansfield and Busch, "The Political Economy of Nontariff Barriers," 727.
111. As confirmed by the empirical results of Saksena and Anderson (2008), Evans (2009), and Rickard (2012).

The following section describes in detail the variables used to analyze the relationship between NTM incidence and economic and political factors.

4.3 Data and Methodology

The political economy of trade protection suggests that economic and political factors influence trade policy. Any examination of NTM incidence needs to account for both, without giving too much importance to either type. This study therefore uses a variety of economic and political variables to ascertain the determinants of NTM incidence in the ASEAN region.

Analyses of NTMs are, however, complicated by the inherent endogeneity of these measures. For example, a change in import penetration can generate increased demands for NTMs. A higher incidence of NTMs, in turn, may lead to fewer imports.[112] Due to this endogeneity and to insufficient data, this chapter focuses on determining possible correlations between NTM incidence and the explanatory variables, rather than on trying to establish any causal links.

4.3.1 Data and Sources

Table 4.1 gives an overview of the variables of interest in this chapter, along with the predicted relationships between NTM incidence and the various indicators. The variables can be subdivided into 3 groups, based on their subject matter: *(i)* NTM Incidence, *(ii)* Economic Indicators, and *(iii)* Political Indicators. *Table 4.2* provides the summary statistics. For the Member States, the mean frequency ratio is 0.676. On average, 67% (s = 34%) of the region's imported products are regulated by NTMs. The mean values for the economic indicators, and the frequencies of the political indicators, are also presented.

NTM Incidence

The focus of this analysis is on the incidence, or prevalence, of NTMs among the Member States as measured by frequency ratios. The frequency ratio is an

112. United Nations Conference on Trade and Development, *Non-Tariff Measures to Trade: Economic and Policy Issues for Developing Countries*, 22.
113. Based on the author's estimations.

TABLE 4.1: Variables of Interest

Variable	Description	Prediction
Frequency Ratio	Percent of imported products that are regulated by NTMs	
Import Penetration Ratio	Ratio of imports over total domestic demand	(-) organized (+) unorganized
Imports	Imports of goods and services, at constant 2010 US$	(+)
Exports	Exports of goods and services, at constant 2010 US$	(-)
Gross Domestic Product	At constant 2010 US$	(+)
Unemployment Rate	Total, % of total labor force (national estimate)	(+)
Agriculture, Value Added	Sectoral net output, as % of GDP	(+)
Industry, Value Added	Sectoral net output, as % of GDP	(+)
Services, Value Added	Sectoral net output, ass % of GDP	(+)
Plurality	Where the winner-take-all/first past the post	(+) or (-)
Proportional Representation	Based on the proportion of votes received by a party	(+) or (-)
Presidential	The President's tenure is independent of legislative confidence	(+) or (-)
Parliamentary	Governments require sustained legislative confidence	(+) or (-)

TABLE 4.2: Summary Statistics, Country-Level[113].

Variable	Observations	Mean	Std. Deviation	Min.	Max.	Percent
Frequency Ratio	112	0.676	0.344	0	0.999	
Import Penetration Ratio	112	61.404	39.446	14.946	183.236	
Imports	112	1.05e+10	8.76e+09	1.34e+08	3.58e+10	
Exports	112	1.11e+10	9.31e+09	1.30e+08	3.62e+10	
Gross Domestic Product	112	2.47e+11	2.13e+11	5.21e+09	9.88e+11	
Unemployment Rate	106	4.296	3.098	.16	11.85	
Agriculture, value added	102	13.716	10.263	.035	38.284	
Industry, value added	102	35.549	7.097	23.296	48.530	
Services, value added	102	50.589	10.515	37.058	75.160	
Plurality	80					71.429
Proportional Representation	32					28.571
Presidential	48					42.857
Parliamentary	64					57.143

inventory measure which shows the percentage of imported products that are regulated by at least 1 NTM:[114]

$$F_j = \left[\frac{\sum D_i M_i}{\sum M_i} \right] * 100 \tag{4.5}$$

where D and M are dummy variables indicating the presence of NTMs and imports, respectively, in regard to goods i in country j.[115] As a simple inventory measure, this ratio does not reflect the relative value of the affected imports nor the effects of NTMs on trade flows and prices.[116] However, it shows both the

114. United Nations Conference on Trade and Development, *Non-Tariff Measures to Trade: Economic and Policy Issues for Developing Countries*, 22-23.
115. D and M are coded 1 if there are NTMs or imports, respectively, and 0 otherwise.
116. United Nations Conference on Trade and Development, *Non-Tariff Measures to Trade: Economic and Policy Issues for Developing Countries*, 23.

incidence of NTMs on different product groups, and how these trends change from one period to the next,[117] which suffice for purposes of this analysis.

Frequency ratios were generated for 7 Member States[118] from 2000 to 2015. NTM data were sourced from the Trade Analysis Information System (TRAINS) Global Database on NTMs. This database is notable for containing updated, comprehensive information on ASEAN NTMs.[119] NTM information was disaggregated according to the 6-digit Harmonized Commodity Description and Coding System (HS Codes). HS Codes can classify items according to highly specific product groupings. The first 2 digits (HS 2) refer to the products' chapter classification, *i.e.,* 07 = Vegetables and Certain Roots and Tubers; Edible. The next 2 digits (HS 4) refer to categories within that chapter, *i.e.,* 07.01 = Potatoes; fresh or chilled. And the last 2 digits (HS 6) refer to a more disaggregated category, *i.e.,* 07.01.10 = Vegetables; seed potatoes, fresh or chilled.[120] As this system is internationally standardized, the product classifications are uniform for all Member States, provided the same HS Codes version is used. Imports data from 2000 to 2015 were sourced from the United Nations Commodity Trade (UN COMTRADE) database, which likewise disaggregated trade flows according to the 6-digit HS Codes. However, imports were coded according to an earlier HS Codes version (*i.e.,* H0) while the TRAINS NTM database used more recent versions (*i.e.,* H3 and H4). In order to ensure consistency and comparability among the data, the TRAINS NTM HS Codes were converted from either H4 or H3 to H0.[121]

The 6-digit HS Codes identify more than 5000 product groups. To make this analysis more tractable, these product codes were aggregated into 6 industry and 21 product group classifications. These classifications were adapted, with

117. United Nations Conference on Trade and Development, *Non-Tariff Measures to Trade: Economic and Policy Issues for Developing Countries*, 23.

118. Due to data constraints, we excluded Brunei Darussalam, the Lao People's Democratic Republic and Myanmar.

119. Santiago Fernandez de Cordoba et al., "Collecting and Classifying Non-Tariff Measures in ASEAN," in *Non-Tariff Measures in ASEAN*, ed. Lili Yan Ing, Santiago Fernandez de Cordoba, and Olivier Cadot (Economic Research Institute for ASEAN, 2016), 7-10, `http://asean.i-tip.org`.

120. "Harmonized Commodity Description and Coding Systems (HS)," accessed May 10, 2017, `https://unstats.un.org/unsd/tradekb/Knowledgebase/50018/Harmonized-Commodity-Description-and-Coding-Systems-HS`.

121. We used the conversion tables provided by the United Nations Statistics Division.

some modifications, from Ando and Obashi (2010).[122] Products were sorted into their respective categories based on their chapter codes, *i.e.,* the first 2 digits of their 6-digit HS Codes. Frequency ratios were then estimated for each Member State on 3 levels: *(i)* an overall (country) level; *(ii)* on the 6-level industry classification; and *(iii)* on the more disaggregated 21-product group classification.

Table 4.3 below details the industry and product group classifications, and their corresponding HS chapter codes:

122. Mitsuyo Ando and Ayako Obashi, "The pervasiveness of non-tariff measures in ASEAN: evidences from the inventory approach," chap. 2 in *Rising Non-Tariff Protectionism and Crisis Recovery*, ed. Mia Mikic (Thailand: United Nations, 2010), 55.

TABLE 4.3: Industry Classifications[123].

Classification: Industries	Classification: Product Groups	HS Code (Chapter)
I. Animals, plants, food	1. Live animals; edible animal products	HS01-05
	2. Live plants; edible vegetables and fruits; vegetable products	HS06-14
	3. Animal or vegetable fats and oils	HS15
	4. Edible preparations; beverages; tobacco	HS16-24
II. Chemicals, chemical products	5. Chemicals and chemical products	HS28-38
	6. Plastics and articles thereof; rubber and articles thereof	HS39-40
III. Light manufactured goods	7. Raw hides and skins; leather and articles thereof; fur skins and products	HS41-43
	8. Wood and articles thereof; wood charcoal; cork and articles thereof; straw and esparto products	HS44-46
	9. Pulp, paper, paperboard, and articles thereof; printing industry products	HS47-49
	10. Textile fibers; yarn; textile and woven fabrics; articles of apparel and clothing accessories	HS50-63
	11. Footwear; headgear; umbrellas and sticks	HS64-67
	12. Articles of stone, plaster, cement, asbestos and mica; ceramic products; glass and glassware	HS68-70
	13. Natural or cultured pearls, precious or semi-precious stones	HS71
IV. Metals, metal products	14. Base metals and articles thereof	HS72-83
V. Machineries	15. Machinery, mechanical appliances, and parts thereof; electrical machinery and equipment and parts thereof	HS84-85
	16. Vehicles and parts thereof; aircraft, spacecraft, and parts thereof; ships, boats, floating structures	HS86-89
	17. Optical, photographic, cinematographic, measuring, checking, precision, medical instruments; clocks, watches, parts thereof; musical instruments, parts and accessories thereof	HS90-92
VI. Other products	18. Minerals and mineral products	HS25-27
	19. Arms, ammunition, parts and accessories thereof	HS93
	20. Miscellaneous items	HS94-96
	21. Art works, collectors' pieces, antiques	HS97

Economic Indicators

The political economy of protection literature suggests that trade flows can affect the demand for protection from domestic producers.[124] To account for

123. Adapted from Ando and Obashi, "The pervasiveness of non-tariff measures in ASEAN."
124. Trefler, "Trade Liberalization and the Theory of Endogenous Protection," 138-139.

this, import penetration ratios (IPRs) were generated for the Member States from 2000 to 2015, following the formula provided by the Organisation for Economic Co-operation and Development:[125]

$$IPR = \frac{Imports}{GDP - Exports + Imports} \tag{4.6}$$

Figures for imports and exports were sourced from the UN COMTRADE database, while gross domestic product (GDP) data was taken from the World Development Indicators. In addition to the IPR, the relationships of imports and exports with NTM incidence were also examined. As with the frequency ratios, the trade indicators (IPRs, imports, and exports) were aggregated at the *(i)* country, *(ii)* industry, and *(iii)* product group levels. This permits frequency ratios to be examined vis-á-vis trade indicators at more disaggregated levels.

Following Mansfield and Busch (1995) and Saksena and Anderson (2008), the relation between a country's relative size and NTM incidence was also considered. GDP levels from 2000 to 2015 were used as indicators of economic size. Trefler (1993) and Mansfield and Busch (1995) also suggest that unemployment levels are linked to protectionist policies.The influx of cheaper imports lead to a reduced demand for domestic products, which ultimately lead to higher unemployment rates. Thus, the link between unemployment rates, measured as a percentage of the total labor force, and NTM incidence was included in this analysis. Unemployment rates were sourced from the World Development Indicators.

Unlike the United States,there is no detailed information on interest groups in the Member States and their lobbying contributions. Following Lee and Swagel (1997), data on sectoral value added[126], measured as a percentage of GDP, were used instead as proxies for each sector's level of political influence. This assumes that larger sectors have more political influence.[127] These indicators were also sourced from the World Development Indicators.[128]

125. Organisation for Economic Co-operation and Development, *STAN Indicators: Collection of Calculation Formula*, 2011, `https://www.oecd.org/sti/ind/47447210.pdf`.
126. This refers to *(i)* agricultural value added, *(ii)* industry value added, *(iii)* services value added, and *(iv)* manufacturing value added.
127. Lee and Swagel, "Trade Barriers and Trade Flows Across Countries and Industries," 378.
128. Lee and Swagel(1997) used industry employment as another proxy for political influence. Due to data constraints, we excluded this variable from the present study.

Political Indicators

Based on the existing literature, political institutions such as electoral rules are considered determinants of trade policy. One debate centers on whether PR systems are more conducive to free trade. As with Mansfield and Busch (1995), Evans (2009), and Rickard (2012), this study includes electoral indicators. Using data from the Database of Political Institutions 2015 (DPI 2015), Member States were classified as adopting either the plurality system[129] or the PR system[130] in their legislative elections. As *Table 4.4* shows, most of the Member States adopt a plurality system. Only Indonesia and Cambodia have legislatures elected by means of a PR system.

Table 4.4: Electoral Rule, 2015[131].

	IDN	KHM	MYS	PHL	SGP	THA	VNM	TOTAL
PR	✓	✓						2
Plurality			✓	✓	✓	✓	✓	5

The form of government, particularly the structure and division of power, affects how societal preferences are reflected in policies. A parliamentary government might find it easier to initiate or amend trade policies. A presidential system, where power is divided between the executive and legislative branches, might be more constrained.[132] Thus, this study also examines the link between form of government and NTM incidence. Based on information from the DPI 2015, Member States are identified as either parliamentary or presidential.

In constructing the DPI 2015, Cruz, Keefer and Scartascini (2016) classified those governments where the legislature designated the president as being parliamentary, except when said legislature lacked the power to recall the president. Where the legislature lacked this power, the government was classified as having an assembly-elected president.[133] Thus, assembly-elected presidents could

129. This refers to winner-take-all/first past the post rules.
130. In this case, a candidate's success hinges on the number of votes received by his party.
131. Data from Cesi Cruz, Philip Keefer, and Carlos Scartascini, *Database of Political Institutions Codebook, 2015 Update (DPI 2015)*, Inter-American Development Bank, `https://publications.iadb.org/document.cfm?id=40094628`.
132. Peter F. Cowhey, "Domestic Institutions and the Credibility of International Commitments: Japan and the United States," *International Organization* 47, no. 2 (1993): 302.
133. Cruz, Keefer, and Scartascini, *Database of Political Institutions Codebook, 2015 Update (DPI 2015)*.

remain in office even in the absence of legislative confidence. Of the Member States, Vietnam has an assembly-elected president. Considering that a term of office independent of legislative will and confidence is a characteristic of presidential systems,[134] Vietnam is classified for the purposes of the present study as a presidential system, along with Indonesia and the Philippines. Cambodia, Malaysia, Singapore, and Thailand have parliamentary governments.

Table 4.5: Form of Government, 2015[135].

	IDN	KHM	MYS	PHL	SGP	THA	VNM	TOTAL
Presidential	✓			✓			✓	3
Parliamentary		✓	✓		✓	✓		4

The variables for electoral rules and form of government were coded as categorical variables. In the case of electoral rules, plurality and PR systems were coded as 1 and 0, respectively. In the case of form of government, presidential and parliamentary governments were coded as 1 and 0, respectively.

4.3.2 Tests of Association

This study aims to determine whether there is a relationship between NTM incidence, as measured by frequency ratios, and a number of economic and political factors characterizing the Member States. First of all, Spearman's correlation analyses were used to determine the association, if any, between NTM incidence and the economic indicators. Secondly, independent samples t-tests were used to analyze whether there were significant differences between the Member States, based on their political characteristics.

Based on scatterplot analyses, the economic indicators exhibited monotonic, but non-linear, trends characterized by outliers vis-á-vis the frequency ratios. Given these data features, Spearman's rho (ρ) correlation coefficients were estimated between the economic indicators and frequency ratios. Spearman's rho (ρ) indicates both the strength and direction of the relationship between the

134. John M. Carey, "Presidential versus Parliamentary Government," chap. 5 in *Handbook of New Institutional Economics*, ed. Claude Ménard and Mary M. Shirley (The Netherlands: Springer, 2005), 92.

135. Data from Cruz, Keefer, and Scartascini, *Database of Political Institutions Codebook, 2015 Update (DPI 2015).*

variables. As a nonparametric measure of rank correlation, it is less sensitive to outliers and works well with non-linear data. In cases where multiple correlations were estimated, *i.e.,* between frequency ratios and trade indicators, the coefficients were tested using the Bonferroni adjusted significance levels.

However, Spearman's correlation requires variables that are measured on either the ordinal or continuous scale. Thus, this method is inappropriate for political variables. Point-biserial correlation is also inappropriate for a number of reasons. Firstly, an analysis of box plots indicated that there were outliers in the groups of political categories for the disaggregated levels[136] of frequency ratios. Secondly, Levene's test of equality of variances showed that there was no homogeneity of variances in any of the groups of political categories. At the country-level, there was homogeneity of variances only among the category of electoral rules, ($p = 0.076$). Finally, Shapiro-Wilk's test assessed that all 3 levels of frequency ratios were not normally distributed for either set of political indicators ($p<0.05$).

Instead of a direct test of association, independent samples t-tests were used for the political variables. The aim was to determine whether the mean frequency ratios between the different political categories, such as between parliamentary and presidential governments, were significantly different. Given the lack of homogeneity in variances, the unequal variance or Welch t-test was adapted.

4.4 Determinants of ASEAN Protection

In recent years, NTMs have become prevalent in the ASEAN region. Certain trends suggest a link between selected economic and political factors on the one hand, and NTM incidence on the other.

This section begins with a general overview of NTM incidence in the region. *Section 4.4.2* describes the results of the correlation analyses and independent samples t-tests. *Section 4.4.3* analyzes and discusses these results within the context of the existing literature's theories and predictions.

136. Country-level frequency ratios had no significant outliers.

4.4.1 Overview of NTM Incidence

NTM incidence can be considered by looking at both the intensity of regulation and the character of regulated goods. By identifying the highly regulated goods, heavily regulated industries are identified. This identification is the necessary first step to take in an analysis of NTM determinants.

Figures 4.1 and *4.2* illustrate the trends in the mean values of the region's frequency ratios from 2000 to 2015. *Figure 4.1* shows the mean values of the country-level frequency ratios. The region's frequency ratios have been steadily rising, up from 0.51 in 2000 to 0.87 in 2015. On average, a little over half of the region's imports were affected by NTMs in 2000. By 2015, however, almost 90% of the region's imports were regulated by at least 1 NTM.

FIGURE 4.1: Mean Frequency Ratios, 2000-2015

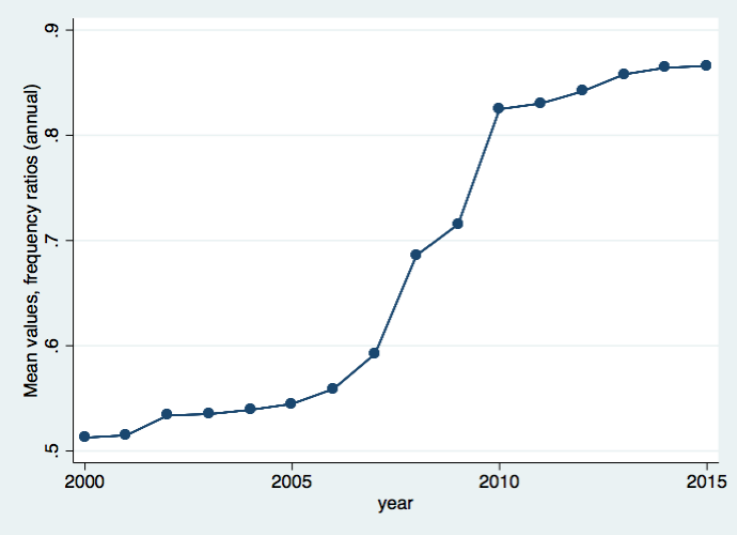
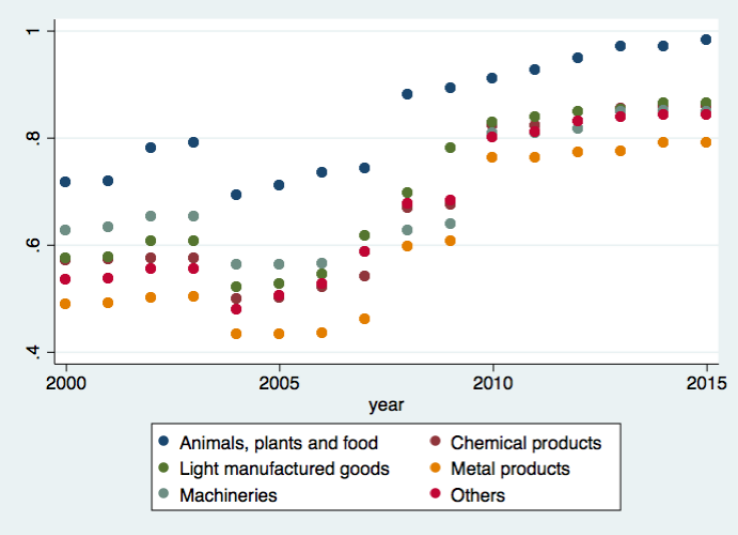


Figure 4.2 shows that animals, plants, and food products have the highest mean frequency ratios among the 6 industry categories. It rose from 0.72 in 2000 to 0.98 in 2015. Metals and metal products have the lowest mean frequency ratios, at 0.79 in 2015.[137]

137. In 2000, the industry with the lowest mean frequency ratios was metals, followed by others, chemicals, light manufactured goods, machineries, and animals, plants, and food. In 2015, metals still had the lowest mean frequency ratios, followed by others, machineries, chemicals, light manufactured goods, and animals, plants, and food.

FIGURE 4.2: Mean Frequency Ratios, 6-Industry Level



4.4.2 Results

Spearman's rank correlation analyses were ran to assess the relationship between frequency ratios and the following:[138]

1. Imports, exports, and IPRs;
2. Agricultural value added, industry value added, and services value added, all expressed as a percentage of total GDP;
3. GDP; and
4. Unemployment rate, expressed as a percentage of total employment.

Independent samples t-tests (Welch test) were used to assess the differences in the frequency ratios among Member States under different:[139]

1. Electoral rules, *i.e.,* either plurality or PR; and
2. Forms of government, *i.e.,* either presidential or parliamentary.

138. For brevity, only notable results are presented in the main discussion. See *Appendix A* for the complete correlation matrices.
139. For brevity, only notable results are presented in the main discussion. See *Appendix B* for the complete results.

Economic Variables

Except for GDP, there were statistically significant findings for the relationship between the economic indicators and frequency ratios.

Trade indicators were generally positively correlated with frequency ratios. This correlation was weak at the country-level, as shown in *Table 4.6*:

Table 4.6: Trade Indicators, Country-Level

	Frequency Ratios	Imports	Exports	IPR
Frequency Ratios	1			
Imports	0.372* (0.000)	1		
Exports	0.292* (0.011)	0.981* (0.000)	1	
IPR	0.243 (0.060)	0.555* (0.000)	0.531* (0.000)	1

[1] Coefficients were tested against the Bonferroni adjusted significance level. Asterisked coefficients are significant.
[2] Observations = 112

Among the 6 industries, the strongest positive correlations between trade indicators and frequency ratios were found in *(i)* animals, plants, and food, and *(ii)* other products. *Tables 4.7* and *4.8* present the correlation coefficients between trade indicators and frequency ratios within those industries.

Tables 4.9 to *4.12* present the correlation coefficients for the product groups with the strongest correlation coefficients. Among such product groups, animals and edible animal products display the strongest degrees of association between frequency ratios and both imports and import penetration. None of the trade indicators registered a statistically significant relationship with frequency ratios for pearls, precious or semi-precious stones.[141]

140. Coefficients were tested against the Bonferroni adjusted significance level. Asterisked coefficients are significant. Observations = 108
141. The correlation coefficients are: imports with $\rho = 0.101$, p = 1; exports with $\rho = 0.049$, p = 1.000; and import penetration with $\rho = 0.089$, p = 1.000.
142. Coefficients were tested against the Bonferroni adjusted significance level. Asterisked coefficients are significant. Observations = 112

Table 4.7: Animals, plants, food[140].

	f	Im	Ex	IPR
f	1			
Im	0.347* (0.001)	1		
Ex	0.110 (1.000)	0.834* (0.000)	1	
IPR	0.396* (0.000)	0.220 (0.134)	0.007 (1.000)	1

Table 4.8: Other products

	f	Im	Ex	IPR
f	1			
Im	0.350* (0.001)	1		
Ex	-0.008 (1.000)	0.818* (0.000)	1	
IPR	0.332* (0.003)	0.567* (0.000)	0.310* (0.007)	1

Table 4.9: Animals, edible animal products[142].

	f	Im	Ex	IPR
f	1			
Im	0.666* (0.000)	1		
Ex	0.094 (1.000)	0.516* (0.000)	1	
IPR	0.420* (0.000)	0.571* (0.000)	0.328* (0.003)	1

Table 4.10: Textiles, apparel, clothing accessories

	f	Im	Ex	IPR
f	1			
Im	0.457* (0.000)	1		
Ex	0.334* (0.002)	0.729* (0.000)	1	
IPR	-0.102 (1.000)	-0.133 (0.970)	0.019 (1.000)	1

Table 4.11: Stone, ceramics, glass

	f	Im	Ex	IPR
f	1			
Im	0.451* (0.000)	1		
Ex	0.179 (0.350)	0.748* (0.000)	1	
IPR	0.375* (0.000)	0.273* (0.022)	-0.078 (1.000)	1

Table 4.12: Vehicles, parts thereof

	f	Im	Ex	IPR
f	1			
Im	0.229 (0.091)	1		
Ex	0.434* (0.000)	0.906* (0.000)	1	
IPR	0.237 (0.072)	0.275* (0.020)	0.138 (0.887)	1

Frequency ratios were generally negatively associated with agricultural and industrial value added. Services value added, on the other hand, were positively associated with frequency ratios. At both country-level and industry-level, the weakest, and the only insignificant, correlations were for agriculture, while the strongest were for industry. *Table 4.13* presents the country-level correlation coefficients between frequency ratios and sectoral value added.

TABLE 4.13: Sectoral Value Added, Country-Level

	Frequency Ratios	Agriculture	Industry	Services
Frequency	1.000			
Agriculture	-0.088	1.000		
	(1.000)			
Industry	-0.524*	-0.113	1.000	
	(0.000)	(1.000)		
Services	0.400*	-0.813*	-0.299*	1.000
	(0.000)	(0.000)	(0.014)	

[1] Coefficients were tested against the Bonferroni adjusted significance level. Asterisked coefficients are significant.
[2] Observations = 102

In general, the correlation coefficients between frequency ratios on the one hand, and industry and services value added, on the other, were statistically significant at product-group level. The following were exceptions:

1. Animals and edible animal products, where there was a moderate negative correlation between agricultural value added and frequency ratios (*Table 4.14*);
2. Plants, vegetables, and fruits, where the correlation between services value added and frequency ratios was statistically insignificant (*Table 4.15*);
3. Textiles, apparel, and clothing accessories, where the relationship between the different sectoral value added and frequency ratios were statistically not significant (*Table 4.16*); and
4. Arms and ammunition, where agricultural value added and frequency ratios were negatively, albeit weakly, correlated (*Table 4.17*).

TABLE 4.14: Animals products[143].

	f	AG	IND	SVCS
f	1			
A	-0.410*	1		
	(0.000)			
I	-0.306*	-0.113	1	
	(0.011)	(1.000)		
S	0.612*	-0.813*	-0.299*	1
	(0.000)	(0.000)	(0.014)	

TABLE 4.15: Plants, vegetables, fruits

	f	AG	IND	SVCS
f	1			
A	-0.064	1		
	(1.000)			
I	-0.467*	-0.113	1	
	(0.000)	(1.000)		
S	0.276	-0.813*	-0.299*	1
	(0.030)	(0.000)	(0.014)	

TABLE 4.16: Textiles, apparel

	f	AG	IND	SVCS
f	1			
A	0.119	1		
	(1.000)			
I	-0.215	-0.113	1	
	(0.183)	(1.000)		
S	0.096	-0.813*	-0.299*	1
	(1.000)	(0.000)	(0.014)	

TABLE 4.17: Arms and ammunition

	f	AG	IND	SVCS
f	1			
A	-0.337*	1		
	(0.005)			
I	-0.379*	-0.093	1	
	(0.001)	(1.000)		
S	0.396*	-0.806*	-0.308*	1
	(0.000)	(0.000)	(0.014)	

As previously mentioned, the relationship between frequency ratios and GDP was not statistically significant. This indicates that the hypothesis of lack of association between these variables cannot be rejected. At the country-level, there was a weak positive correlation between NTM incidence and GDP, $\rho = 0.033$, $p = 0.733$. At the product group level, there were statistically significant results in only 3 instances:

143. Coefficients were tested against the Bonferroni adjusted significance level. Asterisked coefficients are significant. Observations = 102.

1. A weak positive correlation for animals and edible animal products, ρ = 0.192, p = 0.042;
2. A weak positive correlation for textiles, apparel and clothing accessories, ρ = 0.309, p = 0.001; and
3. A negative correlation for art works, ρ = -0.420, p < 0.005.

The results for unemployment were statistically significant, yet contrary to the predicted outcome. Unemployment was negatively correlated with frequency ratios. This correlation was moderately strong at the country-level, ρ = -0.430, p < 0.005. This negative relation became stronger at industry level, notably for *(i)* animals, plants, and food (ρ = -0.587, p < 0.005), and *(ii)* chemicals and chemical products (ρ = -0.525, p < 0.005). 3 out of the 4 product groups under animals, plants, and food displayed strong negative correlations as well, namely:

1. Plants, vegetables and fruits, ρ = -0.528, p < 0.005;
2. Animal or vegetable fats and oils, ρ = -0.552, p < 0.005; and
3. Edible preparations, beverages and tobacco, ρ = -0.512, p < 0.005.

There were also notable negative degrees of correlation for wood and wood products (ρ = -0.548, p < 0.005) and arms and ammunition (ρ = -0.543, p<0.005). Pearls, precious or semi-precious stones was the sole product group for which there was no statistically significant relation between unemployment and frequency ratios, ρ = -0.157, p = 0.108.

Independent Samples t-test

Figure 4.3 illustrates the distribution of frequency ratios within the different categories of electoral rules, while *Table 4.18* provides the relevant descriptive statistics. Member States under the plurality system appear to have higher frequency ratios than those under PR. The median is noticeably higher in plurality Member States (0.94 vs 0.41). However, frequency ratios in PR systems display less variability.

The results of the independent samples t-test for electoral rules at country-level are presented in *Table 4.19*. The mean frequency ratios in PR countries were

FIGURE 4.3: Frequency Ratios and Electoral Rules

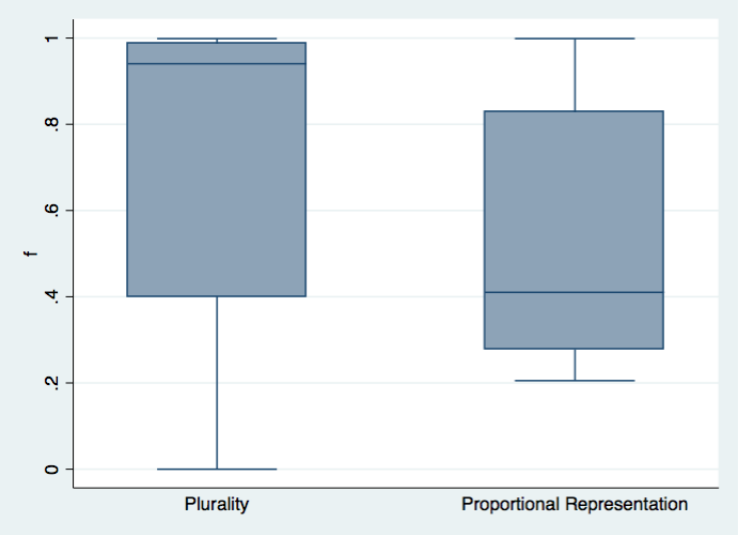


TABLE 4.18: Electoral Rules: Summary Statistics

	Plurality	PR
Mean	0.73	0.53
Min.	0.00	0.21
Q1	0.40	0.28
Median	0.94	0.41
Q3	0.99	0.83
Max	1.00	1.00

lower (0.529 ± 0.297) than they were in plurality countries (0.735 ± 0.346). This was a statistically significant difference of -0.206 (95% confidence interval of -0.336 to -0.076), t(66.155) = -3.155, p = 0.0002.

Likewise, frequency ratios were statistically significantly higher in plurality systems at both the industry and product group levels, except where this difference was not significant:

1. At industry level, for light manufactured goods; and
2. At product group level, for *(i)* natural or cultured pearls, precious or semi-precious stones, and *(ii)* minerals and mineral products.

The textiles, apparel, and clothing accessories product group is another notable exception. In this group's case, frequency ratios in PR countries were

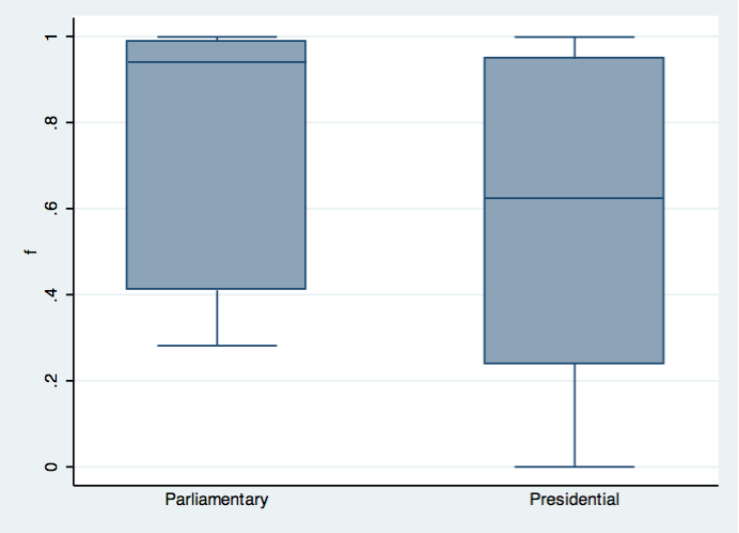
higher (0.761 ± 0.385) than in plurality countries (0.689 ± 0.411), a statistically not significant difference of 0.071 (95% confidence interval of -0.093 to 0.236), t(60.827) = 0.871, p = 0.39.

TABLE 4.19: Two-sample t-test with unequal variances: Electoral Rules

Group	Obs	Mean	Std. Err.	Std. Dev.	[95% Conf.	Interval]
PR	32	.529	.052	.297	.422	.636
Plurality	80	.735	.039	.346	.658	.812
combined	112	.676	.033	.344	.612	.741
diff		-.206	.065		-.336	-.076
Ha : diff != 0				t = -3.155		
Pr(|T| > |t|)=0.002				Satterthwaite's deg. of freedom = 66.155		

Figure 4.4 shows the distribution of frequency ratios within Member States in the cases of presidential and parliamentary forms of government. *Table 4.20* provides the descriptive statistics. While parliamentary governments have a higher median frequency ratio (0.94 vs 0.62), frequency ratios in presidential governments display greater variability.

FIGURE 4.4: Frequency Ratios and Form of Government



The results of the independent samples t-test for forms of government, at the country-level, are presented in *Table 4.21*. The mean frequency ratios for parliamentary states were higher (0.747 ± 0.298) than those in presidential states (0.582 ± 0.381). This represents a significant difference of 0.165 (95% confidence interval of 0.033 to 0.297), t(86.525) = 2.490, p = 0.015.

TABLE 4.20: Form of Government: Summary Statistics

	Parliamentary	Presidential
Mean	0.75	0.58
Min	0.28	0.00
Q1	0.41	0.24
Median	0.94	0.62
Q3	0.99	0.95
Max	1.00	1.00

The statistically significant result that frequency ratios in parliamentary states were higher than in presidential states was also obtained at the industry and product group levels, except in the case of the following categories, which produced statistically not significant outcomes:

1. At the industry level for *(i)* metals and metal products, and *(ii)* other products; and
2. At the product group level for *(i)* plastics and rubber; *(ii)* pulp, paper products, and printing industry products; *(iii)* footwear, headgear, umbrellas, and sticks; *(iv)* stone, plaster, cement, ceramics, and glassware; *(v)* pearls, precious or semi-precious stones; *(vi)* base metals; and *(vii)* mineral products.

The opposite result, namely that frequency ratios were higher in presidential systems than in parliamentary ones, was obtained in 2 cases:

1. For the light manufactured goods industry, frequency ratios were higher in presidential states (0.752 ± 0.276) than in parliamentary states (0.665 ± 0.402), a non-statistically significant difference of -0.087 (95% confidence interval of -0.217 to 0.042), t(105.999) = -1.340, p = 0.183.
2. For the textiles, apparel, and clothing accessories product group, frequency ratios in presidential states were higher (0.783 ± 0.369) than in parliamentary states (0.654 ± 0.422), a non-statistically significant difference of -0.129 (95% confidence interval of -0.277 to 0.020), t(107.363) = -1.720, p = 0.088.

TABLE 4.21: Two-sample t-test with unequal variances: Form of Government

Group	Obs	Mean	Std. Err.	Std. Dev.	[95% Conf. Interval]	
Parliamentary	64	.747	.037	.298	.673	.821
Presidential	48	.582	.055	.381	.471	.692
combined	112	.676	.033	.344	.612	.741
diff		.165	.066		.033	.297
Ha : diff != 0				t = 2.490		
Pr($\|T\| > \|t\|$)=0.015				Satterthwaite's deg. of freedom = 86.525		

Summary of Results

For the Spearman's correlation analyses, only GDP registered results that were not statistically significant for all the frequency ratio levels. In general, there was a weak positive correlation between GDP and frequency ratios.

The general trends between frequency ratios and other economic indicators are:

1. A positive relation with trade flows, as measured by imports, exports, and the import penetration ratio;
2. A negative relation with the agricultural and industrial sectors;
3. A positive relation with the services sector; and
4. A negative relation with unemployment.

Based on independent samples t-tests, frequency ratios are higher in Member States under *(i)* plurality electoral rules, and *(ii)* parliamentary systems.

4.4.3 Discussion

An examination of the correlation results for trade indicators and sectoral value added can generate a number of insights. At this point, the endogeneity of protection should be emphasized. While rising imports can lead to demand for protection, likewise protectionism can result in reduced imports.[144] This feedback mechanism may explain the weak positive correlation between imports and import penetration on the one hand, and frequency ratios on the other. While correlation does not establish causality, the moderately strong correlation

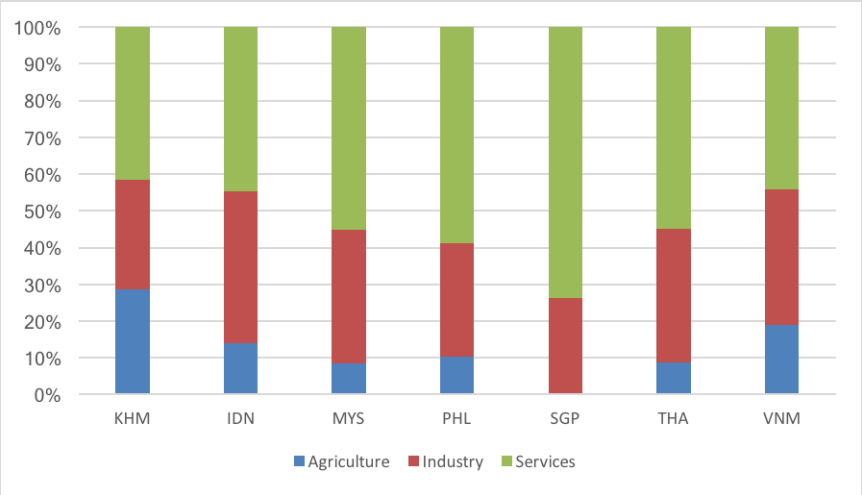
144. Trefler, "Trade Liberalization and the Theory of Endogenous Protection," 143.

in the case of animals and edible animal products, which is one of the most regulated product groups, hints at a strong positive link between imports and NTM incidence.

The political economy literature predicts that protection will be higher for those industries with low or inelastic import demand, where deadweight costs are minimized.[145] Additionally, larger sectors, *i.e.,* those whose domestic output is greater than import demand, have more to gain from protection. With protectionist policies, large sectors can increase their profit from the domestic market.[146] Larger industries also tend to have more political power.[147] In theory, governments would prefer to deviate from the free trade norm to favor large industries with low import demand elasticity. As such, there is an expected positive correlation between sectoral value added, which is also used as a proxy for political influence, and frequency ratios.

Figure 4.5 illustrates the value added of each sector for each Member State for 2015. The services sector is the largest in the region, followed by industry.[148]

FIGURE 4.5: Sectoral Value Added, 2015[149].



145. See Findlay and Wellisz, "Endogenous Tariffs, the Political Economy of Trade Restrictions, and Welfare"; Hillman, "Declining Industries and Political-Support Protectionist Motives"; Grossman and Helpman, "Protection for Sale."
146. Grossman and Helpman, "Protection for Sale," 842.
147. Lee and Swagel, "Trade Barriers and Trade Flows Across Countries and Industries," 378.
148. The services sector has grown during the recent decades. For more details, kindly refer to *Tables 3.2* and *3.3* in *Chapter 3*.
149. Data from World Bank, "World Development Indicators."

As noted in *Table 4.13*, services value added is indeed positively associated with NTM incidence. However, the expected positive correlation did not materialize in the case of industry. Nevertheless, it can be argued that this result was to be expected given the significance of trans-boundary production network trade.

Since the 1990s, the composition of traded goods in ASEAN has shifted from primary and natural-resource intensive goods to manufactures such as electronics, machineries, and transport equipment.[150] From 1992/1993 to 2005/2006, the region's exports of parts and components increased from 29% to 44% of total manufacturing exports.[151] Today, trade in parts and component, as a share of GDP, *"is among the highest in the world in the ASEAN."*[152] Cambodia, Malaysia, Singapore, Thailand and Vietnam are all mainly importers of intermediate goods which are subsequently used for exports of both intermediate and final goods. Indonesia and the Philippines, on the other hand, are exporters of domestic goods as inputs for transnational production networks.[153] *Table 4.22* presents the extent of trade in intermediate goods,[154] expressed as a percentage of total merchandise trade, among the Member States.

TABLE 4.22: Trade in Intermediates, 2014 (% Share, Total Merchandise Trade)[155].

	Exports	Imports
Cambodia (2013)	31.5	70.4
Indonesia	66.1	70.0
Malaysia	69.3	70.8
Philippines	29.1	67.1
Singapore	65.9	68.5
Thailand	51.5	67.1
Vietnam	31.4	74.9

150. Athukorala, "Production Networks and Trade Patterns in East Asia," 5; Yue and Plummer, "Introduction," 4.
151. Athukorala and Menon, "Global Production Sharing, Trade Patterns, and Determinants of Trade Flows in East Asia," 9.
152. Asian Development Bank, *Emerging Asian Regionalism*, 64.
153. World Trade Organization, "Trade in Value-Added and Global Value Chains: Statistical Profiles."
154. Intermediate goods refer to products which are used as inputs in production.
155. Data from World Trade Organization, "Trade in Value-Added and Global Value Chains: Statistical Profiles."

Industrial sectors, such as mining and manufacturing, are among the top importers of intermediate goods.[156] These intermediate goods make up the bulk of merchandise trade.[157] In this context, the assumption that profit-maximizing large sectors use their political power to secure protection is inapplicable. Instead, it is more rational for the industrial sector to lobby for lower prices of their imported inputs. Additionally, the growth of this sector depends on the free flow of goods. Policies which hinder and distort trade have the potential to raise production costs. Thus, the negative correlation between industrial value added and frequency ratios can reflect either one or both of the following:

1. As trans-boundary production network trade gains in prominence, industrial firms demand lower barriers to trade, which translates to a lower NTM incidence.

2. Rising NTM incidence can increase the costs of trade, and ultimately the industrial sector's production costs.

Services is the region's largest sector in terms of both value added and employment.[158] Services are generally produced and consumed domestically, and the imports of such represent just a fraction of merchandise imports, as shown in *Table 4.23*. This suggests that the services sector is politically important[159] and well-placed to secure protection.

TABLE 4.23: Merchandise and Commercial Services Imports, 2014 (In million US$)[160].

	Merchandise	Services
Cambodia	13,500	1,993
Indonesia	178,179	33,076
Malaysia	208,864	44,715
Philippines	67,546	19,684
Singapore	366,247	141,323
Thailand	227,952	52,888
Vietnam	149,261	14,305

156. World Trade Organization, "Trade in Value-Added and Global Value Chains: Statistical Profiles."
157. See *Table 4.23*.
158. See *Table 3.4* in *Chapter 3* for sectoral employment data.
159. Lee and Swagel, "Trade Barriers and Trade Flows Across Countries and Industries," 378.

It is interesting that the strongest association between services value added and NTM incidence was in the animals, plants, and food industry, specifically for the animals and edible animals product group. This suggests that the growth of the services sector is associated with an increase in NTM incidence in the case of agricultural products. As noted in *Figure 4.2*, the animals, plants and food industry has the highest mean frequency ratios in the region. However, the agricultural sector's economic importance has diminished compared to services in terms of both value added[161] and employment[162]. Between these 2 sectors, one would then expect services-related imports to have a higher incidence of NTMs. However, the decline in agricultural value added has been accompanied by a rise in NTM incidence in agricultural products, notably in the animals and edible animals product group. An examination of agricultural import trends may be enlightening here.

While regional trends suggest the diminished economic and political importance of the agricultural sector, agricultural imports make up only a small fraction of Member States' total imports. *Table 4.24* shows agricultural imports as a percentage share of Member States' total merchandise imports in recent years. The low demand for agricultural imports translates into lower deadweight losses and social costs arising from distortionary trade policies. The link between low import demand and NTM incidence is supported by the positive correlation between frequency ratios and imports for animals, plants and food. As a declining industry, agriculture is a *"natural candidate"*[163] for protection. Increasing imports may create a demand for protection, which is not politically costly for politicians to grant.

In other words, the shift of import demand from primary agricultural to other commodities makes any potential costs of protectionist policies less burdensome to both the politically influential industrial producers and the general

160. Data from World Trade Organization, *Trade Profiles 2015*, 2015, `https://www.wto.org/english/res_e/booksp_e/trade_profiles15_e.pdf`.
161. See *Table 4.22*.
162. See *Table 3.4* in *Chapter 3*.
163. Hillman, *The Political Economy of Protection*, 26.
164. Data from World Trade Organization, *Trade Profiles 2006*, 2006, `https://www.wto.org/english/res_e/booksp_e/anrep_e/trade_profiles06_e.pdf`; World Trade Organization, *Trade Profiles 2010*, 2010, `https://www.wto.org/english/res_e/booksp_e/anrep_e/trade_profiles10_e.pdf`; World Trade Organization, *Trade Profiles 2015*.

TABLE 4.24: Agricultural Imports (as a % of Total Imports)[164].

	2006	2010	2015
Cambodia	6.8	6.6	5
Indonesia	11.5	12.4	12.5
Malaysia	6.3	9.9	9.7
Philippines	8.1	12.1	12.8
Singapore	3.2	3.6	4
Thailand	6	7	7.1
Vietnam	7.8	13.2	11.5

consumers.[165] The services sector, which employs a greater portion of the population whose incomes are no longer dependent on agricultural prices, is less likely to offer any effective opposition.[166] Thus, NTM incidence is highest in agriculture, the seemingly least influential sector.

These structural changes may also shed light on the correlation between frequency ratios and unemployment rate, which is contrary to expectations. The predicted positive relation between protection and unemployment is based on the assumed negative impact of trade on the domestic labor market. Specifically, imports and domestic products are presumed to be direct competitors. As a result, *"workers who are displaced by imports will find it progressively more difficult to obtain alternative employment, and when they do, downward pressure will be placed on their wages."*[167]

The wholesale applicability of this assumption to ASEAN is questionable, given the prominence of trans-boundary production network trade in the region. Trade in intermediate products is not damaging to domestic production. On the contrary, it is a vital part of the domestic production process. As such, there is less danger of the displacement of domestic labor as a result of rising trade flows. Consequently, there is less demand for protection as a result of unemployment.

165. Swinnen, "The Political Economy of Agricultural and Food Policies," 60; Anderson, "Economic Growth, Comparative Advantage, and Agricultural Trade of Pacific Rim Countries," 15.
166. Anderson, "Economic Growth, Comparative Advantage, and Agricultural Trade of Pacific Rim Countries," 14.
167. Mansfield and Busch, "The Political Economy of Nontariff Barriers," 725-726.

The negative correlation between unemployment and NTM incidence is therefore not surprising within this context. Given transboundary production network trade, the labor force is more interested in trade liberalization, than in protection. Trade barriers, which include NTMs, have the potential of to raise trade costs. Displaced workers have an interest in stimulating domestic production, notably in labor-intensive sectors involved in transboundary networks, by lobbying for lower trade costs.

The region's labor market trends support this interpretation. Regional unemployment rates have declined in recent years, from 4.7% in 2010 to 4.2% in 2013.[168] While it is still among the main sectors, agriculture's employment share has fallen. The decline in agriculture's importance in terms of labor has been accompanied by rising employment in manufacturing and in both market[169] and non-market[170] services.[171] *Figure 4.6* illustrates the changing structure of regional employment in the different sectors.

The fall in unemployment together with increased employment in the services and manufacturing sectors coincided with increased NTMs on agricultural products. The decline in agricultural employment makes NTMs on agricultural products less costly. As real incomes are less affected by food prices, there is less opposition to potentially protectionist agricultural policies and regulations. The declining absolute labor share of agriculture also means that the per unit cost of protection is also declining. There might even be public support for policies which benefit farmers and fishermen.[173] Thus, the aforesaid employment trends may facilitate the imposition of NTMs on agricultural products.

Taken together, these labor sector trends show that within the context of a globally integrated economy, the negative correlation between unemployment rates and NTM incidence is logical and unsurprising.

168. Asian Development Bank and International Labour Organization, *ASEAN Community 2015: Managing integration for better jobs and shared prosperity* (ILO / ADB, 2014), 9.
169. This include trade, transportation, accommodation and food, and business and administrative services.
170. This includes public administration, community, social, and other services.
171. International Labour Organization, *ILOSTAT*, `http://www.ilo.org/ilostat`.
172. Data from International Labour Organization, "ILOSTAT: Employment by sex and economic activity," `http://www.ilo.org/ilostat`.
173. Anderson, "Economic Growth, Structural Change and the Political Economy of Protection," 15-16.

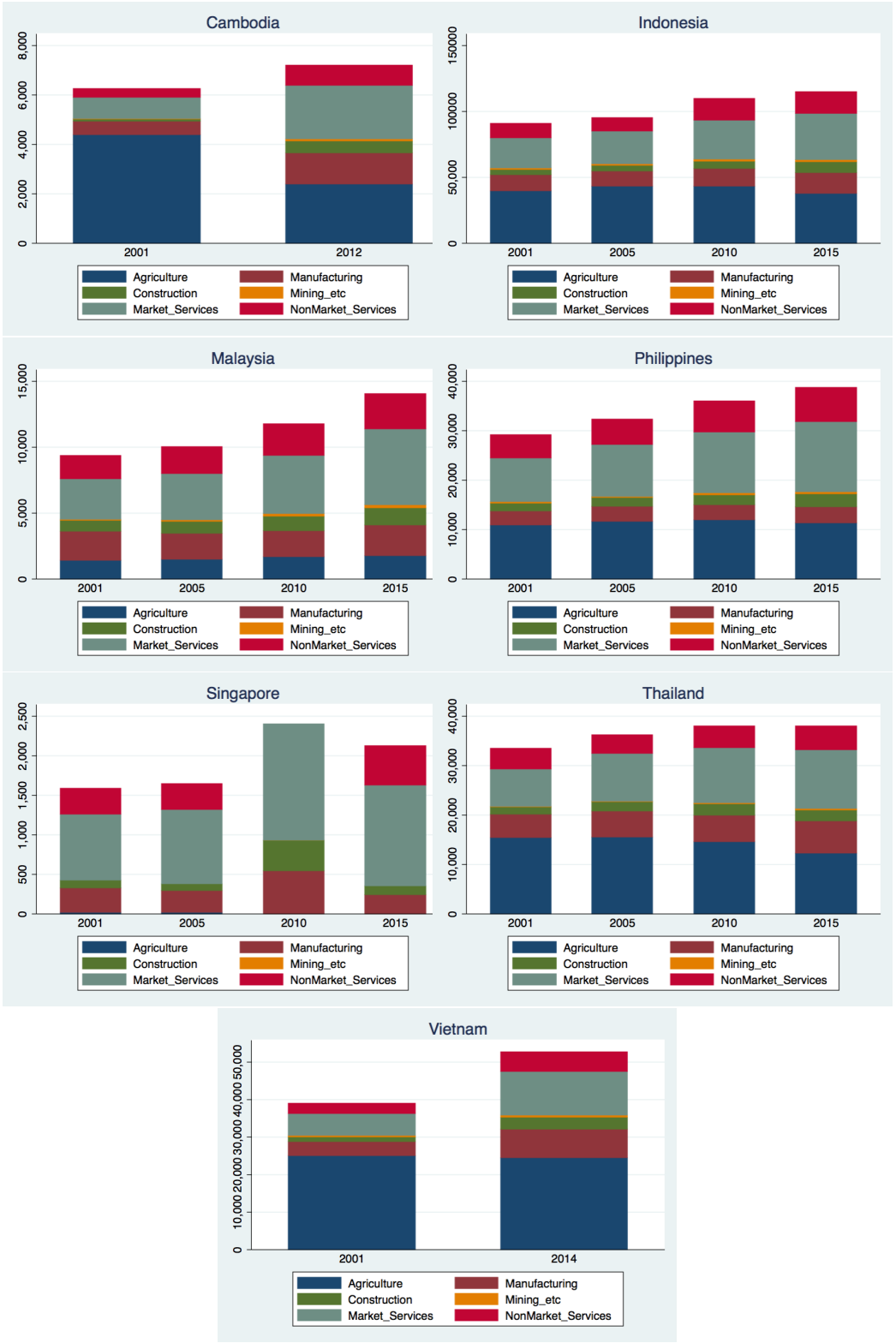


FIGURE 4.6: Employment by Economic Activity (In thousands)[172].

The correlation results for GDP and frequency ratios were consistent with theoretical predictions. As developing economies, the Member States have relatively little market power compared with their main trading partners, *i.e.,* the United States, China, Japan, and the European Union.[174] This makes Member States vulnerable to retaliatory acts from their larger trading partners. As such, the use of trade policy as an instrument of terms-of-trade manipulation is not a viable strategy. Thus, NTM incidence in the region has no statistically significant relationship with the economic size of the Member States.

The results from the independent samples t-test on electoral rules are consistent with Saksena and Anderson (2008).[175] Plurality Member States have higher frequency ratios than proportional representation Member States. As plurality States are also characterized by smaller electoral districts, electoral success hinges on developments at district, rather than national, level. This suggests that plurality Member States are less insulated from, and more responsive to, their constituencies' demands for protection. Thus, politicians have an incentive to cater to specific voters, *i.e.,* industries, within their constituencies, by promising and enacting protectionist policies for example, such as those in favor of the agricultural sector.

The nature of NTMs may also explain why plurality systems are associated with higher frequency ratios. Plurality systems are expected to incentivize good behavior on the part of politicians. Thus, plurality systems should coincide with lower frequency ratios. However, NTMs are inherently opaque and complex. It is difficult to identify and examine the effects of all the current NTMs within a given country. The information costs which voters would need to bear, in order to become fully informed on this issue, are too burdensome.[176] As such, NTMs would ordinarily not be salient to the ordinary voter. As a result, elections do not provide sufficient or effective incentives for good behavior among politicians.

As predicted by the separation of powers argument, parliamentary Member States have higher frequency ratios than presidential States. Unlike presidential systems, parliamentary governments are less accountable to the electorate.

174. ASEAN Secretariat, *ASEAN Yearbook on International Merchandise Trade in Goods 2015*, 2016, 23-24, `http://www.aseanstats.org/wp-content/uploads/2016/11/ASEAN-IMTS-2015_hires-1.pdf`.

175. Saksena and Anderson, "Explaining Variation in the Use of NTBs in Developed Countries"; Rickard, "A Non-Tariff Protectionist Bias in Majoritarian Politics"; Evans, "A Protectionist Bias in Majoritarian Politics."

176. See Olson, *The Logic of Collective Action.*

Legislators, by virtue of the greater concentration of power in the parliament, are also more capable of entering into collusive agreements. Notably, 3 out of the 4 parliamentary Member States (Malaysia, Singapore and Thailand) elect members of their lower houses on the basis of plurality rules.[177] The lower electoral accountability of parliamentary systems is coupled with an incentive for politicians to cater to narrow economic interests. The parliamentary system enables these legislators to pursue policies and programs which benefit such economic interests. Thus, these political institutions potentially make the governments more responsive to, and capable of meeting, industries' demands for protection.

Several insights can be gleaned from these results. Contrary to the predicted outcome, a sector's economic and political importance is not always positively linked with NTM incidence. This is reflected in the negative correlation between industrial value added and frequency ratios. Industrial sectors, given their involvement in transboundary production network trade, are more interested in lower trade costs. Consequently, labor is also more interested in lowering trade costs, as this stimulates the growth of labor-intensive industries which are part of production networks. Thus, industry's growth is linked with falling, rather than rising, frequency ratios.

The correlation results also support the notion that declining sectors do tend to receive greater protection. The rising incidence of NTMs on agricultural products noticeably coincided with the decline of the agricultural sector in terms of both value added and employment. As a declining industry, agriculture is a *"natural candidate for protection"*.[178] Thus, the underlying socioeconomic context does matter, as this shapes preferences either for, or against, free trade. In this specific case, the agricultural sector retains a preference for protection. The structural changes seen in recent decades, namely the growth of the services sector and the transformation of the labor markets, has effectively reduced the social and political costs of protection for agriculture.

The region's political institutions incentivize politicians to respond and cater to these preferences. The results are in line with the theories that plurality

177. Cruz, Keefer, and Scartascini, *Database of Political Institutions Codebook, 2015 Update (DPI 2015)*.
178. Hillman, *The Political Economy of Protection*, 26.

electoral rules and parliamentary governments lead to higher levels of NTM incidence. In ASEAN Member States, electoral success is based on the legislators' ability to cater to narrow, district-specific interests. Parliaments, which enjoy a large amount of power and discretion, are likewise better able to collude with each other to enact their preferred policies and legislation. In other words, *(i)* the socioeconomic context results in preferences for certain types of policy, and *(ii)* political institutions determine how well these preferences are reflected in laws and policies.

4.5 Summary and Concluding Remarks

This chapter aimed to determine whether there is a link between political and economic factors on the one hand, and NTM incidence in ASEAN Member States on the other. In general, frequency ratios have been positively related to trade flows and the growth of the services sector. It has also been negatively related to unemployment and the value added of the agricultural and industrial sectors. Member States with plurality electoral systems and parliamentary governments have also displayed higher frequency ratios than PR systems and presidential governments have.

These results suggest that economic and political factors do impact Member States' trade policy. This implies that regional-level commitments designed to address NTMs might be insufficient and ineffective, if these underlying domestic factors remain unaddressed. Thus, a re-examination of the form and content of the region's NTM-related commitments could be in order.

Due to limited data, this study was restricted to an analysis of correlations between NTM incidence on the one hand, and economic and political variables on the other. An investigation of the causal links between these variables, including an examination of the direction of causality, would shed even more light on the policy-making process. This study was further limited by its use of data on sectoral value added as proxies for political influence. An in-depth examination of sectoral characteristics (such as market concentration, number of firms per industry, and geographic distribution of firms) and lobbying activities vis-á-vis NTM incidence may provide greater insights into the link between a sector's political power andthe question of protection. A more fine-toothed

classification of Member States, made on the basis of political characteristics (such as constituency, district sizes, and types of presidential and parliamentary systems) may likewise yield additional beneficial insights. Unfortunately, these economic and political data from the ASEAN region are still lacking.

5 Conclusion

This thesis has focused on the incidence of non-tariff measures (NTMs) in the Association of Southeast Asian Nations (ASEAN). The persistence of NTMs in the Member States, despite their legal[1] commitments to reduce NTMs and eliminate non-tariff barriers (NTBs), has been analyzed within a law and economics framework. The aim of the thesis is to contribute to the literature on both NTMs and ASEAN policy making.

This concluding chapter summarizes the findings and insights of this thesis (*Section 5.1)*, and discusses the possible implications for ASEAN policy making *(Section 5.2)*. As this research has merely scratched the surface of this complex issue, possible directions for future research are also discussed *(Section 5.3)*.

5.1 Observations and Findings

This thesis mainly focuses on the persistence and rising incidence of NTMs in ASEAN in spite of the presence of various international law instruments mandating their reduction. As such, *Chapter 2* begins with an analysis of the issues on compliance with, and effectiveness of, these legal instruments.

International trading systems can be seen as multilateral prisoners' dilemmas. While the highest payoffs can be achieved through free trade, States retain an incentive to defect. Defection, which may come in the form of tariffs and protectionist measures, allows States to gain at the expense of their trading partners. This dilemma is further complicated by the nature of NTMs. The broad scope of NTMs makes it difficult to identify and classify these instruments. The fact that NTMs may have legitimate underlying purposes[2] may also obscure their

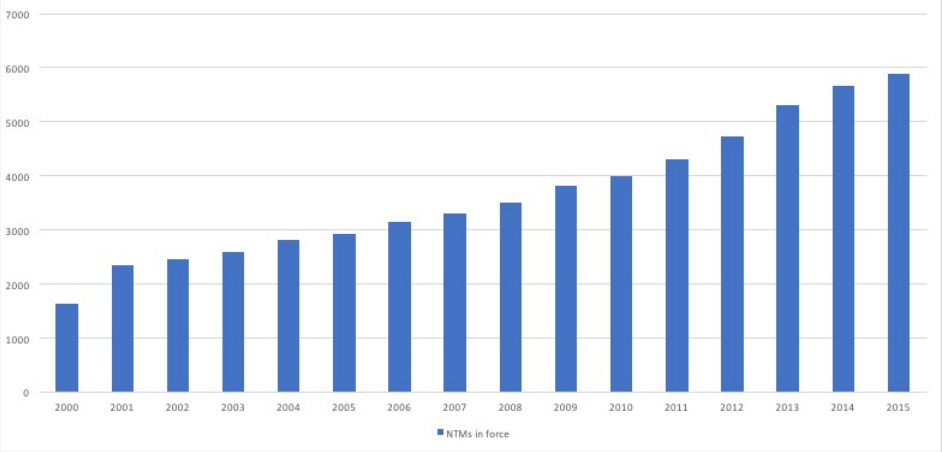
1. Both treaty and soft law.
2. For example, NTMs may come in the form of health and environmental regulations.

adverse trade effects. These qualities may facilitate both willful and inadvertent acts of defection.

The compliance literature suggests that international law can alleviate this dilemma by encouraging cooperation. Instruments such as treaties and soft law commitments can clarify any ambiguities by clearly distinguishing acts of cooperation from acts of defection. Enforcement regimes can also render continued cooperation more profitable than defection, thus offering States an incentive to comply. For example, costly sanctions and penalties may dissipate any short term gains from defection.

However, the data suggests that ASEAN's trade-related soft law and treaty commitments are largely ineffective at reducing the number of NTMs. In fact, the number of NTMs has steadily increased during recent years, as shown in *Figure 5.1*.

FIGURE 5.1: NTMs in Force in ASEAN, 2000-2015[3].



Chapter 2 shows that the ASEAN trade regime has provided insufficient incentives for compliance. Firstly, the instruments in question have failed to distinguish acts of cooperation from acts of defection. The ASEAN Trade in Goods Agreement (ATIGA), ASEAN Economic Community (AEC) Blueprint, and AEC Blueprint 2025 were written in general and vague language, leaving the exact nature and details of the Member States' obligations unclear. For example, NTMs are permitted only insofar as these do not create *"unnecessary obstacles in trade"*[4]. The specific measures needed to identify and address these

3. Adapted from Ing et al., "Non-Tariff Measures in ASEAN: A Simple Proposal," 22.
4. Article 40(2), *ASEAN Trade in Goods Agreement*.

unnecessary obstacles have been left undefined. Secondly, the Member States have been granted a wide scope of discretion on how and when they are to comply with these obligations. In both ATIGA and the AEC Blueprint 2025, ASEAN merely recognizes the different approaches that can be used to address NTMs, such as standards harmonization and mutual recognition agreements. There are, however, no guidelines or schedules for the enforcement of these approaches.

These weaknesses of the ASEAN trade regime has further undermined the effectiveness of other compliance mechanisms, namely reputation, retaliation and reciprocity. While the breach of clearly defined obligations can result in reputational costs,[5] these costs are lessened when there is doubt as to what States are bound to do. In the ASEAN context, the ambiguous, vague language of said trade instruments has created uncertainty over the nature and content of the Member States' obligations. It is inherently difficult to pinpoint clear and intentional instances of breach. As a result, the effectiveness of reputation as an incentive for compliance is impaired.

Retaliation is also ineffective due to the region's weak enforcement systems. They do not even provide for penalties or sanctions in the event of Member States' noncompliance with their obligations. The region's preference for diplomatic, rather than rules-based, processes also casts doubt over the persuasiveness of enforcement and settlement systems. Thus, these systems lack sufficient coercive power.

The threat of reciprocal defections is likewise not credible. This undermines the region's economic integration agenda. The "ASEAN Way" of resolution through flexibility and consensus further allows dissenting Member States to dilute the obligatory pull of commitments. This renders any basis for reciprocal defections futile. It is also doubtful whether reciprocity is a viable option for the Member States. Due to the primacy of sovereignty in ASEAN, Member States take great pains not to interfere in each others' domestic affairs. Any threat of reciprocal action may be construed as an infringement of sovereignty. As such, any resort to reciprocity becomes unlikely.

5. For instance, a defecting State becoming less credible in the eyes of other States. Thus, the latter are less inclined to enter into future agreements with the former.

In light of these considerations, *Chapter 2* concludes that the language used in drafting the legal instruments has not only created considerable uncertainty and ambiguity, which has facilitated noncompliance with the NTM-related obligations, but it has also impaired the effectiveness of other compliance mechanisms.

Notably, the persistence of NTMs has coincided with the rise of industry, particularly production networks, together with efforts at deeper integration. While the region's economic transformation has created a demand for more liberal trade policies, such as the endeavor to establish the AEC, it has also been accompanied by a rise in NTMs among Member States. Based on this observation, *Chapter 3* examines the persistence of NTMs within the context of the region's structural changes.

Since the 1980s, the emergence of production networks and the growth of intra-regional trade in manufactures and intermediate goods has been facilitated by the Member States' and ASEAN's outward-oriented policies. For example, the ASEAN Free Trade Area (AFTA) and its related initiatives has provided for preferential tariffs in favor of ASEAN goods, and encouraged the establishment of regionally integrated production networks. Currently, ASEAN's share of trade in parts and components is among the highest in the world.[6] The Member States' trade in manufactures has also intensified together with their increased participation in production networks. However, as industry's economic importance in the region has grown, that of agriculture has declined in terms of both value added and employment. These structural changes have also coincided with the rising incidence of NTMs.

The increased adoption of NTMs may be due to an increased regulatory demand, as *"trade liberalization leads to import-quality heterogeneity which itself causes regulatory controls."*[7] For example, quality measures[8] may address information asymmetries by ensuring that imports comply with generally accepted international standards. Otherwise, these products would not have been allowed to enter the importing State's domestic market. Consequently, quality measures potentially *(i)* ensure that intermediate and final goods meet the preferences of the ultimate consumers, and *(ii)* enable producers to signal the quality of their products to their buyers.

6. Asian Development Bank, *Emerging Asian Regionalism*, 64.

7. Ing et al., "Non-Tariff Measures in ASEAN: A Simple Proposal," 23.

8. These are NTMs which impose standards and requirements on either the production process or product features.

This seems to be the case of Brunei Darussalam, Malaysia and Singapore. There is a high incidence of quality measures[9] regarding agricultural and food products. A majority of the NTMs in Brunei Darussalam and Malaysia have also been issued by health ministries. It can be assumed that health ministries issued these NTMs in accordance with their mandate, *i.e.,* to promote the public health. As such, it is not unlikely that these NTMs ensure that imports meet certain minimum quality standards. Furthermore, some of the most regulated goods in Singapore[10] and Malaysia[11] are used in production network trade. NTMs in this case could be operating as a signal of product quality. Production network-related trade in these goods in these Member States has remained strong, despite the high incidence of NTMs.

Alternatively, rising NTM incidence may also be accounted for on protectionist grounds. On the one hand, structural changes may have created a preference for trade liberalization in certain sectors, such as those involved in intra-regional production networks. On the other hand, structural changes may have incentivized the declining agricultural sector to lobby for beneficial regulation. Indeed, as a result of the region's structural changes, agriculture became a declining industry and thus a *"natural candidate"*[12] for protection.

A number of factors indicate that political economy motives may be at play in the cases of Cambodia, Indonesia, the Philippines, Thailand, and Vietnam. Agricultural products, including these Member States' main crops, are among the most highly-regulated goods. In addition to quality measures, these goods are also subject to export-related,[13] price control and quantity measures. There are also a great number of NTMs affecting goods involved in production networks, such as machineries[14], chemicals, and light manufactures[15]. As in the cases of Singapore and Malaysia, production network-related trade in these goods has remained strong despite the considerable number of NTMs.

9. Specifically, technical barriers to trade (TBTs) and sanitary and phytosanitary (SPS) measures. SPS measures aim to protect against the spread of harmful contaminants and diseases. TBTs refer to any measure which imposes technical and quality requirements.
10. Machineries and electrical products.
11. Foodstuffs and chemical products.
12. Hillman, *The Political Economy of Protection*, 26.
13. This includes, but is not limited to, measures such as quotas, export prohibitions, licensing requirements, and quantitative restrictions.
14. This includes transport products, computers, and electronics.
15. Such as clothing and textiles.

Unlike in the case of production network-related goods, NTMs do not appear to promote trade in regulated agricultural goods. Agricultural imports constitute but a small fraction of these Member States' total imports. Additionally, most of the NTMs in these Member States were issued by agriculture, industry, and trade ministries. Unlike health ministry NTMs, these issuances do not have the underlying presumption of promoting public health. Studies have also noted the presence of endemic rent-seeking and corruption in Indonesia, the Philippines, and Thailand. This political context, which makes regulators susceptible to pressures from interest groups, casts doubt on the supposedly legitimate justifications for these NTMs on agricultural goods.

The demand for NTMs may have originated from the small group of landowning entities that operate large tracts of land. Given their similar interests, this group can easily overcome their collective action problems and lobby for beneficial regulations. The wide range of NTMs also allows regulators to tailor NTMs in order to favor only a limited selection of beneficiaries. And as agriculture's share of the labor force has declined, real incomes are now less dependent on food prices. Correspondingly, consumers will offer less opposition to the imposition of NTMs on agricultural goods.

In sum, *Chapter 3* shows how structural changes may have influenced the interests of political and economic actors in each of the Member States. Ultimately, these interests are now reflected in the trade policies of these Member States.

Building upon these insights, *Chapter 4* extends the analysis to an examination of the underlying determinants of trade policy in ASEAN. In particular, it asks whether there is a link between economic trends and political factors on the one hand, and NTM incidence on the other. According to the political economy of trade protection literature, both economic and political factors matter in the policy-making process. Economic trends may generate demands for certain types of policy, while political institutions affect how these demands are translated into such policy. Relationships between NTM incidence on the one hand, and economic and political factors on the other, have been analyzed in order to ascertain *(i)* the existence of possible links between them, and *(ii)* the strength and direction of any such association.

The results indicate that sectoral trends do matter. There was a positive correlation between NTM incidence and the services sector[16]. Indeed, the growth of the services sector has coincided with the rise in NTM incidence, specifically in food and agricultural products. Both the agricultural and industrial sectors[17], however, are negatively correlated with NTM incidence. The unemployment rate is also negatively correlated with NTM incidence. *Chapter 4* discusses how these results are not unexpected, given the importance of production network trade in ASEAN.

Industrial sectors, such as mining and manufacturing, are highly involved in production networks. These sectors are among the top importers of intermediate goods. In this context, the assumption that large sectors use their political power to secure protectionist policies is inapplicable. Policies which may hinder the flow of goods, such as NTMs, can increase the costs of trade and, ultimately, this sector's production costs. It is more rational for industrial sectors to use their influence in order to lobby for free trade, as this results in lower prices of imported inputs. Hence, the importance of trans-boundary production network trade explains the negative correlation between industry value added and NTM incidence.

Regarding the agricultural sector, its decline has been accompanied by a rise in the incidence of NTMs on agricultural goods. As a declining industry, agriculture retains a preference for protection. The low demand for agricultural imports means that there are fewer social and deadweight costs arising from potentially distortionary policies. As a majority of the population are now employed in the services sector, their incomes are no longer affected by agricultural prices. Consequently, they are less likely to oppose any NTMs on agricultural products. In this way, the structural changes in the region may have facilitated the issuance of NTMs in favor of agriculture.

The negative correlation between NTM incidence and unemployment seems counter-intuitive. However, the predicted positive correlation is based on the assumed negative impact of imports on the domestic market, *i.e.,* on the assumption that imports and domestic products are direct competitors. This assumption no longer holds given the role of transboundary production networks.

16. As measured by services value added.
17. Measured as agricultural value added and industrial value added.

In this context, imports are now a vital part of production processes. As such, there is less danger of displacement of domestic labor because of imports.

Chapter 4 also notes that the degree of political insulation and accountability may affect how governments react to preferences for certain types of policies. Plurality States have smaller electoral districts, and electoral success depends on district, rather than national, level. Consequently, politicians are less insulated from their constituencies' demands and preferences, making them more susceptible to demands for protection. Indeed, Member States under plurality electoral rules have a higher NTM incidence than Member States under proportional representation.

Parliamentary governments are subject to less electoral accountability than presidential governments. Furthermore, parliamentary legislatures are characterized by a greater concentration of power, and are more capable of entering into collusive agreements. These features enable parliamentary legislatures to pursue policies which benefit specific interests only. Moreover, as expected, parliamentary Member States do have a higher incidence of NTM than presidential States.

In other words, *Chapter 4* shows that *(i)* the socio-economic context of the Member States has created preferences and demands for certain policies, and *(ii)* their political institutions has determined how these preferences are reflected in laws, policies, and regulations.

In light of these insights, the following questions raised in *Chapter 1* can be answered thus:

1. *Does the ASEAN trade regime provide sufficient incentives for compliance with the commitments pertaining to NTMs?* The ASEAN trade regime has not only failed to sufficiently incentivize the Member States to comply with their commitments pertaining to NTMs, but it has also impaired the effectiveness of other compliance mechanisms.

2. *Can the region's structural changes, such as the increased prominence of industry and production networks, explain the demand for NTMs?* The region's structural changes may explain the demand for NTMs. Specifically, sectoral and structural changes may stimulate and create preferences

for different kinds of NTMs. While not all of these preferences are protectionist in nature, declining sectors not unexpectedly retain an interest for protectionist policies.

3. *Are political and economic factors linked with NTM incidence? Can the former explain the rising incidence of NTMs in ASEAN?* The Member States' economic and political contexts are linked with NTM incidence. While economic factors may explain why societies prefer certain types of policies, political institutions determine how well these preferences are catered to by the policymakers.

Taken together, the aforesaid may shed light on the incidence of NTMs in ASEAN. That is, NTMs persist because the region's trade regime has failed to overcome policymakers' interests in catering to the societal preferences for different kinds of NTMs resulting from the structural changes witnessed in recent decades.

5.2 Policy Implications

Using a law and economics framework, *Chapters 2* to *4* each delved into different aspects of the persistence of NTMs in ASEAN. However, the aim was not to definitively provide the reasons for this persistence, but to offer insights which may aid ASEAN policymaking.

Chapters 3 and *4* illustrated the value of analyzing NTMs vis-à-vis the socio-economic and political contexts of the Member States. The general implication is that efforts aimed at addressing NTMs should, first and foremost, be executed on a national level. NTMs are essentially domestic issuances, and can best be addressed by the relevant issuing authorities. While current ASEAN efforts are indeed implemented at the Member State level, the general and broad delegation of authority is insufficient. The possibility of regulatory capture cannot be discounted. Ideally, efforts to harmonize NTMs and eliminate NTBs should be conducted under the supervision of an independent review body. At the very least, "independence" means that such a body has to be sufficiently insulated from both economic and political interests. This way, the danger of efforts to review NTMs being influenced by vested interests would be minimized.

In this vein, the underlying rationale and justifications of the existing NTMs also need to be examined. While some NTMs may be motivated by protectionist interests, others may be prompted by legitimate concerns, such as the protection of public health or the addressing of market failures. A narrow focus on NTM incidence disregards the possible role played by these instruments in the promotion of trade, *i.e.,* in addressing information asymmetries by acting as a signal of product and process quality. While there is no doubt that protectionist NTBs needs to be eliminated, legitimate NTMs are a different matter.

Efforts to address NTMs thus need to be more nuanced than mere simple commitments to harmonize and improve the transparency of these measures, and to reduce their number. For example, where NTMs which affect the same product groups have been issued by different government bodies, the review needs to go beyond a determination that the NTMs were warranted. There is also a need to check for obsolete, redundant, inconsistent, and overlapping NTMs. Where NTMs have legitimate rationales, whether these measures are the most effective, *i.e.,* whether they do not entail unnecessary costs and burdens in order to achieve their aims, should also be verified. The effects of NTMs need to be examined as even legitimate NTMs can become NTBs when they are applied in a discriminatory or improper manner. As such, the participation of the private sector in the Member States' efforts becomes indispensable. Citizens, businesses and other non-governmental actors require more knowledge and experience about the manner of application and effects of NTMs. This information would prove invaluable to Governments' efforts to identify NTBs. Consequently, the Member States need to work more closely with the private sector in the review of NTMs and identification of NTBs.

While much work needs to be done at the national level, ASEAN itself still has a significant role to play in this matter. As discussed in *Chapter 2*, the region's current legal framework has failed to provide the necessary focal points for cooperation. ASEAN can remedy this by providing *(i)* specific guidelines for the review of both existing and proposed NTMs, together with *(ii)* concrete definitions of, and methods of identify NTBs. ASEAN can also take advantage of its regional centrality by aiding in the flow of information. It is well-placed to secure data, not only regarding Member States' trade regimes, but also regarding their experiences in dealing with NTMs and NTBs. This information could supplement the NTM database in the ASEAN Trade Repository, for the

benefit of both the public and private sectors.

Chapter 2's insights into the ASEAN enforcement systems also need to be addressed. These insights point to a need to strengthen the enforcement and dispute settlement mechanisms in the region. One way of doing this is by shifting away from the "ASEAN Way" of diplomatic and voluntary processes, towards legally binding rules and enforcement mechanisms. Indeed, the region needs a clearly defined and mandatory enforcement system which provides for binding sanctions and penalties in case of non-compliance or insufficient compliance. This way, the Member States would have a forum where they could discuss both existing and proposed NTMs, and identify any problematic measures. A legally binding enforcement system would also ensures that, after due process, Member States remove or modify problematic NTMs. ASEAN should also consider allowing private individuals and entities to initiate enforcement proceedings. As previously mentioned, the private sector has first-hand knowledge of the effects of NTMs, and can thus facilitate the identification of problematic NTMs.

Ultimately, given the nature of NTMs and the region's goal to establish a unified market, policy changes at both regional and national levels are needed.

5.3 Final Words

It is hoped that the insights offered by this thesis are enlightening and useful. Nevertheless, in view of the broad and complex nature of NTMs, this thesis can only really be considered to have scratched the surface of such a research agenda.

This thesis has employed insights from compliance theories and the political economy of protection, as well as correlation analyses, in order to address the research questions. In order to gain a better understanding of the NTM incidence in ASEAN, however, more empirical analyses would be required. In particular, causation analysis would provide additional insights into the relationship between economic trends and political institutions on the one hand, and NTM incidence on the other. Ideally, future empirical research would use more finely-tuned political data, *i.e.,* on electoral district sizes and lobbying activities within the Member States, to glean a more thorough understanding of the underlying mechanisms of trade policy. A deeper look into industry-specific

trends, such as market shares and geographic concentration of firms, may also generate nuanced insights into the link between structural changes and NTM incidence. Future research could thus not only broaden the understanding of NTMs and NTBs, but also provide policymakers with the information they need to deal effectively with these measures.

Another issue that requires further study is whether the Member States' regulatory regimes are indeed significantly different. A high incidence of NTMs may not adversely affect intra-regional trade if the Member States are imposing the same kinds of NTM on the same goods. This inquiry would entail a thorough examination of the NTM regimes of the Member States. This, in turn, would call for an analysis not only of the specific types of NTMs imposed on different kinds of goods, but also of their substantive contents and requirements. If the Member States' NTM regimes are sufficiently similar, then the region's focus on reducing NTMs might need to be reexamined. A clear picture of the current state of the ASEAN NTM regime would also be needed in deliberations on appropriate approaches to NTMs. For example, harmonization efforts may be appropriate if the Member States' regulatory regimes are dissimilar; otherwise, mutual recognition agreements may suffice to achieve the region's goals.

Due to this thesis' limited scope, the region's integration endeavours were taken at face value. For example, the delegation of trade-related responsibilities, such as the identification and removal of NTBs, from ASEAN to its Member States was not examined. The efficiency of the region's adapted methods, *i.e.,* standards harmonization and the use of mutual recognition agreements, was also beyond the scope of this research. The wisdom of including the region's less developed Member States in the integration efforts, albeit at staggered schedules, was also not examined. Issues such as these can be addressed within the framework of the economics of federalism. This research agenda has the potential to shed light on the effectiveness of the region's current institutional structure, as well as to yield useful insights into both the design and implementation of integration measures.

On a related note, future research could involve an in-depth look at how various regional integration initiatives have tackled the issue of NTMs. The problem of how to effectively address NTMs is not an experience that is unique to ASEAN. A comparative analysis of the efficiency of various regional attempts to deal with NTMs, including those made by the European Union (EU) and the Southern

Common Market (MERCOSUR), could yield some useful insights for the purposes of future policy-making.

Finally, this thesis only considers the incidence of NTMs in ASEAN. Both the stringency and the actual effects of such NTMs are beyond the scope of this study. Nevertheless, these are important issues. Future research could examine how stringent and restrictive the Member States' NTM regimes actually are, by examining the substantive provisions vis-à-vis their underlying goals and objectives. For example, quality measures would need to be compared against a benchmark[18] to determine whether the measures in place are unduly harsh. A study of trade effects requires the use of quantitative analyses such as price comparisons, quantity impact assessments, gravity models, and general equilibrium models. The results of such analyses would illustrate the effectiveness of NTMs, either in addressing market failures or providing protection to certain industries. These results may also shed light on whether the rising NTM incidence is affected by, or a response to, intra- or extra-ASEAN trade flows. These insights can likewise supplement analyses of the political economy of trade protection, *i.e.,* of policymakers' use of NTMs as a source of rents. Lastly, this type of data would provide guidance on whether the harmonization of NTMs would indeed be beneficial for ASEAN, or whether it could prove costly for ASEAN's Member States.

This research agenda is timely and relevant, not just for ASEAN but for any economy aiming at integration and the liberation of trade. As trade continues to be a politically contentious topic, studies on the underlying mechanisms of trade policy are undeniably valuable. This thesis aims to show whether policy-making processes, at both regional and national levels, can benefit from an interdisciplinary analysis of issues, such as that provided by the law and economics framework. It is hoped that this thesis offers useful insights into both ASEAN's integration efforts and the research agenda concerning NTMs.

18. Such as international standards or global best practices.

A Spearman's Correlation Analyses

Industry-Level Frequency Ratios and GDP

	fI	GDP
fI	1.000	
GDP	-0.054	1.000
	(0.580)	

	fII	GDP
fII	1.000	
GDP	-0.057	1.000
	(0.555)	

	fIII	GDP
fIII	1.000	
GDP	0.051	1.000
	(0.599)	

	fIV	GDP
fIV	1.000	
GDP	-0.027	1.000
	(0.779)	

	fV	GDP
fV	1.000	
GDP	-0.164	1.000
	(0.089)	

	fVI	GDP
fVI	1.000	
GDP	-0.009	1.000
	(0.928)	

Industry-Level Frequency Ratios and Unemployment Rates

	fI	UR
fI	1.000	
UR	-0.587*	1.000
	(0.000)	

	fII	UR
fII	1.000	
UR	-0.525*	1.000
	(0.000)	

	fIII	UR
fIII	1.000	
UR	-0.420*	1.000
	(0.000)	

	fIV	UR
fIV	1.000	
UR	-0.461*	1.000
	(0.000)	

	fV	UR
fV	1.000	
UR	-0.497*	1.000
	(0.000)	

	fVI	UR
fVI	1.000	
UR	-0.490*	1.000
	(0.000)	

Industry-Level Frequency Ratios and Trade Indicators

	fI	IM	EX	IPR
fI	1.000			
IM	0.347*	1.000		
	(0.001)			
EX	0.110	0.834*	1.000	
	(1.000)	(0.000)		
IPR	0.396*	0.220	0.007	1.000
	(0.000)	(0.134)	(1.000)	

	fII	IM	EX	IPR
fII	1.000			
IM	0.309*	1.000		
	(0.007)			
EX	0.256*	0.928*	1.000	
	(0.044)	(0.000)		
IPR	0.285*	0.437*	0.423*	1.000
	(0.017)	(0.000)	(0.000)	

	fIII	IM	EX	IPR
fIII	1.000			
IM	0.371*	1.000		
	(0.001)			
EX	0.226	0.834*	1.000	
	(0.114)	(0.000)		
IPR	0.195	0.051	-0.196	1.000
	(0.260)	(1.000)	(0.250)	

	fIV	IM	EX	IPR
fIV	1.000			
IM	0.264*	1.000		
	(0.035)			
EX	0.205	0.910*	1.000	
	(0.199)	(0.000)		
IPR	0.209	0.660*	0.456*	1.000
	(0.181)	(0.000)	(0.000)	

	fV	IM	EX	IPR
fV	1.000			
IM	0.228	1.000		
	(0.105)			
EX	0.314*	0.954*	1.000	
	(0.006)	(0.000)		
IPR	0.250	0.732*	0.785*	1.000
	(0.055)	(0.000)	(0.000)	

	fVI	IM	EX	IPR
fVI	1.000			
IM	0.350*	1.000		
	(0.001)			
EX	-0.008	0.818*	1.000	
	(1.000)	(0.000)		
IPR	0.332*	0.567*	0.310*	1.000
	(0.003)	(0.000)	(0.007)	

Industry-Level Frequency Ratios and Sectoral Value Added

	fI	Agri.	Ind.	Svcs.
fI	1.000			
A	-0.197	1.000		
	(0.282)			
I	-0.481*	-0.113	1.000	
	(0.000)	(1.000)		
S	0.447*	-0.813*	-0.229*	1.000
	(0.000)	(0.000)	(0.014)	

	fII	Agri.	Ind.	Svcs.
fII	1.000			
A	0.146	1.000		
	(0.886)			
I	-0.471*	-0.113	1.000	
	(0.000)	(1.000)		
S	0.425*	-0.813*	-0.299*	1.000
	(0.000)	(0.000)	(0.014)	

	fIII	Agri.	Ind.	Svcs.
fIII	1.000			
A	-0.030	1.000		
	(1.000)			
I	-0.432*	-0.113	1.000	
	(0.000)	(1.000)		
S	0.319*	-0.813*	-0.299*	1.000
	(0.007)	(0.000)	(0.014)	

	fIV	Agri.	Ind.	Svcs.
fIV	1.000			
A	-0.099	1.000		
	(1.000)			
I	-0.477*	-0.113	1.000	
	(0.000)	(1.000)		
S	0.410*	-0.813*	-0.299*	1.000
	(0.000)	(0.000)	(0.014)	

	fV	Agri.	Ind.	Svcs.
fV	1.000			
A	-0.042	1.000		
	(1.000)			
I	-0.623*	-0.113	1.000	
	(0.000)	(1.000)		
S	0.386*	-0.813*	-0.299*	1.000
	(0.000)	(0.000)	(0.014)	

	fVI	Agri.	Ind.	Svcs.
fVI	1.000			
A	-0.143	1.000		
	(0.917)			
I	-0.466*	-0.113	1.000	
	(0.000)	(1.000)		
S	0.398*	-0.813*	-0.299*	1.000
	(0.000)	(0.000)	(0.014)	

Product Group-Level Frequency Ratios and GDP

	f1	GDP
f1	1.000	
GDP	0.192*	1.000
	(0.042)	

	f2	GDP
f2	1.000	
GDP	-0.029	1.000
	(0.761)	

	f3	GDP
f3	1.000	
GDP	-0.031	1.000
	(0.744)	

	f4	GDP
f4	1.000	
GDP	0.010	1.000
	(0.921)	

	f5	GDP
f5	1.000	
GDP	0.004	1.000
	(0.963)	

	f6	GDP
f6	1.000	
GDP	0.088	1.000
	(0.354)	

	f7	GDP
f7	1.000	
GDP	-0.035	1.000
	(0.711)	

	f8	GDP
f8	1.000	
GDP	-0.044	1.000
	(0.646)	

	f9	GDP
f9	1.000	
GDP	0.077	1.000
	(0.422)	

	f10	GDP
f10	1.000	
GDP	0.309*	1.000
	(0.001)	

	f11	GDP
f11	1.000	
GDP	0.090	1.000
	(0.345)	

	f12	GDP
f12	1.000	
GDP	0.136	1.000
	(0.152)	

	f13	GDP
f13	1.000	
GDP	-0.080	1.000
	(0.404)	

	f14	GDP
f14	1.000	
GDP	0.048	1.000
	(0.614)	

	f15	GDP
f15	1.000	
GDP	-0.065	1.000
	(0.499)	

	f16	GDP
f16	1.000	
GDP	-0.004	1.000
	(0.965)	

	f17	GDP
f17	1.000	
GDP	0.002	1.000
	(0.982)	

	f18	GDP
f18	1.000	
GDP	0.035	1.000
	(0.713)	

	f19	GDP
f19	1.000	
GDP	0.053	1.000
	(0.592)	

	f20	GDP
f20	1.000	
GDP	0.103	1.000
	(0.278)	

	f21	GDP
f21	1.000	
GDP	-0.420*	1.000
	(0.000)	

Product Group-Level Frequency Ratios and Unemployment Rates

	f1	UR
f1	1.000	
UR	-0.340*	1.000
	(0.000)	

	f2	UR
f2	1.000	
UR	-0.528*	1.000
	(0.000)	

	f3	UR
f3	1.000	
UR	-0.552*	1.000
	(0.000)	

	f4	UR
f4	1.000	
UR	-0.512*	1.000
	(0.000)	

	f5	UR
f5	1.000	
UR	-0.460*	1.000
	(0.000)	

	f6	UR
f6	1.000	
UR	-0.357*	1.000
	(0.000)	

	f7	UR
f7	1.000	
UR	-0.470*	1.000
	(0.000)	

	f8	UR
f8	1.000	
UR	-0.548*	1.000
	(0.000)	

	f9	UR
f9	1.000	
UR	-0.444*	1.000
	(0.000)	

	f10	UR
f10	1.000	
UR	-0.218*	1.000
	(0.025)	

	f11	UR
f11	1.000	
UR	-0.321*	1.000
	(0.001)	

	f12	UR
f12	1.000	
UR	-0.425*	1.000
	(0.000)	

	f13	UR
f13	1.000	
UR	-0.157	1.000
	(0.108)	

	f14	UR
f14	1.000	
UR	-0.397*	1.000
	(0.000)	

	f15	UR
f15	1.000	
UR	-0.419*	1.000
	(0.000)	

	f16	UR
f16	1.000	
UR	-0.411*	1.000
	(0.000)	

	f17	UR
f17	1.000	
UR	-0.410*	1.000
	(0.000)	

	f18	UR
f18	1.000	
UR	-0.336*	1.000
	(0.000)	

	f19	UR
f19	1.000	
UR	-0.543*	1.000
	(0.000)	

	f20	UR
f20	1.000	
UR	-0.409*	1.000
	(0.000)	

	f21	UR
f21	1.000	
UR	-0.349*	1.000
	(0.000)	

Product Group-Level Frequency Ratios and Trade Indicators

	f1	IM	EX	IPR
f1	1.000			
IM	0.666*	1.000		
	(0.000)			
EX	0.094	0.516*	1.000	
	(1.000)	(0.000)		
IPR	0.420*	0.571*	0.328*	1.000
	(0.000)	(0.000)	(0.003)	

	f2	IM	EX	IPR
f2	1.000			
IM	0.220	1.000		
	(0.118)			
EX	0.017	0.538*	1.000	
	(1.000)	(0.000)		
IPR	0.004	0.492*	0.223	1.000
	(1.000)	(0.000)	(0.108)	

	f3	IM	EX	IPR
f3	1.000			
IM	0.383*	1.000		
	(0.000)			
EX	-0.132	0.495*	1.000	
	(0.994)	(0.000)		
IPR	0.255*	0.731*	-0.019	1.000
	(0.040)	(0.000)	(1.000)	

	f4	IM	EX	IPR
f4	1.000			
IM	0.355*	1.000		
	(0.001)			
EX	0.406*	0.833*	1.000	
	(0.000)	(0.000)		
IPR	0.390*	-0.116	-0.331*	1.000
	(0.000)	(1.000)	(0.002)	

	f5	IM	EX	IPR
f5	1.000			
IM	0.327*	1.000		
	(0.003)			
EX	0.264*	0.917*	1.000	
	(0.030)	(0.000)		
IPR	0.222	0.371*	0.419*	1.000
	(0.111)	(0.000)	(0.000)	

	f6	IM	EX	IPR
f6	1.000			
IM	0.296*	1.000		
	(0.009)			
EX	0.255*	0.912*	1.000	
	(0.040)	(0.000)		
IPR	0.258*	0.010	-0.091	1.000
	(0.036)	(1.000)	(1.000)	

	f7	IM	EX	IPR
f7	1.000			
IM	0.335*	1.000		
	(0.002)			
EX	0.340*	0.840*	1.000	
	(0.001)	(0.000)		
IPR	0.276*	0.423*	0.240	1.000
	(0.019)	(0.000)	(0.064)	

	f8	IM	EX	IPR
f8	1.000			
IM	0.297*	1.000		
	(0.009)			
EX	-0.324*	0.377*	1.000	
	(0.003)	(0.000)		
IPR	-0.065	0.605*	0.053	1.000
	(1.000)	(0.000)	(1.000)	

	f9	IM	EX	IPR
f9	1.000			
IM	0.233	1.000		
	(0.080)			
EX	0.190	0.698*	1.000	
	(0.273)	(0.000)		
IPR	-0.025	-0.284*	-0.373*	1.000
	(1.000)	(0.015)	(0.000)	

	f10	IM	EX	IPR
f10	1.000			
IM	0.457*	1.000		
	(0.000)			
EX	0.334*	0.729*	1.000	
	(0.002)	(0.000)		
IPR	-0.102	0.133	0.019	1.000
	(1.000)	(0.970)	(1.000)	

	f11	IM	EX	IPR
f11	1.000			
IM	0.288*	1.000		
	(0.012)			
EX	0.064	0.511*	1.000	
	(1.000)	(0.000)		
IPR	0.128	0.350*	0.062	1.000
	(1.000)	(0.001)	(1.000)	

	f12	IM	EX	IPR
f12	1.000			
IM	0.451*	1.000		
	(0.000)			
EX	0.179	0.748*	1.000	
	(0.350)	(0.000)		
IPR	0.375*	0.273*	-0.078	1.000
	(0.000)	(0.022)	(1.000)	

	f13	IM	EX	IPR
f13	1.000			
IM	0.201	1.000		
	(0.204)			
EX	0.144	0.818*	1.000	
	(0.776)	(0.000)		
IPR	0.264*	0.878*	0.554*	1.000
	(0.030)	(0.000)	(0.000)	

	f14	IM	EX	IPR
f14	1.000			
IM	0.299*	1.000		
	(0.008)			
EX	0.257*	0.918*	1.000	
	(0.038)	(0.000)		
IPR	0.183	0.642*	0.442*	1.000
	(0.323)	(0.000)	(0.000)	

	f15	IM	EX	IPR
f15	1.000			
IM	0.311*	1.000		
	(0.005)			
EX	0.343*	0.962*	1.000	
	(0.001)	(0.000)		
IPR	0.282*	0.779*	0.824*	1.000
	(0.016)	(0.000)	(0.000)	

	f16	IM	EX	IPR
f16	1.000			
IM	0.229	1.000		
	(0.091)			
EX	0.434*	0.906*	1.000	
	(0.000)	(0.000)		
IPR	0.237	0.275*	0.138	1.000
	(0.072)	(0.020)	(0.887)	

	f17	IM	EX	IPR
f17	1.000			
IM	0.332*	1.000		
	(0.002)			
EX	0.368*	0.963*	1.000	
	(0.000)	(0.000)		
IPR	0.265*	0.794*	0.750*	1.000
	(0.029)	(0.000)	(0.000)	

	f18	IM	EX	IPR
f18	1.000			
IM	0.376*	1.000		
	(0.000)			
EX	-0.032	0.821*	1.000	
	(1.000)	(0.000)		
IPR	0.370*	0.618*	0.397*	1.000
	(0.000)	(0.000)	(0.000)	

	f19	IM	EX	IPR
f19	1.000			
IM	0.151	1.000		
	(0.774)			
EX	0.331*	0.504*	1.000	
	(0.004)	(0.000)		
IPR	0.169	0.823*	0.278*	1.000
	(0.531)	(0.000)	(0.027)	

	f20	IM	EX	IPR
f20	1.000			
IM	0.391*	1.000		
	(0.000)			
EX	-0.047	0.614*	1.000	
	(1.000)	(0.000)		
IPR	0.222	0.147	-0.265*	1.000
	(0.113)	(0.727)	(0.028)	

	f21	IM	EX	IPR
f21	1.000			
IM	0.001	1.000		
	(1.000)			
EX	0.080	0.661*	1.000	
	(1.000)	(0.000)		
IPR	0.195	0.813*	0.445*	1.000
	(0.249)	(0.000)	(0.000)	

Product Group-Level Frequency Ratios and Sectoral Value Added

	f1	Agri.	Ind.	Svcs.
f1	1.000			
A	-0.410*	1.000		
	(0.000)			
I	-0.306*	-0.113	1.000	
	(0.011)	(1.000)		
S	0.612*	-0.813*	-0.229*	1.000
	(0.000)	(0.000)	(0.014)	

	f2	Agri.	Ind.	Svcs.
f2	1.000			
A	-0.064	1.000		
	(1.000)			
I	-0.467*	-0.113	1.000	
	(0.000)	(1.000)		
S	0.276	-0.813*	-0.299*	1.000
	(0.030)	(0.000)	(0.014)	

	f3	Agri.	Ind.	Svcs.
f3	1.000			
A	-0.231	1.000		
	(0.117)			
I	-0.475*	-0.113	1.000	
	(0.000)	(1.000)		
S	0.442*	-0.813*	-0.229*	1.000
	(0.000)	(0.000)	(0.014)	

	f4	Agri.	Ind.	Svcs.
f4	1.000			
A	-0.166	1.000		
	(0.576)			
I	-0.509*	-0.113	1.000	
	(0.000)	(1.000)		
S	0.431*	-0.813*	-0.299*	1.000
	(0.000)	(0.000)	(0.014)	

	f5	Agri.	Ind.	Svcs.
f5	1.000			
A	-0.141	1.000		
	(0.947)			
I	-0.486*	-0.113	1.000	
	(0.000)	(1.000)		
S	0.425*	-0.813*	-0.229*	1.000
	(0.000)	(0.000)	(0.014)	

	f6	Agri.	Ind.	Svcs.
f6	1.000			
A	-0.105	1.000		
	(1.000)			
I	-0.486*	-0.113	1.000	
	(0.000)	(1.000)		
S	0.411*	-0.813*	-0.299*	1.000
	(0.000)	(0.000)	(0.014)	

	f7	Agri.	Ind.	Svcs.
f7	1.000			
A	-0.110	1.000		
	(1.000)			
I	-0.514*	-0.113	1.000	
	(0.000)	(1.000)		
S	0.401*	-0.813*	-0.229*	1.000
	(0.000)	(0.000)	(0.014)	

	f8	Agri.	Ind.	Svcs.
f8	1.000			
A	-0.084	1.000		
	(1.000)			
I	-0.538*	-0.113	1.000	
	(0.000)	(1.000)		
S	0.308*	-0.813*	-0.299*	1.000
	(0.010)	(0.000)	(0.014)	

	f9	Agri.	Ind.	Svcs.
f9	1.000			
A	-0.079	1.000		
	(1.000)			
I	-0.450*	-0.113	1.000	
	(0.000)	(1.000)		
S	0.359*	-0.813*	-0.229*	1.000
	(0.001)	(0.000)	(0.014)	

	f10	Agri.	Ind.	Svcs.
f10	1.000			
A	0.119	1.000		
	(1.000)			
I	-0.215	-0.113	1.000	
	(0.183)	(1.000)		
S	0.096	-0.813*	-0.299*	1.000
	(1.000)	(0.000)	(0.014)	

	f11	Agri.	Ind.	Svcs.
f11	1.000			
A	-0.088	1.000		
	(1.000)			
I	-0.453*	-0.113	1.000	
	(0.000)	(1.000)		
S	0.381*	-0.813*	-0.229*	1.000
	(0.001)	(0.000)	(0.014)	

	f12	Agri.	Ind.	Svcs.
f12	1.000			
A	-0.142	1.000		
	(0.936)			
I	-0.370*	-0.113	1.000	
	(0.001)	(1.000)		
S	0.369*	-0.813*	-0.299*	1.000
	(0.001)	(0.000)	(0.014)	

	f13	Agri.	Ind.	Svcs.
f13	1.000			
A	-0.033	1.000		
	(1.000)			
I	-0.623*	-0.113	1.000	
	(0.000)	(1.000)		
S	0.435*	-0.813*	-0.229*	1.000
	(0.000)	(0.000)	(0.014)	

	f14	Agri.	Ind.	Svcs.
f14	1.000			
A	-0.099	1.000		
	(1.000)			
I	-0.477*	-0.113	1.000	
	(0.000)	(1.000)		
S	0.410*	-0.813*	-0.299*	1.000
	(0.000)	(0.000)	(0.014)	

	f15	Agri.	Ind.	Svcs.
f15	1.000			
A	-0.076	1.000		
	(1.000)			
I	-0.587*	-0.113	1.000	
	(0.000)	(1.000)		
S	0.412*	-0.813*	-0.229*	1.000
	(0.000)	(0.000)	(0.014)	

	f16	Agri.	Ind.	Svcs.
f16	1.000			
A	-0.044	1.000		
	(1.000)			
I	-0.574*	-0.113	1.000	
	(0.000)	(1.000)		
S	0.357*	-0.813*	-0.299*	1.000
	(0.001)	(0.000)	(0.014)	

	f17	Agri.	Ind.	Svcs.
f17	1.000			
A	-0.086	1.000		
	(1.000)			
I	-0.541*	-0.113	1.000	
	(0.000)	(1.000)		
S	0.415*	-0.813*	-0.229*	1.000
	(0.000)	(0.000)	(0.014)	

	f18	Agri.	Ind.	Svcs.
f18	1.000			
A	-0.149	1.000		
	(0.814)			
I	-0.465*	-0.113	1.000	
	(0.000)	(1.000)		
S	0.440*	-0.813*	-0.299*	1.000
	(0.000)	(0.000)	(0.014)	

	f19	Agri.	Ind.	Svcs.
f19	1.000			
A	-0.337*	1.000		
	(0.005)			
I	-0.379*	-0.093	1.000	
	(0.001)	(1.000)		
S	0.396*	-0.806*	-0.308*	1.000
	(0.000)	(0.000)	(0.014)	

	f20	Agri.	Ind.	Svcs.
f20	1.000			
A	-0.089	1.000		
	(1.000)			
I	-0.479*	-0.113	1.000	
	(0.000)	(1.000)		
S	0.367*	-0.813*	-0.299*	1.000
	(0.001)	(0.000)	(0.014)	

	f21	Agri.	Ind.	Svcs.
f21	1.000			
A	-0.046	1.000		
	(1.000)			
I	-0.757*	-0.113	1.000	
	(0.000)	(1.000)		
S	0.441*	-0.813*	-0.299*	1.000
	(0.000)	(0.000)	(0.014)	

B Independent Samples t-tests

Industry-Level Frequency Ratios and Electoral Rules

Table B.1: Animals, Plants, Food

Group	Obs	Mean	Std. Err.	Std. Dev.	[95% Conf.	Interval]
Proportional	32	.648	.062	.352	.521	.775
Plurality	76	.919	.021	.184	.877	.961
combined	108	.839	.026	.274	.786	.891
diff		-.271	.066		-.404	-.138
Ha : diff != 0				t = -4.116		
Pr(|T| > |t|)=0.000				Satterthwaite's degrees of freedom = 38.355		

Table B.2: Chemicals, Chemical Products

Group	Obs	Mean	Std. Err.	Std. Dev.	[95% Conf.	Interval]
Proportional	32	.414	.065	.368	.281	.547
Plurality	76	.786	.034	.295	.718	.853
combined	108	.675	.035	.360	.607	.744
diff		-.372	.073		-.519	-.224
Ha : diff != 0				t = -5.070		
Pr(|T| > |t|)=0.000				Satterthwaite's degrees of freedom = 48.635		

Table B.3: Light Manufactured Goods

Group	Obs	Mean	Std. Err.	Std. Dev.	[95% Conf.	Interval]
Proportional	32	.632	.056	.320	.517	.748
Plurality	76	.729	.042	.370	.645	.814
combined	108	.701	.034	.357	.632	.769
diff		-.097	.071		-.238	.044
Ha : diff != 0				t = -1.373		
Pr(|T| > |t|)=0.174				Satterthwaite's degrees of freedom = 67.120		

TABLE B.4: Metals, Metal Products

Group	Obs	Mean	Std. Err.	Std. Dev.	[95% Conf. Interval]	
Proportional	32	.331	.071	.402	.187	.476
Plurality	76	.718	.047	.407	.625	.811
combined	108	.604	.042	.441	.520	.688
diff		-.387	.085		-.557	-.217
Ha : diff != 0				t = -4.552		
Pr($\|T\| > \|t\|$)=0.000				Satterthwaite's degrees of freedom = 58.993		

TABLE B.5: Machineries

Group	Obs	Mean	Std. Err.	Std. Dev.	[95% Conf. Interval]	
Proportional	32	.525	.061	.346	.400	.650
Plurality	76	.767	.038	.327	.692	.842
combined	108	.695	.034	.349	.629	.762
diff		-.242	.072		-.386	-.098
Ha : diff != 0				t = -3.374		
Pr($\|T\| > \|t\|$)=0.001				Satterthwaite's degrees of freedom = 55.506		

TABLE B.6: Other Products

Group	Obs	Mean	Std. Err.	Std. Dev.	[95% Conf. Interval]	
Proportional	32	.505	.059	.334	.384	.625
Plurality	76	.736	.039	.344	.657	.814
combined	108	.667	.034	.356	.599	.735
diff		-.231	.071		-.373	-.089
Ha : diff != 0				t = -3.251		
Pr($\|T\| > \|t\|$)=0.002				Satterthwaite's degrees of freedom = 59.909		

Industry-Level Frequency Ratios and Forms of Government

TABLE B.7: Animals, Plants, Food

Group	Obs	Mean	Std. Err.	Std. Dev.	[95% Conf. Interval]	
Parliamentary	64	.945	.011	.086	.923	.966
Presidential	44	.684	.055	.368	.572	.796
combined	108	.839	.026	.274	.786	.891
diff		.261	.056		.147	.374
Ha : diff != 0				t = 4.617		
Pr($\|T\| > \|t\|$)=0.000				Satterthwaite's degrees of freedom = 46.232		

TABLE B.8: Chemicals, Chemical Products

Group	Obs	Mean	Std. Err.	Std. Dev.	[95% Conf.	Interval]
Parliamentary	64	.736	.040	.324	.655	.817
Presidential	44	.587	.059	.394	.468	.707
combined	108	.675	.035	.360	.607	.744
diff		.149	.072		.006	.292
Ha : diff != 0				t = 2.072		
Pr($\|T\| > \|t\|$)=0.041				Satterthwaite's degrees of freedom = 80.462		

TABLE B.9: Light Manufactured Goods

Group	Obs	Mean	Std. Err.	Std. Dev.	[95% Conf.	Interval]
Parliamentary	64	.665	.050	.402	.565	.765
Presidential	44	.752	.042	.276	.668	.836
combined	108	.701	.034	.357	.632	.769
diff		-.087	.065		-.217	.042
Ha : diff != 0				t = -1.340		
Pr($\|T\| > \|t\|$)=0.183				Satterthwaite's degrees of freedom = 105.999		

TABLE B.10: Metals, Metal Products

Group	Obs	Mean	Std. Err.	Std. Dev.	[95% Conf.	Interval]
Parliamentary	64	.642	.055	.442	.532	.753
Presidential	44	.548	.066	.439	.414	.681
combined	108	.604	.042	.441	.520	.688
diff		.094	.086		-.077	.265
Ha : diff != 0				t =1.096		
Pr($\|T\| > \|t\|$)=0.276				Satterthwaite's degrees of freedom = 92.979		

TABLE B.11: Machineries

Group	Obs	Mean	Std. Err.	Std. Dev.	[95% Conf.	Interval]
Parliamentary	64	.787	.033	.260	.722	.852
Presidential	44	.562	.063	.416	.435	.688
combined	108	.695	.034	.349	.629	.762
diff		.225	.071		.084	.366
Ha : diff != 0				t =3.189		
Pr($\|T\| > \|t\|$)=0.002				Satterthwaite's degrees of freedom = 65.979		

TABLE B.12: Other Products

Group	Obs	Mean	Std. Err.	Std. Dev.	[95% Conf.	Interval]
Parliamentary	64	.698	.044	.353	.610	.786
Presidential	44	.623	.054	.359	.514	.732
combined	108	.667	.034	.356	.599	.735
diff		.075	.070		-.064	.214
Ha : diff != 0				t =1.076		
Pr($\|T\| > \|t\|$)=0.285				Satterthwaite's degrees of freedom = 91.635		

Product Group-Level Frequency Ratios and Electoral Rules

TABLE B.13: Live animals, edible animal products

Group	Obs	Mean	Std. Err.	Std. Dev.	[95% Conf.	Interval]
Proportional	32	.745	.058	.326	.628	.863
Plurality	80	.886	.029	.257	.829	.944
combined	112	.846	.027	.284	.793	.899
diff		-.141	.064		-.271	-.012
Ha : diff != 0				t = -2.192		
Pr($\|T\| > \|t\|$)=0.033				Satterthwaite's degrees of freedom = 47.233		

TABLE B.14: Live plants, edible plant products

Group	Obs	Mean	Std. Err.	Std. Dev.	[95% Conf.	Interval]
Proportional	32	.644	.069	.391	.503	.785
Plurality	80	.866	.029	.263	.807	.924
combined	112	.802	.030	.319	.742	.862
diff		-.221	.075		-.373	-.070
Ha : diff != 0				t = -2.945		
Pr($\|T\| > \|t\|$)=0.005				Satterthwaite's degrees of freedom = 42.698		

TABLE B.15: Animal or vegetable fats and oils

Group	Obs	Mean	Std. Err.	Std. Dev.	[95% Conf.	Interval]
Proportional	32	.448	.072	.408	.301	.595
Plurality	80	.850	.032	.287	.786	.914
combined	112	.735	.035	.372	.665	.805
diff		-.402	.079		-.561	-.242
Ha : diff != 0				t = -5.085		
Pr($\|T\| > \|t\|$)=0.000				Satterthwaite's degrees of freedom = 43.763		

TABLE B.16: Edible preparations; beverages; tobacco

Group	Obs	Mean	Std. Err.	Std. Dev.	[95% Conf.	Interval]
Proportional	32	.626	.069	.390	.486	.767
Plurality	80	.877	.033	.293	.811	.942
combined	112	.805	.032	.341	.741	.869
diff		-.250	.076		-.404	-.097
Ha : diff != 0				t = -3.281		
Pr(|T| > |t|)=0.002				Satterthwaite's degrees of freedom = 45.714		

TABLE B.17: Chemicals and Chemical Products

Group	Obs	Mean	Std. Err.	Std. Dev.	[95% Conf.	Interval]
Proportional	32	.443	.063	.358	.314	.572
Plurality	80	.761	.035	.313	.692	.831
combined	112	.671	.034	.355	.604	.737
diff		-.318	.072		-.463	-.173
Ha : diff != 0				t = -4.398		
Pr(|T| > |t|)=0.000				Satterthwaite's degrees of freedom = 50.920		

TABLE B.18: Plastics and Rubber

Group	Obs	Mean	Std. Err.	Std. Dev.	[95% Conf.	Interval]
Proportional	32	.316	.072	.407	.170	.463
Plurality	80	.689	.050	.447	.590	.789
combined	112	.583	.044	.466	.496	.670
diff		-.373	.088		-.548	-.198
Ha : diff != 0				t = -4.260		
Pr(|T| > |t|)=0.000				Satterthwaite's degrees of freedom = 62.385		

TABLE B.19: Skins and Leather

Group	Obs	Mean	Std. Err.	Std. Dev.	[95% Conf.	Interval]
Proportional	32	.539	.060	.338	.417	.661
Plurality	80	.774	.030	.264	.715	.833
combined	112	.707	.029	.305	.650	.764
diff		-.235	.067		-.369	-.101
Ha : diff != 0				t = -3.525		
Pr(|T| > |t|)=0.001				Satterthwaite's degrees of freedom = 46.924		

TABLE B.20: Wood Articles

Group	Obs	Mean	Std. Err.	Std. Dev.	[95% Conf.	Interval]
Proportional	32	.582	.070	.395	.439	.724
Plurality	80	.747	.038	.343	.670	.823
combined	112	.699	.034	.365	.631	.768
diff		-.165	.080		-.325	-.005
Ha : diff != 0				t = -2.067		
Pr($\|T\| > \|t\|$)=0.044				Satterthwaite's degrees of freedom = 50.743		

TABLE B.21: Pulp and Paper Articles

Group	Obs	Mean	Std. Err.	Std. Dev.	[95% Conf.	Interval]
Proportional	32	.326	.075	.425	.173	.479
Plurality	80	.654	.047	.424	.560	.748
combined	112	.560	.042	.448	.476	.644
diff		-.328	.089		-.506	-.151
Ha : diff != 0				t = -3.699		
Pr($\|T\| > \|t\|$)=0.001				Satterthwaite's degrees of freedom = 57.108		

TABLE B.22: Textiles

Group	Obs	Mean	Std. Err.	Std. Dev.	[95% Conf.	Interval]
Proportional	32	.761	.068	.385	.622	.899
Plurality	80	.689	.046	.411	.598	.781
combined	112	.710	.038	.403	.634	.785
diff		.071	.082		-.093	.236
Ha : diff != 0				t = 0.871		
Pr($\|T\| > \|t\|$)=0.388				Satterthwaite's degrees of freedom = 60.827		

TABLE B.23: Footwear, headgear, umbrellas

Group	Obs	Mean	Std. Err.	Std. Dev.	[95% Conf.	Interval]
Proportional	32	.542	.052	.297	.435	.649
Plurality	80	.699	.037	.329	.626	.773
combined	112	.654	.031	.327	.593	.716
diff		-.157	.064		-.285	-.029
Ha : diff != 0				t = -2.457		
Pr($\|T\| > \|t\|$)=0.017				Satterthwaite's degrees of freedom = 63.016		

TABLE B.24: Stones, ceramics, glass

Group	Obs	Mean	Std. Err.	Std. Dev.	[95% Conf. Interval]	
Proportional	32	.384	.071	.403	.239	.529
Plurality	80	.699	.047	.419	.606	.792
combined	112	.609	.041	.436	.527	.691
diff		-.314	.085		-.485	-.144
Ha : diff != 0				t = -3.693		
Pr(|T| > |t|)=0.001				Satterthwaite's degrees of freedom = 59.250		

TABLE B.25: Pearls and precious stones

Group	Obs	Mean	Std. Err.	Std. Dev.	[95% Conf. Interval]	
Proportional	32	.660	.052	.296	.553	.767
Plurality	80	.682	.052	.461	.580	.785
combined	112	.676	.040	.419	.597	.754
diff		-.023	.073		-.169	.124
Ha : diff != 0				t = -0.307		
Pr(|T| > |t|)=0.760				Satterthwaite's degrees of freedom = 87.782		

TABLE B.26: Base metals

Group	Obs	Mean	Std. Err.	Std. Dev.	[95% Conf. Interval]	
Proportional	32	.331	.071	.402	.187	.476
Plurality	80	.682	.048	.427	.588	.777
combined	112	.582	.042	.447	.498	.666
diff		-.351	.086		-.522	-.180
Ha : diff != 0				t = -4.102		
Pr(|T| > |t|)=0.000				Satterthwaite's degrees of freedom = 60.429		

TABLE B.27: Machinery

Group	Obs	Mean	Std. Err.	Std. Dev.	[95% Conf. Interval]	
Proportional	32	.560	.065	.366	.428	.692
Plurality	80	.744	.039	.352	.665	.822
combined	112	.691	.034	.364	.623	.759
diff		-.184	.076		-.335	-.032
Ha : diff != 0				t = -2.428		
Pr(|T| > |t|)=0.019				Satterthwaite's degrees of freedom = 55.304		

TABLE B.28: Vehicles

Group	Obs	Mean	Std. Err.	Std. Dev.	[95% Conf.	Interval]
Proportional	32	.501	.056	.316	.387	.615
Plurality	80	.701	.046	.410	.610	.793
combined	112	.644	.037	.395	.570	.718
diff		-.200	.072		-.344	-.056
Ha : diff != 0				t = -2.770		
Pr($\|T\| > \|t\|$)=0.007				Satterthwaite's degrees of freedom = 73.735		

TABLE B.29: Photographic instruments; medical instruments; clocks, etc.; musical instruments

Group	Obs	Mean	Std. Err.	Std. Dev.	[95% Conf.	Interval]
Proportional	32	.392	.066	.371	.258	.526
Plurality	80	.693	.041	.369	.611	.776
combined	112	.607	.037	.392	.534	.681
diff		-.301	.077		-.456	-.146
Ha : diff != 0				t = -3.892		
Pr($\|T\| > \|t\|$)=0.000				Satterthwaite's degrees of freedom = 56.884		

TABLE B.30: Minerals, mineral products

Group	Obs	Mean	Std. Err.	Std. Dev.	[95% Conf.	Interval]
Proportional	32	.612	.060	.339	.489	.734
Plurality	80	.716	.042	.379	.632	.801
combined	112	.686	.035	.370	.617	.756
diff		-.105	.073		-.251	.042
Ha : diff != 0				t = -1.423		
Pr($\|T\| > \|t\|$)=0.160				Satterthwaite's degrees of freedom = 63.476		

TABLE B.31: Arms and ammunition

Group	Obs	Mean	Std. Err.	Std. Dev.	[95% Conf.	Interval]
Proportional	32	.580	.073	.413	.431	.729
Plurality	71	.839	.031	.260	.777	.900
combined	103	.758	.033	.336	.693	.824
diff		-.259	.079		-.419	-.099
Ha : diff != 0				t = -3.268		
Pr($\|T\| > \|t\|$)=0.002				Satterthwaite's degrees of freedom = 42.488		

TABLE B.32: Miscellaneous items

Group	Obs	Mean	Std. Err.	Std. Dev.	[95% Conf. Interval]	
Proportional	32	.408	.063	.359	.278	.537
Plurality	80	.662	.044	.395	.574	.750
combined	112	.590	.038	.401	.515	.665
diff		-.255	.077		-.409	-.100
Ha : diff != 0				t = -3.291		
Pr(|T| > |t|)=0.002				Satterthwaite's degrees of freedom = 62.539		

TABLE B.33: Art works and antiques

Group	Obs	Mean	Std. Err.	Std. Dev.	[95% Conf. Interval]	
Proportional	32	.551	.084	.474	.380	.721
Plurality	78	.824	.034	.300	.756	.891
combined	110	.744	.036	.378	.673	.816
diff		-.273	.090		-.456	-.091
Ha : diff != 0				t = -3.023		
Pr(|T| > |t|)=0.004				Satterthwaite's degrees of freedom = 41.569		

Product Group-Level Frequency Ratios and Forms of Government

TABLE B.34: Live animals, edible animal products

Group	Obs	Mean	Std. Err.	Std. Dev.	[95% Conf. Interval]	
Parliamentary	64	.962	.004	.028	.955	.969
Presidential	48	.691	.055	.384	.580	.803
combined	112	.846	.027	.284	.793	.899
diff		.271	.055		.159	.382
Ha : diff != 0				t =4.884		
Pr(|T| > |t|)=0.000				Satterthwaite's degrees of freedom = 47.381		

TABLE B.35: Live plants, edible plant products

Group	Obs	Mean	Std. Err.	Std. Dev.	[95% Conf. Interval]	
Parliamentary	64	.932	.018	.147	.895	.969
Presidential	48	.629	.057	.398	.514	.745
combined	112	.802	.030	.319	.742	.862
diff		.303	.060		.182	.424
Ha : diff != 0				t = 5.020		
Pr(|T| > |t|)=0.000				Satterthwaite's degrees of freedom = 56.653		

TABLE B.36: Animal or vegetable fats and oils

Group	Obs	Mean	Std. Err.	Std. Dev.	[95% Conf. Interval]	
Parliamentary	64	.899	.021	.171	.856	.942
Presidential	48	.516	.065	.449	.386	.647
combined	112	.735	.035	.372	.665	.805
diff		.383	.068		.246	.519
Ha : diff != 0				t = 5.601		
Pr(|T| > |t|)=0.000				Satterthwaite's degrees of freedom = 57.300		

TABLE B.37: Edible preparations; beverages; tobacco

Group	Obs	Mean	Std. Err.	Std. Dev.	[95% Conf. Interval]	
Parliamentary	64	.960	.007	.054	.946	.973
Presidential	48	.599	.064	.442	.471	.727
combined	112	.805	.032	.341	.741	.869
diff		.361	.064		.232	.490
Ha : diff != 0				t = 5.630		
Pr(|T| > |t|)=0.000				Satterthwaite's degrees of freedom = 48.056		

TABLE B.38: Chemicals and chemical products

Group	Obs	Mean	Std. Err.	Std. Dev.	[95% Conf. Interval]	
Parliamentary	64	.762	.036	.290	.689	.834
Presidential	48	.549	.058	.399	.433	.665
combined	112	.671	.034	.355	.604	.737
diff		.212	.068		.077	.348
Ha : diff != 0				t = 3.122		
Pr(|T| > |t|)=0.003				Satterthwaite's degrees of freedom = 82.040		

TABLE B.39: Plastics and Rubber

Group	Obs	Mean	Std. Err.	Std. Dev.	[95% Conf. Interval]	
Parliamentary	64	.646	.057	.459	.532	.761
Presidential	48	.498	.067	.466	.363	.634
combined	112	.583	.044	.466	.496	.670
diff		.148	.088		-.028	.323
Ha : diff != 0				t = 1.672		
Pr(|T| > |t|)=0.098				Satterthwaite's degrees of freedom = 100.585		

TABLE B.40: Skins and leather

Group	Obs	Mean	Std. Err.	Std. Dev.	[95% Conf.	Interval]
Parliamentary	64	.807	.027	.218	.752	.861
Presidential	48	.573	.051	.352	.471	.676
combined	112	.707	.029	.305	.650	.764
diff		.233	.058		.118	.348
Ha : diff != 0				t = 4.042		
Pr(|T| > |t|)=0.000				Satterthwaite's degrees of freedom = 73.443		

TABLE B.41: Wood articles

Group	Obs	Mean	Std. Err.	Std. Dev.	[95% Conf.	Interval]
Parliamentary	64	.807	.039	.314	.728	.885
Presidential	48	.557	.055	.382	.446	.668
combined	112	.699	.034	.365	.631	.768
diff		.250	.068		.115	.384
Ha : diff != 0				t = 3.692		
Pr(|T| > |t|)=0.000				Satterthwaite's degrees of freedom = 89.662		

TABLE B.42: Pulp and paper articles

Group	Obs	Mean	Std. Err.	Std. Dev.	[95% Conf.	Interval]
Parliamentary	64	.614	.057	.453	.501	.727
Presidential	48	.488	.063	.435	.362	.614
combined	112	.560	.042	.448	.476	.644
diff		.126	.085		-.042	.293
Ha : diff != 0				t = 1.488		
Pr(|T| > |t|)=0.140				Satterthwaite's degrees of freedom = 103.566		

TABLE B.43: Textiles

Group	Obs	Mean	Std. Err.	Std. Dev.	[95% Conf.	Interval]
Parliamentary	64	.654	.053	.422	.549	.760
Presidential	48	.783	.053	.369	.676	.890
combined	112	.710	.038	.403	.634	.785
diff		-.129	.075		-.277	.020
Ha : diff != 0				t = -1.720		
Pr(|T| > |t|)=0.088				Satterthwaite's degrees of freedom = 107.363		

TABLE B.44: Footwear, headgear, umbrellas

Group	Obs	Mean	Std. Err.	Std. Dev.	[95% Conf. Interval]	
Parliamentary	64	.694	.040	.323	.613	.774
Presidential	48	.602	.047	.328	.507	.697
combined	112	.654	.031	.327	.593	.716
diff		.092	.062		-.032	.215
Ha : diff != 0				t = 1.475		
Pr($\|T\| > \|t\|$)=0.143				Satterthwaite's degrees of freedom = 100.418		

TABLE B.45: Stones, ceramics, glass

Group	Obs	Mean	Std. Err.	Std. Dev.	[95% Conf. Interval]	
Parliamentary	64	.640	.057	.454	.526	.753
Presidential	48	.567	.059	.412	.448	.687
combined	112	.609	.041	.436	.527	.691
diff		.072	.082		-.091	.235
Ha : diff != 0				t = 0.882		
Pr($\|T\| > \|t\|$)=0.380				Satterthwaite's degrees of freedom = 106.034		

TABLE B.46: Pearls and precious stones

Group	Obs	Mean	Std. Err.	Std. Dev.	[95% Conf. Interval]	
Parliamentary	64	.735	.052	.418	.630	.839
Presidential	48	.597	.059	.412	.478	.717
combined	112	.676	.040	.419	.597	.754
diff		.137	.079		-.020	.294
Ha : diff != 0				t = 1.734		
Pr($\|T\| > \|t\|$)=0.086				Satterthwaite's degrees of freedom = 102.208		

TABLE B.47: Base metals

Group	Obs	Mean	Std. Err.	Std. Dev.	[95% Conf. Interval]	
Parliamentary	64	.642	.055	.442	.532	.753
Presidential	48	.502	.064	.447	.372	.632
combined	112	.582	.042	.447	.498	.666
diff		.140	.085		-.028	.308
Ha : diff != 0				t = 1.650		
Pr($\|T\| > \|t\|$)=0.102				Satterthwaite's degrees of freedom = 100.77		

TABLE B.48: Machinery

Group	Obs	Mean	Std. Err.	Std. Dev.	[95% Conf.	Interval]
Parliamentary	64	.823	.029	.230	.766	.881
Presidential	48	.515	.062	.432	.389	.640
combined	112	.691	.034	.364	.623	.759
diff		.309	.069		.172	.446
Ha : diff != 0				t = 4.496		
Pr($\|T\| > \|t\|$)=0.000				Satterthwaite's degrees of freedom = 66.948		

TABLE B.49: Vehicles

Group	Obs	Mean	Std. Err.	Std. Dev.	[95% Conf.	Interval]
Parliamentary	64	.721	.044	.355	.632	.810
Presidential	48	.541	.061	.425	.418	.665
combined	112	.644	.037	.395	.570	.718
diff		.180	.076		.029	.330
Ha : diff != 0				t = 2.373		
Pr($\|T\| > \|t\|$)=0.020				Satterthwaite's degrees of freedom = 90.586		

TABLE B.50: Photographic instruments; medical instruments; clocks, etc.; musical instruments

Group	Obs	Mean	Std. Err.	Std. Dev.	[95% Conf.	Interval]
Parliamentary	64	.688	.044	.352	.600	.776
Presidential	48	.500	.061	.421	.378	.622
combined	112	.607	.037	.392	.534	.681
diff		.188	.075		.039	.337
Ha : diff != 0				t = 2.504		
Pr($\|T\| > \|t\|$)=0.014				Satterthwaite's degrees of freedom = 90.565		

TABLE B.51: Minerals, mineral products

Group	Obs	Mean	Std. Err.	Std. Dev.	[95% Conf.	Interval]
Parliamentary	64	.725	.043	.345	.639	.811
Presidential	48	.635	.057	.398	.520	.751
combined	112	.686	.035	.370	.617	.756
diff		.090	.072		-.053	.232
Ha : diff != 0				t = 1.248		
Pr($\|T\| > \|t\|$)=0.215				Satterthwaite's degrees of freedom = 92.935		

TABLE B.52: Arms and ammunition

Group	Obs	Mean	Std. Err.	Std. Dev.	[95% Conf. Interval]	
Parliamentary	64	.872	.030	.237	.813	.932
Presidential	39	.571	.062	.390	.444	.697
combined	103	.758	.033	.336	.693	.824
diff		.302	.069		.163	.440
Ha : diff != 0				t = 4.361		
Pr($\|T\| > \|t\|$)=0.000				Satterthwaite's degrees of freedom = 55.292		

TABLE B.53: Miscellaneous items

Group	Obs	Mean	Std. Err.	Std. Dev.	[95% Conf. Interval]	
Parliamentary	64	.655	.049	.395	.556	.754
Presidential	48	.503	.057	.395	.388	.618
combined	112	.590	.038	.401	.515	.665
diff		.152	.075		.002	.302
Ha : diff != 0				t = 2.013		
Pr($\|T\| > \|t\|$)= 0.047				Satterthwaite's degrees of freedom = 101.43		

TABLE B.54: Art works and antiques

Group	Obs	Mean	Std. Err.	Std. Dev.	[95% Conf. Interval]	
Parliamentary	64	.857	.031	.249	.795	.919
Presidential	46	.587	.068	.465	.449	.725
combined	110	.744	.036	.378	.673	.816
diff		.270	.075		.119	.420
Ha : diff != 0				t = 3.585		
Pr($\|T\| > \|t\|$)= 0.001				Satterthwaite's degrees of freedom = 63.623		

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Summary

While various treaties and agreements have substantially reduced tariff rates on most traded goods, international trade is still burdened by restrictive laws and regulations. As a result, policymakers have shifted their focus to these non-tariff measures which have the potential to adversely affect trade flows. One such example is the Association of Southeast Asian Nations' (ASEAN) efforts to harmonize and reduce non-tariff measures, as well as eliminate non-tariff barriers, all of which are embodied in both treaty and soft law commitments. Nevertheless, these measures have persisted, and even increased, in ASEAN during the past decades.

This thesis aims to shed light on the persistence of non-tariff measures in ASEAN. It begins with an analysis of the issues on compliance with, and effectiveness of, the region's international law instruments relating to non-tariff measures. The persistence of non-tariff measures may be due to the trade regime's inability to provide the Member States with sufficient incentives to comply with their obligations. Not only did the vaguely worded instruments fail to identify the focal points for cooperative behavior, but they also granted the Member States a wide scope of discretion with respect to the fulfillment of their commitments. In addition, the weaknesses in the region's trade regime and enforcement mechanisms undermined the effectiveness of other compliance mechanisms.

As this persistence issue concerns the actions of States, it is also necessary to consider their underlying motivations. It is noteworthy that the persistence of non-tariff measures coincided with significant structural changes in the region's economies. This begs the question of whether structural changes may explain the Member States' demand and preferences for non-tariff measures. This thesis shows how these structural changes may have influenced the preferences of different actors in the Member States for non-tariff measures. For some Member States, their rising use of non-tariff measures may be due to an increased regulatory demand. As trade liberalization and globalization permitted the influx of imports, the resulting product heterogeneity created a demand for increased regulatory controls. In this context, non-tariff measures address

market failures and externalities, such as by signaling and ensuring product quality. For others, however, the structural changes may have prompted declining sectors, particularly agriculture, to lobby for protection which came in the form of non-tariff measures.

The last part of this thesis builds upon these insights and extends the analysis to an examination of the underlying determinants of trade policy in the region. Relationships between non-tariff measure incidence and various political and economic factors were examined to determine possible links between them, and the strength and direction of association, if any. The results indicate that economic factors, particularly sectoral trends, do matter. Sectoral economic trends influence societal preferences for trade policies. Additionally, the degree of political insulation and accountability may affect how governments respond to these societal preferences, as reflected in laws, policies, and regulations.

In other words, non-tariff measures persist in ASEAN because its trade regime failed to overcome the policymakers' interests in catering to the societal preferences for different kinds of trade measures, which preferences resulted from the structural changes of the past decades.

Samenvatting

Hoewel tarieven over de meeste verhandelde goederen dankzij diverse verdragen en overeenkomsten aanzienlijk zijn verlaagd, wordt de internationale handel nog altijd geplaagd door beperkende wet- en regelgeving. Als gevolg daarvan zijn beleidsmakers zich gaan richten op deze non-tarifaire maatregelen, die een negatief effect kunnen hebben op handelsstromen. Een voorbeeld daarvan zijn de pogingen van de Associatie van Zuidoost-Aziatische Naties (ASEAN) om non-tarifaire maatregelen te harmoniseren en te verminderen en non-tarifaire belemmeringen te elimineren, die alle zijn vervat in zowel verdrags- als soft law-verplichtingen. Ondanks die pogingen zijn die non-tarifaire maatregelen in ASEAN in de afgelopen decennia blijven bestaan. Ze zijn zelfs toegenomen.

Het doel van dit proefschrift is het belichten van de aanhoudende non-tarifaire maatregelen in ASEAN. Het begint met een analyse van de problemen inzake conformiteit met, en effectiviteit van, de internationale instrumenten op het gebied van non-tarifaire maatregelen. Het voortduren van non-tarifaire maatregelen zou het gevolg kunnen zijn van het onvermogen van het handelsregime om de lidstaten voldoende prikkels te bieden om te voldoen aan hun verplichtingen. Niet alleen lieten de vaag verwoorde instrumenten na de focuspunten voor coöperatief gedrag te benoemen, ze boden de lidstaten ook een ruime beoordelingsvrijheid betreffende het nakomen van hun verplichtingen. Daarnaast ondermijnden de tekortkomingen van het handelsregime en de handhavingsmechanismen in het gebied de doeltreffendheid van andere nalevingsmechanismen.

Aangezien dit aanhoudende probleem van invloed is op het gedrag van staten, moeten ook hun onderliggende beweegredenen worden bekeken. Het is opmerkelijk dat het aanhouden van non-tarifaire maatregelen samenliep met significante structurele veranderingen aangaande de economie in het gebied. Dat roept de vraag op of de lidstaten vanwege die structurele veranderingen behoefte aan en voorkeur voor non-tarifaire maatregelen hebben. Dit proefschrift toont hoe die structurele veranderingen er wellicht voor hebben gezorgd dat verschillende betrokkenen in de lidstaten de voorkeur geven aan

non-tarifaire maatregelen. In sommige lidstaten is het toenemend gebruik van non-tarifaire maatregelen mogelijk toe te schrijven aan een grotere vraag naar regelgeving. Terwijl handelsliberalisatie en globalisering de instroom van import mogelijk maakte, creëerde de daaruit voortvloeiende producttheterogeniteit de behoefte aan meer wettelijke controle. In dit opzicht pakken non-tarifaire maatregelen marktfalen en externaliteiten aan, bijvoorbeeld door productkwaliteit te signaleren en waarborgen. Aan de andere kant echter hebben de structurele veranderingen afnemende sectoren, met name de landbouw, er mogelijk toe aangezet te pleiten voor bescherming, wat leidde tot de non-tarifaire maatregelen.

In het laatste deel van dit proefschrift wordt voortgebouwd op deze inzichten en wordt de analyse doorgetrokken naar een onderzoek van de onderliggende factoren van het handelsbeleid in het gebied. De verhouding tussen de incidentie van non-tarifaire maatregelen en diverse politieke en economische factoren is onderzocht om vast te stellen of er een verband tussen bestaat; en zo ja, wat de kracht en richting van dat verband is. Het resultaat duidt erop dat economische factoren, met name sectorale trends, zeker van belang zijn. Sectorale economische trends zijn van invloed op de maatschappelijke voorkeur voor een specifiek handelsbeleid. Daarnaast kan de mate van politieke isolatie en verantwoordelijkheid bepalen hoe overheden reageren op deze maatschappelijke voorkeur, zoals wordt weerspiegeld in wetten, beleid en regelgeving.

Met andere woorden: non-tarifaire maatregelen blijven voortduren in ASEAN, omdat het handelsregime aldaar niet in staat is geweest het belang van de beleidsmakers om tegemoet te komen aan de maatschappelijke voorkeur (het resultaat van de structurele veranderingen in de afgelopen decennia) voor verschillende vormen van handelsmaatregelen, te ondervangen.

European Doctorate in Law & Economics

Curriculum vitae

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Short bio	
Gemelee has a European Master in Law and Economics (LL.M) from the University of Hamburg and Erasmus University Rotterdam. She is also a lawyer, and she has practiced in both the private and public sectors. She formerly served as Securities Counsel with the Philippine Securities and Exchange Commission, where she was tasked with both regulatory and policy-making functions. She has also worked as a Junior Associate with the Commercial and Tax Law Departments of top law firms in the Philippines. She is currently writing her doctoral research in law and economics at the University of Bologna, under the European Doctorate in Law and Economics programme. She is fluent in both English and Filipino, and is currently learning German.	
Education	
European Doctorate in Law and Economics (PhD) – University of Bologna, Erasmus University Rotterdam, and University of Hamburg	2015 -
European Master in Law and Economics (LL.M) – University of Hamburg, and Erasmus University Rotterdam	2014 - 2015
Juris Doctor – University of the Philippines	2005 - 2009
Bachelor's Degree (AB), Economics – Ateneo de Manila University	2001 - 2005
Work experience	
Securities Counsel III – Securities and Exchange Commission, Philippines	2012 - 2014
Junior Associate – Esguerra & Blanco Law Offices, Philippines	2011 - 2012
Junior Associate – Villaraza Cruz Marcelo & Angangco (CVC Law), Philippines	2010 - 2011
Legal Assistant – Jimeno Cope & David Law Offices, Philippines	2010
Law Intern – Office of Legal Aid, University of the Philippines	2008 - 2009
Prizes and awards	
Graduated with honours (Honourable Mention), Ateneo de Manila University	2005
Second place for best thesis, "Income and Environmental Degradation: the Application of the Environmental Kuznets Curve on the Philippines"	2005
Dean's List, Ateneo de Manila University	2002 - 2004
Others	
Member, Integrated Bar of the Philippines	
Well-versed in both common and civil law	
Good command of LaTeX	

European Doctorate in Law & Economics

EDLE PhD Portfolio

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PhD training

Bologna courses	***year***
Experimental Economics, Methods	2015
Introduction to European Competition Law	2015
Modelling Private Law	2015
Experimental Economics, Topics	2016
Behavioural Law and Economics and Enforcement Mechanisms	2016
Game Theory and the Law	2016
Econometrics I	2016
Technology, Geography and Trade	2016
International Trade and Institutions	2016
Specific courses	***year***
International Trade Theory (Johns Hopkins University, Bologna)	2015
Academic Writing in English for PhD Students (Rotterdam)	2016
Seminar Series – Empirical Legal Studies (Rotterdam)	2017
Seminars and workshops	***year***
EDLE Bologna November seminar (attendance)	2015
Reading group on international trade, University of Bologna (attendance)	2015 - 2016
Hamburg Institute of Law and Economics Summer Workshops (attendance)	2016
Rotterdam Fall EDLE Seminar Series (peer feedback)	2016
Rotterdam Winter EDLE Seminar Series (peer feedback)	2017
Seminar Series – Empirical Legal Studies, Rotterdam (attendance)	2017
Workshop on Scientific Misconduct, Rotterdam (attendance)	2017
The Common Law of Contracts and the Default Rule Project, Rotterdam (attendance)	2017
Joint Seminar - “The Future of Law and Economics”, Maastricht (attendance)	2017
The Global Evolution of Corporate Prosecutions, University of Bologna (attendance)	2017

EDLE Bologna November seminar (presenter)	2017
Joint Seminar – "The Future of Law and Economics", Paris (presenter)	2018
Presentations	***year***
Bologna March EDLE Seminar	2016
Hamburg June EDLE Seminar	2016
Rotterdam Fall EDLE Seminar Series	2016
Rotterdam Winter EDLE Seminar Series	2017
EDLE Bologna November Seminar	2017
European Master in Law and Economics Midterm Meeting, Rotterdam	2018
Joint Seminar – "The Future of Law and Economics", Paris	2018
Attendance (international) conferences	***year***
European Master in Law and Economics Midterm Meeting, Hamburg (attendance)	2016
World Economics Association Online Conference: Public Law and Economics (paper presenter)	2017
European Master in Law and Economics Midterm Meeting, Rotterdam (speaker)	2018