THE NECESSITY TEST IN ARTICLE 2.2 OF THE TBT AGREEMENT

A systematic legal analysis of Article 2.2 of the TBT Agreement under the current jurisprudence

M.Sc. Master Thesis
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Preface

As a student with a scientific background, I have never imagined that I would be able to complete legal research in international trade law, especially in legal interpretation. Exploring a new filed is a time-consuming journey full of joy and tears. During the research, I have gained lots of support from my supervisors, friends, and family members and I would like to take this opportunity to express my gratitude.

First, I would like to thank my supervisor Dr. Alexia Herwig who gave me a chance to write my MSc Thesis Project under the topic of WTO law. Thank you for your valuable comments and guidance to help complete this thesis project. At the beginning of the project, I did not know much about the legal aspects of WTO law. Thank you for your patience to walk me into the field, especially during the research design process. I would also like to thank Dr. Kai Purnhagen for his course Global Economic (Trade) Law and Risk Regulation, where I developed my interest in international trade law.

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Many thanks to my parents who gave me the continuously mental support and positive energy.

Abstract

The TBT Agreement aims to achieve a balance between trade liberalization and regulatory autonomy. Article 2.2 of the TBT Agreement acts as a necessity test to assess whether a technical regulation is more trade-restrictive than necessary, taking account of the risks non-fulfilment would create. It involves a holistic weighing and balancing of all relevant factors. Legal uncertainties exist in how the weighing and balancing takes place and the meaning of each element in the necessity test. Doctrinal legal research was conducted to provide a systematic legal analysis of TBT Article 2.2 with the latest jurisprudence in *Article 21.5 US – COOL* and *Australia – Tobacco Plain Packaging*. A close relationship between TBT Article 2.1 and TBT Article 2.1 was identified through the negotiating history and the linkage between "competitive opportunities" and "trade-restrictiveness". Non-discriminatory internal measures can be found to be trade-restrictiveness due to the reduced volume of imported products. A notion of "margin of appreciation" has been introduced in assessing the equivalence of the respective degrees of contribution between the measure at issue and the proposed alternatives. "The risks non-fulfilment would create" can inform such margin of appreciation. "The nature of the risks" is a constant with the objective being constant, and "the gravity of the consequences that would arise from non-fulfilment of the legitimate objective" is correlated to the relative importance of the objective to the regulating Member. The burden of proof under TBT Article 2.2 falls on the complainant to establish a *prima facie* case that a less trade-restrictive alternative measure, which also achieves an equivalent contribution to the relevant objective, would be reasonably available. WTO Panels take economic and technical feasibility into account when assessing the reasonably availability of a proposed alternative. Recommendations on the evidence requirement and for further research ideas were provided in the end

Keywords: Article 2.2 of the TBT Agreement, necessity test, weighing and balancing, trade-restrictiveness, the risks non-fulfilment would create, evidence

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List of Abbreviations

Abbreviations	Descriptions
COOL	Country of Origin Labelling
DSB	Dispute Settlement Body
DSU	Understanding on rules and procedures governing the settlement of disputes
GATS	General Agreement on Trade in Services
GATT 1947	General Agreement on Tariffs and Trade 1947
GATT 1994	General Agreement on Tariffs and Trade 1994
MFN	Most-favored-nation treatment
NTM	Non-tariff measures
Panels	panel and Appellate Body
SPS	Sanitary and Phytosanitary
SPS Agreement	Agreement on the Application of Sanitary and Phytosanitary Measures
STC	Specific Trade Concerns
TBT Agreement	Agreement on Technical Barriers to Trade
TPP	Tobacco Plain Packaging
VCLT	Vienna Convention on the Law of Treaties
WTO	World Trade Organization
WTO Agreement	Marrakesh Agreement Establishing the World Trade Organization

List of Abbreviated Dispute Names and Their Citations

Short title	Full case title and citation
Australia – Tobacco Plain Packaging (Cuba)	Panel Report, *Australia – Certain Measures concerning Trademarks, Geographical Indications and other Plain Packaging Requirements applicable to Tobacco Products and Packaging*, WT/DS458/R, Add.1 and Suppl.1, adopted 27 August 2018
Australia – Tobacco Plain Packaging (Dominican Republic)	Panel Report, *Australia – Certain Measures concerning Trademarks, Geographical Indications and other Plain Packaging Requirements applicable to Tobacco Products and Packaging*, WT/DS441/R, Add.1 and Suppl.1, circulated to WTO Members 28 June 2018 [appealed by the Dominican Republic 23 August 2018]
Australia – Tobacco Plain Packaging (Honduras)	Panel Report, *Australia – Certain Measures concerning Trademarks, Geographical Indications and other Plain Packaging Requirements applicable to Tobacco Products and Packaging*, WT/DS435/R, Add.1 and Suppl.1, circulated to WTO Members 28 June 2018 [appealed by Honduras 19 July 2018]
Australia – Tobacco Plain Packaging (Indonesia)	Panel Report, *Australia – Certain Measures concerning Trademarks, Geographical Indications and other Plain Packaging Requirements applicable to Tobacco Products and Packaging*, WT/DS467/R, Add.1 and Suppl.1, adopted 27 August 2018
Brazil – Retreaded Tyres	Appellate Body Report, *Brazil – Measures Affecting Imports of Retreaded Tyres*, WT/DS332/AB/R, adopted 17 December 2007, DSR 2007:IV, p. 1527
China – Publications and Audiovisual Products	Appellate Body Report, *China – Measures Affecting Trading Rights and Distribution Services for Certain Publications and Audiovisual Entertainment Products*, WT/DS363/AB/R, adopted 19 January 2010, DSR 2010:I, p. 3
EC – Asbestos	Appellate Body Report, *European Communities – Measures Affecting Asbestos and Asbestos-Containing Products*, WT/DS135/AB/R, adopted 5 April 2001, DSR 2001:VII, p. 3243
EC – Seal Products	Appellate Body Reports, *European Communities – Measures Prohibiting the Importation and Marketing of Seal Products*, WT/DS400/AB/R / WT/DS401/AB/R, adopted 18 June 2014, DSR 2014:I, p. 7
EC – Seal Products	Panel Reports, *European Communities – Measures Prohibiting the Importation and Marketing of Seal Products*, WT/DS400/R and Add.1 / WT/DS401/R and Add.1, adopted 18 June 2014, as modified by Appellate Body Reports WT/DS400/AB/R / WT/DS401/AB/R, DSR 2014:II, p. 365
Japan – Alcoholic Beverages II	Appellate Body Report, Japan – Taxes on Alcoholic Beverages, WT/DS8/AB/R, WT/DS10/AB/R, WT/DS11/AB/R, adopted 1 November 1996, DSR 1996:I, p. 97

US – Clove Cigarettes	Appellate Body Report, *United States – Measures Affecting the Production and Sale of Clove Cigarettes*, WT/DS406/AB/R, adopted 24 April 2012, DSR 2012: XI, p. 5751
US – Clove Cigarettes	Panel Report, *United States – Measures Affecting the Production and Sale of Clove Cigarettes*, WT/DS406/R, adopted 24 April 2012, as modified by Appellate Body Report WT/DS406/AB/R, DSR 2012: XI, p. 5865
US – Continued Zeroing	Appellate Body Report, *United States – Continued Existence and Application of Zeroing Methodology*, WT/DS350/AB/R, adopted 19 February 2009, DSR 2009:III, p. 1291
US – COOL	Appellate Body Reports, *United States – Certain Country of Origin Labelling (COOL) Requirements*, WT/DS384/AB/R / WT/DS386/AB/R, adopted 23 July 2012, DSR 2012:V, p. 2449
US – COOL	Panel Reports, *United States – Certain Country of Origin Labelling (COOL) Requirements*, WT/DS384/R / WT/DS386/R, adopted 23 July 2012, as modified by Appellate Body Reports WT/DS384/AB/R / WT/DS386/AB/R, DSR 2012:VI, p. 2745
US – COOL (Article 21.5 – Canada and Mexico)	Appellate Body Reports, *United States – Certain Country of Origin Labelling (COOL) Requirements – Recourse to Article 21.5 of the DSU by Canada and Mexico*, WT/DS384/AB/RW / WT/DS386/AB/RW, adopted 29 May 2015
US – COOL (Article 21.5 – Canada and Mexico)	Panel Reports, *United States – Certain Country of Origin Labelling (COOL) Requirements – Recourse to Article 21.5 of the DSU by Canada and Mexico*, WT/DS384/RW and Add.1 / WT/DS386/RW and Add.1, adopted 29 May 2015, as modified by Appellate Body Reports WT/DS384/AB/RW / WT/DS386/AB/RW
US – Gambling	Appellate Body Report, *United States – Measures Affecting the Cross-Border Supply of Gambling and Betting Services*, WT/DS285/AB/R, adopted 20 April 2005, DSR 2005:XII, p. 5663 (and Corr.1, DSR 2006:XII, p. 5475)
US – Gasoline	Panel Report, *United States – Standards for Reformulated and Conventional Gasoline*, WT/DS2/R, adopted 20 May 1996, as modified by Appellate Body Report WT/DS2/AB/R, DSR 1996:I, p. 29
US – Tuna II (Mexico)	Appellate Body Report, *United States – Measures Concerning the Importation, Marketing and Sale of Tuna and Tuna Products*, WT/DS381/AB/R, adopted 13 June 2012, DSR 2012:IV, p. 1837
US – Tuna II (Mexico)	Panel Report, *United States – Measures Concerning the Importation, Marketing and Sale of Tuna and Tuna Products*, WT/DS381/R, adopted 13 June 2012, as modified by Appellate Body Report WT/DS381/AB/R, DSR 2012:IV, p. 2013

Chapter 1: Introduction

1.1 Research Background

Since the signing of the General Agreement on Tariffs and Trade 1947 (GATT 1947)[1], the statutory tariffs have declined significantly. However, non-tariff measures (NTMs) including technical regulations, standards, and conformity assessment procedures have been taken by certain contracting parties to create trade barriers in international trade.[2] Consequently, the Agreement on Technical Barriers to Trade (TBT Agreement)[3], as a part of the border category of WTO agreements dealing with such NTMs, entered into force in 1995.[4]

In the context of the TBT Agreement, Article 2.2 acts as a necessity test, requiring that technical regulation shall not be "more trade-restrictive than necessary to fulfil a legitimate objective".[5] This provision lay dormant for more than a decade since the establishment of the World Trade Organization (WTO) in 1995. It was not until 2012 that the Appellate Body first interpreted the provision through a trilogy of cases including the *US – Tuna II (Mexico)*[6], *US – COOL*[7], *US – Clove Cigarettes*[8]. Another opportunity was given to clarify the provision in the *EC – Seal Products* dispute, however, the Panel's findings and reasoning were eventually found to be "moot and of no legal effect" because the Appellate Body reversed the Panel's finding that the challenged seal regime is a technical regulation.[9] In 2015, the Appellate Body Report of *US – COOL (Article 21.5)*, which contains a more systematic legal interpretation of Article 2.2 and its application, was circulated.[10] The latest report analyzing Article 2.2 is the panel report of *Australia – Tobacco Plain Packaging*, which was adopted in August 2018.[11] In total, there have been five disputes concerning Article 2.2 of the TBT Agreement.[12]

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[1] General Agreement on Tariffs and Trade, Oct. 30, 1947, 61 Stat. A-11, 55 U.N.T.S. 194 [hereinafter GATT 1947].

[2] Appleton, A. (2003). 3.10 Technical Barriers to Trade. In *United Nations Conference on Trade and Development (UNCTAD),* at 3-4.

[3] Agreement on Technical Barriers to Trade, Apr. 15, 1994, Marrakesh Agreement Establishing the World Trade Organization, Annex 1A, 1868 U.N.T.S. 120 [hereinafter TBT Agreement].

[4] The WTO Secretariat. (2014). Technical Barriers to Trade. In *The WTO Agreements Series* (pp. 1–152). World Trade Organization. Retrieved from https://www.wto.org/english/res_e/publications_e/tbttotrade_e.pdf , at 11.

[5] Article 2.2, the TBT Agreement, *supra* note 3.

[6] Appellate Body Report, *US – Tuna II (Mexico)*, WT/DS381/AB/R, adopted 13 June 2012.

[7] Appellate Body Report, *US – COOL*, WT/DS384/AB/R / WT/DS386/AB/R, adopted 23 July 2012.

[8] Appellate Body Report, *US – Clove Cigarettes*, WT/DS406/AB/R, adopted 24 April 2012.

[9] Appellate Body Report, *EC – Seal Products*, WT/DS400/AB/R, WT/DS401/AB/R, WT/DS400/R and Add.1 / WT/DS401/R and Add.1, adopted 18 June 2014.

[10] Appellate Body Report, *US – COOL (Article 21.5 – Canada and Mexico)*, WT/DS384/AB/RW, adopted 29 May 2015 [hereinafter *Article 21.5 US – COOL*].

[11] Panel Report, *Australia – Tobacco Plain Packaging*, WT/DS458/R / WT/DS441/R / WT/DS435/R / WT/DS467/R, Adopted 27 August 2018.

[12] Cut-off date is Aug 7, 2019.

With the development of case law, the legal standard under Article 2.2 of the TBT Agreement got revealed. Essentially, it starts by investigating whether the objective(s) of the measure at issue is legitimate. In doing so, WTO adjudicators including panel and Appellate Body may take into account "the texts of statutes, legislative history, and other evidence regarding the structure and operation of the measure."[13] Then, the necessity analysis begins at earnest and focuses on whether the measure is "more trade-restrictive than necessary to fulfil a legitimate objective."[14] The necessity test under Article 2.2 of the TBT Agreement adopts a similar analysis as Article XX of the GATT 1994[15] and Article XIV of the GATS[16], in which "necessity' is determined based on 'weighing and balancing' a number of factors".[17] In the context of TBT Article 2.2, the necessity test involves "a relational analysis of the trade-restrictiveness of the technical regulation, the degree of contribution that it makes to the achievement of a legitimate objective, and the risks non-fulfilment would create".[18] In most cases, a comparative analysis between the challenged measure and proposed alternative measures should be undertaken.[19] Comparisons are made to assess "whether the proposed alternative is less trade-restrictive, whether it would make an equivalent contribution to the relevant legitimate objective, taking account of the risks non-fulfilment would create, and whether it is reasonably available".[20]

Although the two-step analysis of the necessity test and the relevant factors needed to be taken into account have been clarified, some critiques have been raised by scholars as regards to the legal interpretation of Article 2.2 of the TBT Agreement. To be more specific, the meaning of some elements in the necessity test including "trade-restrictiveness" and "the risks non-fulfilment would create" remain vague, and thus cast doubt on how the process of "weighing and balancing" take place in the necessity test under TBT Article 2.2.

Although the term "trade-restrictiveness" has a broad meaning of "the limiting effect on

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[13] Appellate Body Report, *US – Tuna II*, *supra* note 6 at para. 314; Appellate Body Report, *US – COOL, supra* note 7 at para. 371.

[14] Sanchez, A., & Aneno, K. S. (2016). Article 2.2 of the TBT Agreement: More Complicated than Necessary? *Global Trade and Customs Journal*, *11*(9), 369–377, at 370.

[15] General Agreement on Tariffs and Trade 1994, Apr. 15, 1994, Marrakesh Agreement Establishing the World Trade Organization, Annex 1A, 1867 U.N.T.S. 187, 33 I.L.M. 1153 (1994) [hereinafter GATT 1994].

[16] General Agreement on Trade in Services, Apr. 15, 1994, Marrakesh Agreement Establishing the World Trade Organization, Annex 1B, 1869 U.N.T.S. 183, 33 I.L.M. 1167 (1994) [hereinafter GATS].

[17] Appellate Body Report, *US – Tuna II*, *supra* note 6 at fn. 643.

[18] Appellate Body Report, *US – Tuna II*, *supra* note 6 at para.318.

[19] Appellate Body Report, *US– Tuna II*, *supra* note 6 at para. 322. Under fn. 647, the Appellate Body identify two instances where a comparison may not be required. The first situation is that the measure is not trade restrictive at all thus may not be inconsistent with Article 2.2 and the second is that although being trade restrictive, the measure makes no contribution to fulfil the legitimate objective, then it may be inconsistent with Article 2.2.

[20] Appellate Body Report, *US – Tuna II*, *supra* note 6 at para.322.

trade,"[21] its precise scope remains unclear and the WTO Panels tend to assume the existence or the degree of trade-restrictiveness without much justification.[22] In the relational analysis, Panels tend to recognize the existence of trade-restrictiveness for the inherent legal restraints embedded in the regulation without identifying to which extent the trade-restrictiveness is.[23] Without a common understanding of the concept, Sanhez & Aneno (2016) maintained that such inquiry of whether the measure at issue is trade-restrictive appears redundant since almost all the technical regulations can seem as trade-restrictive by requiring the operators to satisfy certain product requirements.[24] As for the comparative analysis, the focus is usually on the comparison of the degree of contribution while the complainant's assertion that a proposed alternative is less trade-restrictive is not routinely challenged. For instance, in the *US – Clove Cigarettes*, with the fact that Indonesia only provided a list of alternative measures without presenting any supplementary evidence, the panels still stated that "it seems clear enough that each of these measures would be less trade-restrictive than the ban on clove cigarettes."[25] However, they were reluctant to make a judgment on the potential contribution.[26] Under this logic, does it imply that the WTO Panels can simply rely on the different degree of legal restraints in different forms of technical regulation such as ban with exceptions, voluntary labeling regulation or mandatory packaging labeling without investigating the actual market effect?

Voon (2015) recognized the vagueness of the concept of "trade-restrictiveness" and found that there is no single overarching definition of trade-restrictiveness from WTO Panels' general statement.[27] After investigating the term "trade effects", "competitive opportunities", and the interrelationship between discrimination and trade-restrictiveness, she concluded that a non-discriminatory internal measure that reduces the sales of both domestic and imported products is unlikely to be "trade-restrictive." The argument is based on the proposition that a non-discriminatory domestic measure will not reduce the competitive opportunities of the imported products vis-à-vis domestic products.[28] However, her statement is proven to be false with the panel's finding of *Australia – Tobacco Plain Packaging* that Australia's non-discriminatory Tobacco Plain Packaging (TPP) measures are trade-restrictive by reducing the volume of imported tobacco products on the Australian market, and thereby have a "limiting effect" on

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[21] Appellate Body Report, *US – Tuna II*, *supra* note 6, at para. 319.

[22] Voon, T. (2015). Exploring the Meaning of Trade-Restrictiveness in the WTO. *World Trade Review*, *14*(3), 451–477. https://doi.org/10.1017/S1474745614000512 , at 476.

[23] In the Panel Report, *EC-Seals*, the Panel stated that the EU Seal Regime including the ban and exceptions is trade restrictive because "it does 'hav[e] a limiting effect on trade' by prohibiting certain seal products, including those imported from Canada and Norway, from accessing the EU market."

[24] *See* Sanchez & Aneno, *supra* note 14, at 371, fn 10, the author excluded certain technical regulations that may be trade enhancing by setting down an equivalent requirement as other countries.

[25] Panel Report, *US – Clove Cigarettes*, WT/DS406/R, adopted 24 April 2012, at para. 7.423.

[26] *See* Appellate Body Report, *US – Clove Cigarettes*, ibid. at para. 7.423.

[27] *See* Voon, *supra* note 22, at 462.

[28] Ibid, at 477.

trade.[29] The questions come whether the concept of "trade-restrictiveness" under Article 2.2 of the TBT Agreement relates more about the different extent of legal restraints, or competitive opportunities, or actual trade effects in terms of market access or lost sales.

As for the term "the risks non-fulfilment would create", Sanhez & Aneno (2016) stated that the jurisprudence of "risks non-fulfilment" has made it futileness since the interpretation leads to a repetition of another element of Article 2.2. To be more specific, the identification of "nature of the risks" and "the gravity of the consequences arising from non-fulfilment" are essentially linked to the measure's objective, which is already covered in the first step of the legal standard.[30] Also, the assessment of "the gravity of the consequences arising from non-fulfilment" has been equated with the likelihood of the alternative measures not achieving the equivalent degree of contribution, which overlaps with the "degree of contribution" in the comparative analysis.[31] They also refuted the use of "the risks non-fulfilment would create" as an element in the comparative analysis since "the nature of the risks" of the challenged measure and that of the alternative measures stays the same and cannot be compared.[32]

So far, most of the scholar analysis on Article 2.2 of the TBT Agreement was written around the time when the trio cases came out, and the later research focuses more on a specific dispute or a relevant topic such as public moral and public health. With the new jurisprudence of *Article 21.5 US – COOL* and *Australia – Tobacco Plain Packaging*, the legal standard of the necessity test under Article 2.2 of the TBT Agreement got further explained and the meaning of each element in the necessity test got clarified.

1.2 Problem Definition

Legal uncertainties exist in the legal standard under Article 2.2 of the TBT Agreement, including how the weighing and balancing test takes place and how the relevant factors are assessed. In particular, the meaning of each element in the necessity test, especially for "trade-restrictiveness" and "the risks non-fulfilment would create", are still vague. It can lead to legal uncertainty and bring legal doubt to the WTO Member about which kind of evidence is required and to which extent of strength should the supporting evidence be provided to meet the legal standard.

The importance of the issue

The existence of legal uncertainty under Article 2.2 of the TBT Agreement due to the unclarified meanings of the elements such as "trade-restrictiveness" and "the risks non-fulfilment would create" in the necessity test, may bring fear to Members when they establish domestic health warning labeling regulations in the field of food, beverage, and tobacco. In 2015, specific trade concerns (STCs) on food, beverage and tobacco regulation ranked the first

[29] Panel Report, *Australia– Tobacco Plain Packaging, supra* note 11, at para.7.1255.

[30] *See* Sanchez & Aneno, *supra* note 14, at 374-377.

[31] Ibid, at 374 – 375.

[32] Ibid, at 375.

among the regulations on all product groups.[33] However, the threats of litigation and the lack of clarity about the strength of the supporting evidence demanded by the WTO Panels are possible to sway the Members, especially for those with fewer resources, to experiment with information-based regulation to combat public health problem.[34]

The importance of clarifying the legal standard under Article 2.2 can also be reflected by the frequency of Article 2.2 being discussed in the WTO tribunal and the realm of STCs. Since the advent of the WTO in 1995, there have been 24 out of 54 disputes in which Article 2.2 have been cited in the request for consultation among all the disputes under the TBT Agreement.[35] STCs refers to the discussions of trade issues about technical regulations, conformity assessment procedures and standards, proposed, adopted or applied by other Members.[36] According to the Eighth Triennial Review adopted in November 2018, 534 STCs have been raised by WTO Members at the TBT Committee.[37] A systematic legal analysis of Article 2.2 of the TBT Agreement can facilitate the discussions of STCs considering the heavy workload.

Besides, a better understanding of the necessity test under the TBT Agreement could be beneficial to interpret other necessity tests in the WTO law such as Article XX of the GATT 1994 and Article XIV of the GATS since the adjudication bodies' interpretations in practice are usually cross-fertilized.[38]

1.3 Research Objective

The thesis provides a systematic legal analysis of Article 2.2 of the TBT Agreement under the current jurisprudence. The objective of this research is to reduce the legal uncertainties under TBT Article 2.2 by clarifying the analytical process of weighing and balancing and the meanings of the relevant factors in the necessity test, with a focus on the ambiguous terms including "trade-restrictiveness" and "the risks non-fulfilment would create".

A more precise scope of the concepts in the necessity test can help ensure the WTO Panels conduct an objective assessment and enlighten Members about which kind of evidence and to which extent of the strength of the evidence is needed to justify their propositions, thus

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[33] *DG Azevêdo praises work of standards committee on reaching 500th trade concern.* (2016, March 8-10). Retrieved from World Trade Organization: https://www.wto.org/english/news_e/news16_e/tbt_11mar16_e.htm.

[34] O'Brien, P., Gleeson, D., Room, R., & Wilkinson, C. (2018). Commentary on 'Communicating Messages About Drinking': Using the 'Big Legal Guns' to Block Alcohol Health Warning Labels. *Alcohol and Alcoholism*, 53(3), 333–336. https://doi.org/10.1093/alcalc/agx124.

[35] Cut-off date is July, 26, 2019. All information formally raised before the WTO can be accessed at https://www.wto.org/english/tratop_e/dispu_e/dispu_agreements_index_e.htm.

[36] Note By the Secretariat. Twenty-third Annual Review of the Implementation and Operation of the TBT Agreement, G/TBT/40, (Mar.12, 2018), at 16.

[37] Committee on Technical Barriers to Trade, Eighth Triennial Review of the Operation and Implementation of the Agreement on Technical Barriers to Trade Under Article 15.4, G/TBT/41, (Nov.19, 2018).

[38] Kapterian, G. (2010). A Critique of the WTO Jurisprudence on 'Necessity.' *International and Comparative Law Quarterly*, 59(01), 89. https://doi.org/10.1017/S0020589309990091, at 90-91.

providing more predictability to the multilateral trading system.

1.4 Research Questions

What is the legal standard under Article 2.2 of the TBT Agreement by WTO Panels and how to assess each element in the necessity test under the current jurisprudence?

- What is the negotiating history of TBT Article 2.2?
- What is the role of the panel and Appellate Body and which rules they should follow to interpret TBT Article 2.2?
- What are the relevant case laws, analytical process, and burden of proof of the legal standard under TBT Article 2.2?
- How to assess each element in the necessity test u nder TBT Article 2.2, with a focus on "trade-restrictiveness" and "the risks non-fulfilment would create"?

1.5 Research Method

Doctrinal legal research was conducted to answer the research question. To be more specific, it investigated what the law is and what the law asks for in the context of Article 2.2 of the TBT Agreement.

Firstly, many WTO official documents have been collected to examine how the TBT Agreement came to exist and how the text of TBT Article 2.2 was negotiated in the GATT/WTO era. Next, the introductory information on the official website has been studied to explain the role of the panel and Appellate Body, the WTO dispute settlement process. Besides, Article 31 to Article 33 of the Vienna Convention on the Law of Treaties (VCLT) have been used to show how the interpretation of TBT Article 2.2 should be carried out. In specific, the legal interpretation of the provision should be conducted in light of its text, context, and the object and purpose.

Furthermore, a systematic review of the panel and Appellate Body reports of the five disputes concerning Article 2.2 of the TBT Agreement was analyzed to find out the legal standard and the meaning of each element under the necessity test. A particular focus was cast on the latest jurisprudence including the Appellate Body Report of *Article 21.5 US– COOL* and Panel Report of *Australia – Tobacco Plain Packaging* since they added fresh insights to the legal interpretation and have clarified the legal standard to some extent. Analysis of the legal standard and Panels' interpretation of TBT Article 2.2 was carried out based on the discrepancies in different rulings with the development of case laws and with the help of secondary literature.

My primary materials are legislation and case law including *GATT 1994*, *TBT Agreement*, *Dispute Settlement Rules: Understanding on Rules and Procedures Governing the Settlement of Disputes (DSU)*, *US – Clove Cigarettes*, *US – Tuna II (Mexico)*, *US – COOL*, *EC – Seal Products* and *Australia – Tobacco Plain Packaging*. The secondary literature was collected through databases such as Heinonline, Kluwer, WUR University Library, etc.

1.6 Outline

Chapter 2 provides background information to help understand the role of Article 2.2 in the TBT Agreement and the original intention of its negotiators. It first examines why and how the TBT Agreement came to exist and what key principles it contains. Next, it explores the negotiating history of the text of Article 2.2 in the GATT/WTO era. In addition, a comparison between the necessity test under TBT Article 2.2 and GATT Article XX is presented.

Chapter 3 explains the main WTO bodies in the WTO dispute settlement process and the rules for treaty interpretation. It introduces the role of the panel and Appellate Body, the contents in the panel and Appellate Body reports, as well as the legal basis for Panels to conduct an objective assessment in the dispute under the DSU.

Chapter 4 demonstrates the legal standard under Article 2.2 of the TBT Agreement by first providing a brief review of the relevant case laws, then explaining the process of the weighing and balancing test under Article 2.2. Also, the burden of proof under Article 2.2 is discussed as a part of the legal standard.

Chapter 5 examines how the WTO Panels assess each element in the necessity test, including trade-restrictiveness, degree of contribution, the risks non-fulfilment would create, and reasonably available. For the first three elements, an analysis part is offered to discuss what is still unclear, what has been clarified within the meaning of each element in the necessity test under Article 2.2. Possible sources of evidence are presented to further conceptualize the ambiguous elements “trade-restrictiveness” and “the risks non-fulfilment would create”.

Chapter 6 and 7 are dedicated to the conclusion and recommendations of the research. For the recommendations, recommendations for both WTO Panels, the complainants and respondents in the dispute settlement process are given and recommendations for further study are provided.

Chapter 2: Article 2.2 of the TBT Agreement in Context

To understand Article 2.2 in its context, an introduction to the TBT Agreement including its historical development, scope, object and purpose, as well as key principles is first presented. Next, the negotiating history of Article 2.2 of the TBT Agreement is explored in order to understand the intent of the negotiators. Lastly, TBT Article 2.2, as a necessity test, is further introduced in the context of the necessity tests in the WTO law, and a particular comparison between TBT Article 2.2 and GATT Article XX is provided.

2.1 Introduction to the TBT Agreement

2.1.1 Historical development of the TBT Agreement

The TBT Agreement is not the first one in the GATT/WTO era to deal with technical barriers to international trade. Although not treated in great details, the term "regulation" and the term "standards" were first mentioned in the GATT 1947.[39] However, under that era, the GATT system failed to cope with technical barriers to trade due to the drawbacks of the Protocol of Provisional Application (PPA)[40], the consensus requirement in the GATT dispute settlement procedures[41], and the lack of specific provisions to target technical regulations and standards.[42]

With the rising number of non-tariff barriers to trade, in the early 1970s, Working Group 3 of the Committee on Trade In Industrial Products was set up to examine standards acting as technical barriers to trade.[43] After several years of discussions, they completed a draft code on standards.[44] Since the beginning of the Tokyo Round in 1974, a specific negotiating group was established, working on the early work of the GATT Working Group.[45] Eventually, at the end of the Tokyo Round in 1979, a plurilateral agreement *"*Standards Code*"* was signed by 32 of more than 100 GATT Contracting Parties.[46] As a predecessor, it provides a basis for the provisions of the TBT Agreement. However, it was found to be insufficient to deal with increasing technical barriers to trade because of the feature of "not-binding to all the

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[39] *See* UNCTAD, *supra* note 2 at 5.

[40] The GATT 1947 was adopted provisionally by the Contracting Parties through the PPA and the PPA allowed Parties to retain their existing trade restrictive regulations and technical barriers, making the GATT system ineffective.

[41] In the GATT dispute settlement procedures, the establishment of the panel and the adoption of panel reports were in need of a consensus requirement, thus weakening the enforcement of the dispute settlement system.

[42] Kudryavtsev, A. (2013). The TBT Agreement in context. In *Research Handbook on the WTO and Technical Barriers to Trade* (pp. 17–79). Edward Elgar Publishing. https://doi.org/10.4337/9780857936721, at 22-23.

[43] Lester, S., & Stemberg, W. (2014). The GATT Origins of TBT Agreement Articles 2.1 and 2.2. *Journal of International Economic Law*, *17*(1), 215–232. https://doi.org/10.1093/jiel/jgu012 , at 4.

[44] Ibid.

[45] Ibid.

[46] World Trade Organization. (2011). Technical Information on Technical barriers to trade. Retrieved July 29, 2019, from WTO website: https://www.wto.org/english/tratop_e/tbt_e/tbt_info_e.htm.

Contracting Parties" and the ineffective GATT dispute settlement system as described above.[47]

Eventually, the contemporary TBT Agreement was adopted in 1994 in the Uruguay Round. Unlike the Standard Code, it is an integral part of the WTO Agreement[48], and it is binding to all the WTO Members. Also, the enforcement of the TBT Agreement gets strengthened with the adoption of WTO's Dispute Settlement Understanding (DSU).[49] Besides, after prolonged trade negotiations on technical barriers to trade during the Uruguay Round, a final decision was made to separate and deal with sanitary and phytosanitary (SPS) measures in the SPS Agreement.[50]

2.1.2 Scope

With the SPS Agreement dealing with food safety, and, animal and plant health standards, the TBT Agreement deals with the other aspects and applies to "technical regulations", "standards", and "conformity assessment procedures".[51] In this research, technical regulations are the main focus as Article 2.2 sets down the preparation, adoption and application requirements for technical regulations by central government bodies.[52] According to Annex 1 of the TBT Agreement, "technical regulation" lays down product characteristics or their related processes and production methods, with which compliance is mandatory. It may also deal with "terminology, symbols, packaging, marking or labelling requirements".[53]

2.1.3 Object and purpose

According to the second, fifth and sixth recitals of the preamble of the TBT Agreement, the object and purpose of the TBT Agreement is to prevent trade protectionism and achieve a balance between trade liberalization and regulatory autonomy.[54] The TBT Agreement aims to avoid unnecessary obstacles to international trade while recognizing WTO Members' right to implement measures to protect their legitimate interests.[55]

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[47] *See* Kudryavtsev, *supra* note 42 at 24, *See* also UNCTAD, *supra* note 2 at 5-6.

[48] Marrakesh Agreement Establishing the World Trade Organization, Apr. 15, 1994, 1867 U.N.T.S. 154, 33 I.L.M. 1144 (1994) [hereinafter WTO Agreement].

[49] Understanding on Rules and Procedures Governing the Settlement of Disputes, Apr. 15, 1994, Marrakesh Agreement Establishing the World Trade Organization, Annex 2, 1869 U.N.T.S. 401 [hereinafter DSU]. *See* Articles 6.1, 16.4, 17.14 of the DSU, a reverse consensus is needed to not establish a panel, or not adopt a Panel or Appellate Panel report and in practice, such rules are nearly impossible, thus ensuring the enforcement of the WTO Agreement.

[50] Agreement on the Application of Sanitary and Phytosanitary Measures, Apr. 15, 1994, Marrakesh Agreement Establishing the World Trade Organization, Annex 1A, 1867 U.N.T.S. 493. [hereinafter SPS Agreement]

[51] Annex 1, TBT Agreement.

[52] Article 2, TBT Agreement.

[53] Annex 1, TBT Agreement.

[54] Appellate Body Report, *US – Clove Cigarettes, supra* note 8 at paras.89, 91-92, 94-96.

[55] *See* The WTO Secretariat, *supra* note 4 at 12; *See* Appellate Body Report, *US – Clove Cigarettes*, ibid. at paras. 94-96.

2.1.4 Key principles

The prevention of trade protectionism is usually achieved in two ways. One is through the non-discrimination principle, including "national treatment" [56] and "most-favored-nation" treatment (MFN)[57], and the other is through avoidance of unnecessary obstacles to trade by necessity obligation. Except for the above two core principles, the other key principles and rules can be classified in the following: the use of international standards, technical assistance and special and differential treatment for developing countries, as well as transparency.[58] Under the category of technical regulations, the nondiscrimination principle is embedded in Article 2.1 while the avoidance of unnecessary obstacles to trade is addressed in Article 2.2.

2.2 How Article 2.2 of the TBT Agreement Came Into Existence

As discussed in the historical development of the TBT Agreement, Article 2.2 of the TBT Agreement has its origin in the Tokyo Round GATT Standards Code negotiations and some earlier GATT discussions before that Round.[59] In specific, the precursor of TBT Article 2.2 is Article 2.1 of the Standards Code. In order to examine how Article 2.2 of the TBT Agreement came into existence, the negotiating history of Article 2.1 of the Standards is first examined. In particular, the choice of qualifying words is explained. Next, the evolution from Article 2.1 of the Standards Code to Article 2.2 of the TBT Agreement is discussed.

2.2.1 The negotiating history of Article 2.1 of the GATT Standards Code

The draft and discussions of the Standards Code can be divided into two phases including the draft code proposed by the Working Group 3 before the Tokyo Round and the final provision completed by the Tokyo Round negotiating group. Lester (2014) reviewed the GATT negotiation process of Article 2.1 of the Standards Code with a focus on the specific language used, the discussions of possible terminology proposed, and the evolution of the terms.[60] He found that various words and phrases have been proposed and discussed during the negotiating history of Article 2.1 of the Standards Code, which indicts the difficulty of setting the boundary of international economic law.[61]

Working Group 3 on Standards proposed GATT Code of Conduct for preventing technical barriers to trade

The first draft of GATT Code of Conduct Regarding Standards Which May Act As Technical Barriers To Trade was noted by the United Kingdom Delegation in May 1971 with the text of

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paras. 94-96.

[56] A country should not discriminate between its own and foreign products, services or nationals.

[57] A country should not discriminate between its trading partners.

[58] *See* The WTO Secretariat, Ibid, *supra* note 4 at 15. *See* also, UNCTAD, *supra* note 2 at 19.

[59] *See* Lester & Stemberg, *supra* note 43, at 215.

[60] Lester, S. (2014). Finding the Boundaries of International Economic Law. *Journal of International Economic Law*, *17*(1), 3–9. https://doi.org/10.1093/jiel/jgu011, at 4.

[61] Ibid.

"2(a) contracting parties should ensure that mandatory standards are not such as to afford protection to domestic producers."[62] At that point, it only contains one obligation which was the national treatment principle. In July 1971, a new element of "undue barriers" was suggested in the meeting requiring that "do not constitute [undue] barriers to trade".[63] It was the first indication for the obligation to go beyond non-discrimination.[64] The next major change occurred in March 1972 with the first appearance of the phrase "unnecessary obstacle to international trade".[65] While the majority of the Drafting Group accepted the new version, some disagreed and contended that it contained unacceptable loopholes and that a direct prohibition saying that "adherents shall ensure that mandatory standards are not such as to afford protection to domestic production" as proposed in the Spec72(3), should be retained.[66] In July 1972, the discussions still centered on the last phrase in the text in Spec 72(18), which was "neither the standards themselves, nor the way in which they are applied, constitute an unnecessary obstacle to trade".[67] By December 1972, the text became a shorter version without the traditional language of the national treatment principle, which read that "adherents shall ensure that mandatory standards are not prepared or applied so as to create an arbitrary or unjustifiable obstacle to international trade".[68] Different opinions were proposed by the delegations regarding the use of the text of "protection to domestic production" and the qualifying adjectives.[69] Some wanted to add explicit text to prohibit the domestic production protection while others proposed that the existing text already related both to barriers to trade and protection of domestic production.[70] Some were in favor of using the adjectives such as "arbitrary and unjustified" to qualify the text while the others supposed that such qualification should be "spelt out in detail".[71] In January 1973, the Working Group proposed a new phrase "which is not an inevitable result of basic ecological, technological or other conditions" to attempt to elaborate the concept of the "obstacle to international trade", replacing the qualifying adjectives "arbitrary and unjustifiable" with something more specified.[72] However, it did not achieve a consensus.[73] Eventually, in June 1973, the Final Report of Group 3 on Standards Proposed GATT Code of Conduct for Preventing Technical Barriers to Trade adopted a similar version of the text proposed by the European Communities in March 1973 which introduced a new language of "unjustified obstacle".[74] The text read as follows: "2(a) adherents shall ensure that mandatory standards are not prepared, adopted or applied with a view to creating obstacles

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[62] Spec (71)39.

[63] Spec (71)45/Rev.1.

[64] *See* Lester, *supra* note 60, at 5.

[65] Spec (72)18.

[66] Ibid; Spec (72)3.

[67] Spec (72)77.

[68] INT (72)130.

[69] INT (72)130.; INT (72)135.

[70] Ibid.

[71] Ibid.

[72] INT (73)3; *See* also Lester, *supra* note 60, at 6.

[73] INT (73)3.

[74] COM.IND/W/108; INT (73)23.

to international trade. They shall likewise ensure that neither mandatory standards themselves nor their application have the effect of creating an unjustifiable obstacle to international trade".[75]

Tokyo Round negotiating group on "Technical Barriers to Trade"

The report provided by Working Group 3 helped established a solid basis for the Tokyo Round negotiating group to continue to work on the issue of technical barriers to trade. During the meeting of the Sub-Group meeting on May 1975, several issues and detailed suggestions were raised concerning the Working Group 3 Report.[76] It was suggested that "the drafting should be tightened up by using 'unjustifiable or unreasonable".[77] Another language of "the application of the standards should not create obstacles to trade which were 'disproportionate to the objectives of the standards" was also suggested.[78] It was the first time for the word "proportionate" to be mentioned in the text.[79] In June 1976, two proposals were prepared by Switzerland and Canada with a difference in the language used in the last phrase.[80] To be more specific, Switzerland described the obstacle as "which are disproportionate to the legitimate objectives to the regulations concerned" while Canada proposed another language that "which are unnecessary for the achievement of the objectives of the technical regulations concerned".[81] They both noticed the relationship between the measure and the objective. It was not until January 1977 that the Secretariat recognized the two proposals and another suggestion was made that "it might be unnecessary to insert a qualifying adjective in the second sentence."[82] In March 1977, the phrase "unjustifiable obstacle" was replaced with "unnecessary obstacles".[83] Although Switzerland repeated its proposal to use the word "disproportionate" again in May 1977, the language of "unnecessary obstacles" was kept until the end.[84] Around that time, some delightful points were made on the Applicability of the Draft Standards Code to Agriculture.[85] For example, it was pointed out that many regulations introduced to protect human, animal or plant health are by nature barriers to trade, thus it was suggested that the code should include the concept that "technical regulations and standards should not be more severe than necessary".[86] The final change was in October 1978 when the national treatment principle and MFN were added in the middle of the provision.[87]

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[75] COM.IND/W/108

[76] MTN/NTM/W/12.

[77] Ibid.

[78] Ibid.

[79] *See* Lester, *supra* note 60, at 7.

[80] MTN/NTM/W/50.

[81] Ibid.

[82] MTN/NTM/W/72.

[83] MTN/NTM/W/93.

[84] MTN/NTM/W/95.

[85] MTN/AG/W/21.

[86] MTN/AG/W/21, at 7.

[87] MTN/NTM/W/192.

The three-sentences Article 2.1 of the Standards Code states:

> **Article 2: Preparation, adoption and application of technical regulations and standards by central government bodies**
>
> With respect to their central government bodies:
>
> 2.1 Parties shall ensure that technical regulations and standards are not prepared, adopted or applied with a view to creating obstacles to international trade. Furthermore, products imported from the territory of any Party shall be accorded treatment no less favourable than that accorded to like products of national origin and to like products originating in any other country in relation to such technical regulations or standards. They shall likewise ensure that neither technical regulations nor standards themselves nor their application have the effect of creating unnecessary obstacles to international trade.[88]

2.2.2 The evolution from Article 2.1 of the Standards Code to TBT Article 2.2

In the Uruguay Round, the discussions on the further improvement, clarification or expansion of the Agreement on Technical Barriers to Trade was carried out by the Negotiating Group on Multilateral Trade Negotiations Agreements and Arrangements based on the Standards Code.[89]

In May 1990, Canada submitted a proposal to amend Article 2.1 about technical regulations and standards as unnecessary obstacles to trade in the Agreement on Technical Barriers to Trade.[90] The proposal aimed to "establish a more predicable context for the adoption of technical measures" to achieve legitimate objectives for the fact that the absence of the criteria to determine whether measures were intended or applied as necessary trade obstacles weakened the enforcement of Article 2.1 in practice.[91]

The amendments were as follows:

> 2.1 Parties shall ensure that technical regulations and standards are not prepared, adopted or applied with a view to creating obstacles to international trade. Furthermore, products imported from the territory of any Party shall be accorded treatment no less favourable than that accorded to like products of national origin and to like products originating in any other country in relation to such technical regulations or standards. They shall likewise ensure that neither technical regulations nor standards themselves nor their application have the effect of creating unnecessary obstacles to international trade. In so doing, Parties shall, inter alia, ensure that technical regulations and standards including changes thereto:
>
> 2.1.1 do not contain requirements that are greater than necessary to meet objectives consistent with this Article and the specific circumstances giving rise to their adoption;
>
> 2.1.2. are based on an acceptable degree of risk associated with their objectives by taking into account, inter alia, scientific and technical evidence, consumer applications, relevant processing

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[88] Agreement on Technical Barriers to Trade ("Standards Code"), WorldTradeLaw.net, retrieved from http://www.worldtradelaw.net/document.php?id=tokyoround/standardscode.pdf. [hereinafter Standards Code]

[89] MTN.GNG/NG8/W/13.

[90] MTN.GNG/NG8/W/77.

[91] Ibid.

technology;

2.1.3. are not maintained if the circumstances giving rise to their adoption no longer exist or if the changed circumstances can be addressed in a less trade-restrictive manner;

2.1.4. are not applied in such a way as to affect imported products either originating in geographic areas where the problem being addressed does not occur or destined for industrial or consumer applications where the problem does not exist;

2.1.5. are consistent with provisions of this Article when adopted to secure compliance with international agreements or standards;

2.1.6. are consistent with provisions of this Article if different from international standards for reasons given in Article 2.2.[92]

In July 1990, a draft text of Agreement on Technical Barriers to Trade was distributed, and the degree of convergences of different areas in the text was differentiated in the type of the text.[93] The text in the bold type represented "the areas of broad convergence without prejudging its final acceptance by any participant" while the text displayed in normal type represented areas "where there are divergences, sometimes fundamental, or where further work in needed".[94] In this draft, Article 2.1 was separated into two different obligations in two provisions, which read as follows:

2.1 Parties shall ensure that products imported from the territory of any Party shall be accorded treatment no less favourable than that accorded to like products of national origin and to like products originating in any other country in relation to technical regulations.

2.2 Parties shall ensure that technical regulations are not prepared, adopted or applied with a view to or with the effect of creating unnecessary obstacles to international trade. In so doing, Parties shall, inter alia, ensure that technical regulations:

2.2.1 do not contain requirements that are more stringent or are applied more strictly than necessary to meet legitimate objectives of general public interest taking into account risks

that would be created by not meeting those objectives. Such legitimate objectives are inter alia national security requirements; prevention of deceptive practices; protection for human health or safety, animal or plant life or health, or the environment;

2.2.2 take into account an acceptable level of protection from risks mentioned in paragraph 2.1.2, as identified through appropriate risk assessment procedures, which would allow the maximum trade opportunities while ensuring the fulfilment of legitimate objectives of general public interest; risk assessment would be based on, inter alia, scientific and technical evidence, consumer applications and relevant processing technology;

2.2.3 are not maintained if the circumstances or objectives giving rise to their adoption no longer exist or if the changed circumstances or objectives can be addressed in a less trade restrictive manner;

2.2.4 are not applied in such a way as to affect products either originating in geographic areas where the problem being addressed does not occur or destined for industrial or consumer applications where the problem does not exist;

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[92] Ibid.

[93] MTN.GNG/NG8/W/83/Add.3.

[94] Ibid.

2.2.5 are formulated in such a way that the necessary requirements are based on the least trade restrictive alternatives which are reasonably available and are consistent with other provisions of this Agreement;
2.2.6 are consistent with provisions of this Agreement when adopted to comply with international agreements;[95]

After three informal meetings on 18-20 September, 9-10 October and 17-18 October 1990 by the Negotiating Group, most of the issues got solved, and a subsequent draft was presented with a substantive improvement.[96] This final version shares the same language as the current Article 2.2 of the TBT Agreement, which reads as follows.[97]

> Article 2.2 Members shall ensure that technical regulations are not prepared, adopted or applied with a view to or with the effect of creating unnecessary obstacles to international trade. For this purpose, technical regulations shall not be more trade-restrictive than necessary to fulfil a legitimate objective, taking account of the risks non-fulfilment would create. Such legitimate objectives are, inter alia: national security requirements; the prevention of deceptive practices; protection of human health or safety, animal or plant life or health, or the environment. In assessing such risks, relevant elements of consideration are, inter alia: available scientific and technical information, related processing technology or intended end-uses of products.

To sum up, the precursor of TBT Article 2.2 is Article 2.1 of the Standards Code, which has its origin in the Tokyo Round and some earlier GATT discussions. At that time, the non-discrimination principle and necessity obligation were written in the same provision, however, it later got separated and developed into the current Article 2.1 and Article 2.2 of the TBT Agreement. The relationship between the measure and the objective was noticed during the negotiating process, and various qualifying words including "undue", "proportionate", "unreasonable" and "unjustifiable" had been proposed, which indicates the difficulty of setting the boundary of international trade law. The word "unnecessary" was agreed in the end to be used for Article 2.1 of the Standards Code and kept the same till now.

2.3 Necessity Tests in the WTO Law

Article 2.2, serving as a necessity test in the TBT Agreement, seeks to achieve a balance between two opposing goals: trade liberalization while allowing WTO Members to adopt technical regulations to pursue their legitimate policy objective. Except Article 2.2 of the TBT Agreement, under the WTO agreements, many other provisions are commonly referred to as "necessity tests", for instance, Article XX and XI of the GATT, GATS Article XIV and VI:4, and Article 2.2 and Article 5.6 of the SPS Agreement.[98]

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[95] MTN.GNG/NG8/W/83/Add.3.

[96] MTN.GNG/NG8/W/83/Add.3/Rev.1.

[97] Ibid.

[98] S/WPDR/W/27, Working Party on Domestic Regulation, "Necessity tests" in the WTO, (Dec.2, 2003), at para.3.

Necessity tests establish a fundamental principle in the WTO agreements which prevents the adoption of unduly trade-restrictive measures at the expense of international trade.[99] It contains three main elements including the *measure* at issue, the *object* which the measure seeks to achieve, and the link of *necessity* between the measure and the objective.[100] The above mentioned three elements combine to create conceptually two different kinds of provisions including *exception* provision and *positive obligation* provision.[101] Article XX of the GATT 1994 belongs to the first kind while Article 2.2 of the TBT Agreement falls under the second one.[102] Out of this, there are three main differences between GATT Article XX and TBT Article 2.2. Firstly, the burden of proof to invoke the violation of a positive obligation provision lies with the complainant under TBT Article 2.2 while the respondent bears the burden to justify its measures with the exception provision under GATT Article XX.[103] Secondly, TBT Article 2.2 contains a non-exhaustive list of the legitimate objectives while GATT Article XX has a finite list of policy objectives.[104] Lastly, it is only in TBT Article 2.2 that "the risks non-fulfilment would create" is required to be considered.

Although it was stressed by WTO Panels that the interpretation from one necessity test cannot be directly transposable to the other, their jurisprudence in practice is usually cross-fertilized.[105] According to the WTO Appellate Body report, the necessity test under Article 2.2 of the TBT Agreement is "not, in principle, different from the balance set out in the GATT 1994."[106] Also, scholars find out that beyond 'technicities and rhetoric', there are no material differences between those necessity obligations.[107] With the development of case law, the necessity test under the WTO law has been evolved from an unreasonable 'least trade-restrictive test'[108] to a more sophisticated weighing and balancing test.[109]

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[99] Ibid., at para.4.

[100] Ibid., at para.5.

[101] Ibid., at para.6.

[102] Ibid., at para.6.

[103] Dawar, K., & Ronen, E. (2016). How Necessary: A Comparison of Legal and Economic Assessments - GATT Dispute Settlements under Article XX(B), TBT 2.2 and SPS 5.6. *Trade, Law and Development*, *8*, 1.

[104] *See* S/WPDR/W/27, *supra* note 98, at para.7.

[105] Ibid., para. 4; *See* also Kapterian, *supra* note 38, at 90-91.

[106] Appellate Body Report, *US–Clove Cigarettes*, at para. 96.

[107] Du, M. (2016). The Necessity Test in World Trade Law: What Now? *Chinese Journal of International Law*, *15*(4), 817–847. https://doi.org/10.1093/chinesejil/jmw036, at 846; *See* also Kapterian, *supra* note 38, at 90-91.

[108] It requires that a GATT contracting party must use the least GATT-inconsistent measures reasonably available to it.

[109] *See* Du, *supra* note 38, at 820-834.

Chapter 3: WTO Dispute Settlement System

After introducing the TBT Agreement, Article 2.2 of the TBT Agreement, and the necessity tests in the WTO agreements, the WTO dispute settlement system, as the central pillar of the multilateral trading system, is discussed in Chapter 3. As a rules-based system, the WTO could not be effective without the establishment of the dispute settlement system. The current dispute settlement system is a major result of the Uruguay Round, and it is embodied in the DSU, constituting Annex 2 of the WTO Agreement.[110] According to Article 3 of the DSU, a central objective of the WTO dispute settlement system is to provide security and predictability to the multilateral trading system.[111] To be more specific, it provides a mechanism through which the rights and obligations of Members under the WTO agreements can be preserved and ensured.[112] Also, it is intended to clarify the provisions of those agreements "in accordance with customary rules of interpretation of public international law".[113] Hence, the legal interpretation of Article 2.2 of the TBT Agreement is conducted through the WTO dispute settlement system.

This Chapter is divided into two parts, respectively investigating who is responsible for interpreting Article 2.2 of the TBT Agreement and how the WTO agreements should be construed. The first section discusses the main involved WTO Bodies and the general process of a dispute. The role of the panel and Appellate Body including whether they consult expert advice in the TBT disputes, as well as the composition of a panel and Appellate Body report, are introduced in this section. The second section mainly investigates how the Vienna Convention on the Law of Treaties (VCLT) relates to the treaty interpretation in the WTO law.

3.1 Involved WTO Bodies and Process

This section starts with presenting four involved WTO Bodies including the Dispute Settlement Body (DSB), panels, Appellate Body, and experts. It investigates the composition and functions of those different WTO Bodies. Next, an overview of how a dispute proceeds in the WTO is presented, which contains the introduction of the content of a panel and Appellate Body report.

3.1.1 Involved WTO Bodies

Dispute Settlement Body

The DSB can be viewed as a political institution, and it is composed of representatives of all WTO Members.[114] According to Article 2 of the DSU, the DSB is responsible for administering the rules and procedures of the DSU, which includes establishing panels,

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[110] DSU, *supra* note 49.

[111] Article 3.2, DSU.

[112] Ibid.

[113] Ibid.

[114] World Trade Organization. (n.d.). 3.1 The Dispute Settlement Body (DSB)- WTO Bodies involved in the dispute settlement process. Retrieved July 30, 2019, from https://www.wto.org/english/tratop_e/dispu_e/disp_settlement_cbt_e/c3s1p1_e.htm.

adopting panel and Appellate Body reports, maintaining surveillance of implementation of rulings and recommendations, and authoring suspension of concessions and other obligations under the covered agreements.[115] The general rule for the DSB to make a decision is by consensus.[116] However, three exceptions exist where a reverse consensus is required to prevent the DSB from approving the decision, including when the DSB establishes panels, adopts panel and Appellate Body reports, and authorizes retaliation.[117] In practice, such a negative consensus is unlikely to happen and has never occurred to date.[118]

Panels

Panels are the quasi-judicial bodies and should be composed ad hoc for each case with the selection of three or five panelists according to the procedures laid down in the DSU.[119] Under Article 11 of the DSU, the function of panels is to assist the DSB in discharging its responsibilities under the DSU and the covered agreements.[120] To be more specific, a panel should make an objective assessment of the facts and the applicability of and conformity with the relevant agreements, assisting the DSB in making the recommendations or in giving the rulings provided for in the covered agreements.[121] The panel must review the factual and legal aspects of the case and submit a report to the DSB in which it evaluates the evidence, establish the facts and examine the consistency of the respondent's measure with the covered agreements as claimed by the complainants.[122]

Appellate Body

Unlike panels, the Appellate Body is a permanent body who are entrusted with the task of addressing legal issues and panel interpretations that have been appealed.[123] The appellate review is limited to legal questions, and the Appellate Body does not address factual questions.[124] For example, the Appellate Body cannot request new factual evidence or re-examining existing evidence. Hence, the Appellate Body can be unable to finish a complete legal analysis because of the insufficiency of facts. Besides, Appellate Body may declare the panel's findings as "moot and having no legal effect" where certain legal findings of the panel

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[115] Article 2.1 of the DSU.

[116] Article 2.4 of the DSU

[117] Article 6.1, Article 16.4, Article 17.14, Article 22.6, Article 22.7 of the DSU.

[118] *See* World Trade Organization, *supra* note 114.

[119] Article 8 of the DSU.

[120] Article 11 of the DSU.

[121] Article 11 of the DSU.

[122] World Trade Organization. (n.d.). 3.3 Panels - WTO Bodies involved in the dispute settlement process. Retrieved July 31, 2019, from https://www.wto.org/english/tratop_e/dispu_e/disp_settlement_cbt_e/c3s3p1_e.htm.

[123] Article 17.6 of the DSU; Article 17.12 of the DSU; World Trade Organization. (n.d.). 3.4 Appellate Body - WTO Bodies involved in the dispute settlement process. Retrieved July 31, 2019, from https://www.wto.org/english/tratop_e/dispu_e/disp_settlement_cbt_e/c3s4p1_e.htm.

[124] Article 17.6 of the DSU.

are no longer valid because the relevant legal interpretation has been reversed or modified. The Appellate Body's ruling on the panel's analysis in the *EC–Seals* under TBT Article 2.2 is such an example.

The Appellate Body shall be composed of seven persons and in an appeal case, three of them serve in a rotation to hear appeals and may uphold, reverse or modify the panel's findings.[125] However, there has been a crisis in the WTO dispute settlement system with the United States blocking the (re)-appointment of the Appellate Body members since 2017.[126] In December 2019, the terms of two of the three remaining Appellate Body will expire and the Appellate Body will be down to one member.[127] With the minimum number of three judges to hear appeals, the Appellate Body will then be inoperable and the entire WTO dispute settlement system will then be paralyzed.[128] Proposals have been published by various members, however, no agreed solution has appeared yet.

Experts

When it comes to disputes which involves complex factual questions of a technical or scientific nature, Article 13 of the DSU grants general authority for each panel to have the right to seek information and technical advice from any individual or body it considers appropriate.[129] As for the TBT Agreement, besides the general rule, Article 14.2, 14.3, and Annex 2 of the TBT Agreement authorize to establish a technical expert group to assist in questions of a technical nature by a panel.[130]

So far, there has been only one TBT case in which the panel consulted experts.[131] In *EC – Asbestos*, the panel noted the extreme factual and scientific complexity of the issue and consulted individual scientific experts under Article 13 of the DSU on the carcinogenicity of chrysotile fibers.[132] Technically, the overarching authority of using of experts embedded in Article 13 of the DSU makes it possible for panels to act in cases involving Article 2.2 of the TBT Agreement when answering the question whether a proposed alternative measure achieves a Member's policy objectives.[133] However, to date, no technical expert group has been

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[125] Article 17.1 of the DSU; Article 17.13 of the DSU.

[126] Jens Hillebrand Pohl. (2019). Seven months until Appellate Body apocalypse: time to prepare for the worst case - blog - Maastricht University. Retrieved August 8, 2019, from Maastricht University website: https://www.maastrichtuniversity.nl/blog/2019/05/seven-months-until-appellate-body-apocalypse-time-prepare-worst-case.

[127] Ibid.

[128] Ibid.

[129] Article 13.1 of the DSU.

[130] Article 14.2, 14.3 and Annex 2 of the TBT Agreement.

[131] *EC – Asbestos*, WT/ DS135/R, and Add.1, adopted on 5 April 2001.

[132] Ibid.

[133] Valles, C. (2018). Different Forms of Expert Involvement in WTO Dispute Settlement Proceedings. *Journal of International Dispute Settlement*, *9*(3), 367–378. https://doi.org/10.1093/jnlids/idy010 , 373.

appointed by the panel in the WTO to make an assessment under TBT Article 2.2.[134]

3.1.2 Process

In general, the WTO dispute settlement process includes three main stages: bilateral consultations; adjudicative stage by panels, if applicable, by the Appellate Body; the implementation of the ruling.[135] Two possible ways can be used to settle a dispute once a Member files a complaint. One way is through bilateral consultations to have a mutually agreed solution, and the other is through adjudications including the implementation of the panel and Appellate Body reports.[136]

According to Article 4 of the DSU, the WTO dispute settlement process starts by bilateral consultations between the concerning Members.[137] If the consultations fail to resolve the dispute, the complaining party can request the establishment of a panel to adjudicate the dispute.[138] It allows the respondent to defend itself because it may disagree with the complainant on either the facts or the correct interpretation of the involved WTO agreement.[139] The adjudicative stage is intended to settle a legal dispute and lead to a binding ruling.[140] Standard terms of reference are typically adopted for the panel's examination of the matter, and it defines and limits the scope of the dispute.[141] Only the measures identified in the request become the subject of the panel's review, and the review is conducted only in light of the provisions cited.[142] In the panel proceedings, the complaining party files its written submissions, followed by writing submissions from the responding party.[143] Also, third parties can submit their comments on the parties' factual and legal arguments under Article 10 of the DSU.[144] After the exchange of writing submissions and oral hearings, an interim report by the panel is presented for the Members' comments. Then, a final panel report is circulated and waited to be adopted by the DSB. The panel report consists of two parts: the descriptive part and the findings. The descriptive part is typically composed of an introduction, the factual

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[134] Ibid., at 371.

[135] World Trade Organization. (n.d.). 6.1 Flow chart of the Dispute Settlement Process - The process - Stages in a typical WTO dispute settlement case. Retrieved July 31, 2019, from https://www.wto.org/english/tratop_e/dispu_e/disp_settlement_cbt_e/c6s1p1_e.htm.

[136] Ibid.

[137] Article 4 of the DSU.

[138] Article 4.7 of the DSU.

[139] World Trade Organization. (n.d.). 6.3 The panel stage - The process - Stages in a typical WTO dispute settlement case. Retrieved July 31, 2019, from https://www.wto.org/english/tratop_e/dispu_e/disp_settlement_cbt_e/c6s3p1_e.htm.

[140] Ibid.

[141] Trebilcock, M. J. (2015). *Advanced Introduction to International Trade Law*. Edward Elgar Publishing, Incorporated. Retrieved from https://books.google.nl/books?id=j4IZBgAAQBAJ, at 26.

[142] *See* World Trade Organization, *supra* note 137.

[143] *See* Trebilcock, *supra* note 141, at 27.

[144] Article 10.2 of the DSU.

aspects, the claims of the parties, and a summary of the factual and legal arguments of the parties and third parties.[145] The findings part includes the panel's reasoning to support its conclusion as to whether the complainant's claim is upheld or rejected.[146] However, the ruling will not be binding unless it is adopted by the DSB. If the parties appeal panel decisions, the panel report cannot yet be adopted because the Appellate Body could modify or reverse it.[147] Similar to the panel's report, the Appellate Body report also consists of those two parts. With the descriptive part presenting the background information of the dispute and the summary of all the arguments, the finding part of the Appellate Body report addresses the issues raised on appeal, elaborates its reasoning and conclusions, and states whether the appealed panel findings and conclusions are upheld, modified or reversed.[148] It also contains additional relevant conclusions, for instance, if the respondent has been found in violation of another provision rather than the one addressed by the panel.[149] Members have a reasonable time to comply with the panel and Appellate Body rulings once adopted by the DSB. If there is a disagreement as to whether the losing Member has implemented the recommendations and rulings, the matter can be remitted to the original panel under Article 21.5 of the DSU.[150] The task of an Article 21.5 panel is to examine the consistency of the new measure in its totality with the covered agreement.[151] If non-compliance persists, retaliatory trade sanctions may be authorized by the DSB until the measures inconsistent with a covered agreement has been removed.[152]

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[145] World Trade Organization. (n.d.). Submissions and oral hearings - 6.3 The panel stage - The process - Stages in a typical WTO dispute settlement case. Retrieved July 31, 2019, from https://www.wto.org/english/tratop_e/dispu_e/disp_settlement_cbt_e/c6s3p3_e.htm.

[146] Ibid.

[147] Article 16.4 of the DSU.

[148] World Trade Organisation. (n.d.). 6.5 Appellate review - The process - Stages in a typical WTO dispute settlement case. Retrieved July 31, 2019, from https://www.wto.org/english/tratop_e/dispu_e/disp_settlement_cbt_e/c6s5p4_e.htm.

[149] Ibid.

[150] *See* Trebilcock, *supra* note 141, at 27.

[151] World Trade Organisation. (n.d.). 6.7 Implementation by the "losing" Member - The process - Stages in a typical WTO dispute settlement case. Retrieved July 31, 2019, from https://www.wto.org/english/tratop_e/dispu_e/disp_settlement_cbt_e/c6s7p2_e.htm.

[152] Article 22 of the DSU.

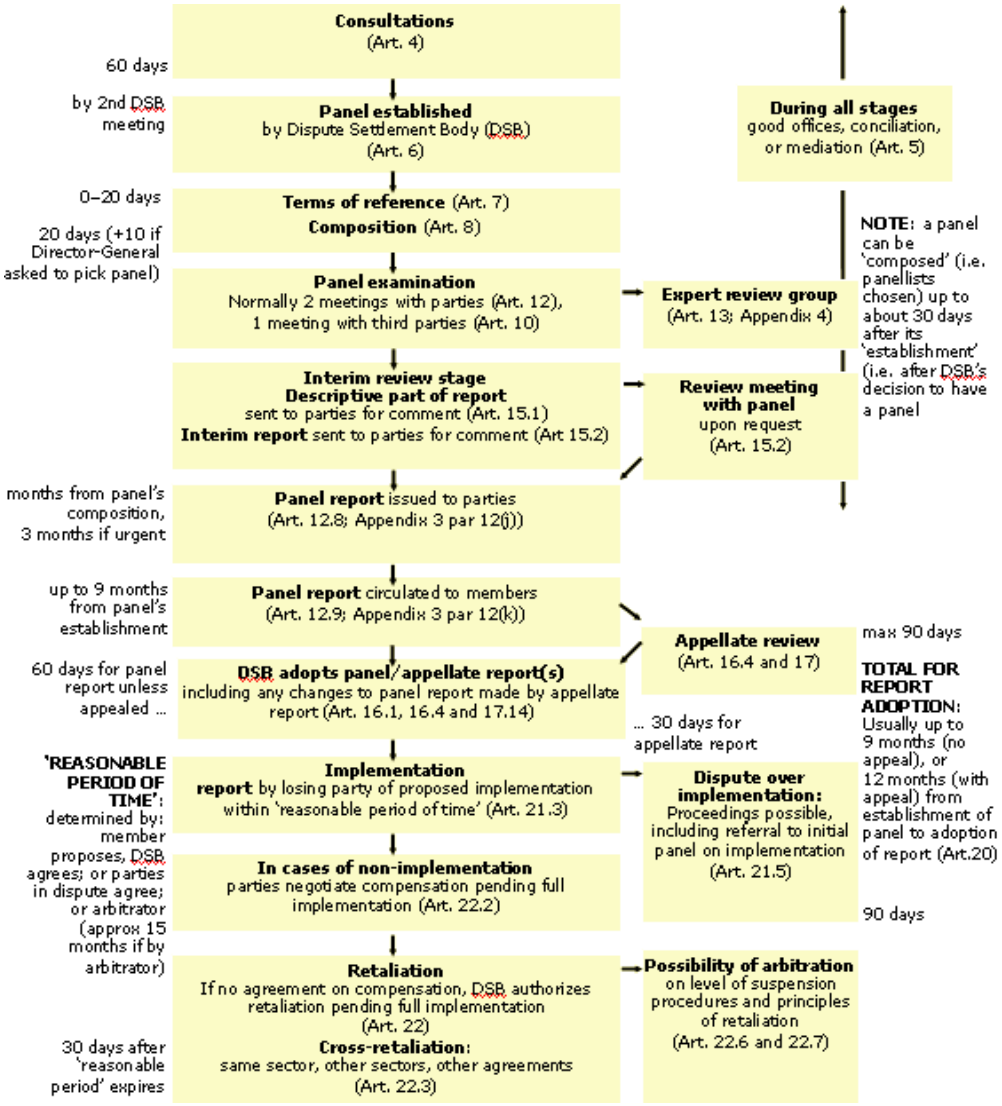

Figure 1. Flow chart of the Dispute Settlement Process. WTO.[153]

3.2 VCLT and Treaty Interpretation

Legal provisions are often drafted in general terms so that they can apply to a variety of cases. As for an international treaty, its provisions tend to lack clarity as a result of much comprise after multilateral negotiations. The various negotiators may agree to have a text which can be understood in more than one way to meet their demand considering their diverging positions. Hence, an individual case often requires an interpretation of a pertinent provision under an international treaty to clarify the rights and obligations of the parties.

[153] World Trade Organization. (n.d.). 6.1 Flow chart of the Dispute Settlement Process - The process - Stages in a typical WTO dispute settlement case. Retrieved July 31, 2019, from https://www.wto.org/english/tratop_e/dispu_e/disp_settlement_cbt_e/c6s1p1_e.htm.

Although Article IX:2 of the WTO Agreement regulates that "the Ministerial Conference and the General Council shall have the exclusive authority to adopt interpretations of this Agreement and the Multilateral Trade Agreements", Article 3.2 of the DSU ensures that the WTO dispute settlement system serves to clarify the existing provisions according to "customary rules of interpretation of public international law".[154] Also, Article 17.6 of the DSU implies that the capacity of the panel and Appellate Body to develop legal interpretations.[155] Therefore, the "exclusive authority" to adopt interpretations under Article IX:2 of the WTO Agreement can be understood as the possibility to adopt "authoritative" interpretations that are applicable to all WTO Members while interpretations by panels and the AB only apply to the concerning parties and the subject of a specific dispute, which get emphasized under Article 3.9 of the DSU.[156]

As for the methods of interpretation, although which "customary rules of interpretation of public international law" is not clearly written in the provision, the Appellate Body confirmed in its reports that Article 31, 32 and 33 of the Vienna Convention on the Law of Treaties (VCLT) contained the basic principles of treaty interpretation.[157] These three provisions cover respectively general rule of interpretation, supplementary means of interpretation, and interpretation of treaties authenticated in two or more languages. There is a limited hierarchy between Article 31 and Article 32 of the VCLT for the reason that the supplementary means of interpretation including the preparatory work of the treaty and the circumstances of its conclusion is only used as a tool to confirm the results according to the ordinary meaning, context, as well as object and purpose, or to determine the meaning if that interpretative result is ambiguous, obscure, manifestly absurd or unreasonable.[158] In practice, the negotiating history of the agreement is merely a subsidiary tool of interpretation considering the frequent incompleteness or unavailability of preparatory work.[159] As for Article 33 of the VCLT, the WTO Agreements is equally authoritative in three official languages, which are English, French, and Spanish.

The main focus is cast on Article 31 of the VCLT to help analyses the legal interpretation of Article 2.2 of the TBT Agreement. According to Article 31.1 of the VCLT, "a treaty shall be interpreted in good faith in accordance with the ordinary meaning to be given to the terms of

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[154] Article IX:2 of the WTO Agreement; Article 3.2 of the DSU.

[155] Article 17.6 of the DSU.

[156] 1.3 Functions, objectives and key features of the dispute settlement system, Introduction to the WTO dispute settlement system, WTO, https://www.wto.org/english/tratop_e/dispu_e/disp_settlement_cbt_e/c1s3p2_e.htm#fnt1; Article 3.9 of the DSU.

[157] *US – Gasoline*, WT/DS2/AB/R, DSR 1996:I, adopted 20 May 1996, at 23; *Japan – Alcoholic Beverages II*, WT/DS8/AB/R, WT/DS10/AB/R, WT/DS11/AB/R, DSR 1996, adopted 1 November 1996, at 104.

[158] Article 31, 32 of the VCLT; Van Damme, I. (2010). Treaty Interpretation by the WTO Appellate Body. *European Journal of International Law*, *21*(3), 605–648. https://doi.org/10.1093/ejil/chq049, at 620; *See* also WTO, *supra* note 154.

[159] *See* WTO*, supra note* 154*; See* also Van Damme, *supra* note 158, at 620.

the treaty in their context and in the light of its object and purpose."[160] Such language emphasized that interpreting the WTO Agreements should not take a strict grammatical or textual analysis in isolation from other elements including the object and purpose and the context.[161] The meanings of different concepts including good faith, object and purpose, and context are elaborated below.

3.2.1 Good faith

The good faith principle in treaty interpretation can seem as a part of the obligation under Article 26 of the VCLT which requires that every treaty must be performed in good faith.[162] It must be carried out during the entire process of treaty interpretation, including when examining interpretive elements and the final result.[163] Although it is difficult to give a precise meaning to this concept, a fundamental requirement of reasonableness may be the bottom line and seems to be hinted in the rules of interpretations, for instance, Article 32 lit b.[164] Therefore, the ordinary meaning should undergo a test of reasonableness and not be manifestly absurd or unreasonable.

3.2.2 Object and purpose

The object and purpose is a singular concept, and it refers to the explicit or implicit objective of the individual provision in question or the agreement as a whole.[165] Deliberately separating the object and purpose of individual treaty provisions and that of the entire treaty is not necessary because the former one is subsidiary to, and in harmony with the later one.[166] Many elements can help to identify the "object and purpose", for instance, the title, preamble, specific framework, negotiating history of the treaty.[167] Although the "object and purpose" is instrumental in confirming and justifying the interpretations, it cannot form "an independent basis for interpretation".[168]

3.3.3 Context

"Context" refers to "the kinds of conclusions that can be drawn based on, for example, the

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[160] Article 31 of the VCLT.

[161] *See* Van Damme, *supra* note 158, at 619-620.

[162] Article 26 of the VCLT.

[163] Dörr, O., & Schmalenbach, K. (2012). Article 31. General rule of interpretation. In O. Dörr & K. Schmalenbach (Eds.), *Vienna Convention on the Law of Treaties* (pp. 521–570). Berlin, Heidelberg: Springer Berlin Heidelberg. https://doi.org/10.1007/978-3-642-19291-3_34 , at para.60.

[164] Ibid., at, at para.61.

[165] World Trade Organization. (2004). 1.3 Functions, objectives and key features of the dispute settlement system - Introduction to the WTO dispute settlement system. Retrieved July 31, 2019, from Handbook on the WTO Dispute Settlement System website: https://www.wto.org/english/tratop_e/dispu_e/disp_settlement_cbt_e/c1s3p2_e.htm

[166] *See* Van Damme, *supra* note 158, at 632.

[167] Ibid., 631.

[168] Appellate Body Report, *Japan – Alcoholic Beverages II*, *supra* note 155, at 106, n.20.

structure, content or terminology in other provisions belonging to the same agreement, particularly the ones preceding and following the rule subject to interpretation".[169] Two key features have been recognized in the Appellate Body's interpretive practice to contextualize the treaty language, including the use of dictionaries and cross-referencing. Consulting dictionaries is a helpful tool used by the Appellate Body to interpret the ordinary meaning at the starting point, occasionally conclusive.[170] Considering that there are many possible dictionary definitions, the broader context of the treaty language, the context of the dispute, and other interpretive elements mentioned in the VCLT needs to be taken into account.[171] In addition, cross-referencing is another common interpretive technique in the WTO dispute.[172] By comparing the similarities and differences in various treaties or different provisions in the same treaty, the Appellate Body can either interpret the treaty or help confirm the interpretation in light of its object and purpose.[173] Such a technique has been applied to use other instruments of international law as an interpretive context without mentioning Article 31 and 32 VCLT.[174]

Except those principles codified in the VCLT, non-codified principles of interpretation are also used by the Appellate Body, including the principle of effectiveness, the principle of in dubio mitius, etc.[175] In all, the above mentioned interpretive elements and rules cannot be used as a sole mean for interpretation because the process of treaty interpretation is "an integrated operation, where interpretive rules and principles must be understood and applied as connected and mutually reinforcing components of a holistic exercise."[176]

To sum up, the legal interpretation of a treaty text is conducted by WTO panel and Appellate Body through the WTO dispute settlement system. A panel should make an objective assessment of the facts and the applicability of and conformity with the relevant agreements. When assessing complex factual questions of a technical or scientific nature, it is allowed for them to establish a technical expert group to consult, however, no technical expert group has been appointed to help assess the effectiveness of technical regulation. The Appellate Body is limited to address legal issues and panel interpretations that have been appealed. The basic principles of treaty interpretation followed by the WTO Panels is Article 31, 32 and 33 of the VCLT, which require that the treaty should be interpreted in good faith, in context and in the light of its object and purpose, and preparatory work such as the negotiating history is only used as supplementary tool.

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[169] *See* World Trade Organization*, supra note* 163.

[170] *See* Van Damme, *supra* note 156, at 622.

[171] Ibid, at 622

[172] Ibid, at 627.

[173] Ibid, at 627-29.

[174] Ibid, at 630

[175] World Trade Organization. (n.d.). I.3.1 General rules of treaty interpretation — Articles 31 and 32 of the Vienna Convention. Retrieved August 7, 2019, from Repertory of Appellate Body Reports website: https://www.wto.org/english/tratop_e/dispu_e/repertory_e/i3_e.htm.

[176] *US – Continued Zeroing*, WT/DS350/AB/R, adopted 19 February 2009, at para. 268; *China — Publications and Audiovisual Products*, WT/DS363/AB/R, adopted 19 January 2010, at para. 399.

Chapter 4: The Legal Standard Under TBT Article 2.2

In this chapter, the legal standard under Article 2.2 of the TBT Agreement is discussed based on the current jurisprudence. Firstly, a brief review of the relevant case law relating to Article 2.2 of the TBT Agreement is introduced. Secondly, how weighing and balancing is taken place under Article 2.2 is explained. In the third section, the burden of proof is described.

4.1 A Brief Review of the Relevant Case Law

Till now, there have been five cases in which Article 2.2 of the TBT Agreement were discussed, including *US – Clove Cigarettes*, *US – Tuna II (Mexico)*, *US – Country of Origin Labelling (US – COOL)*, *EC – Seal Products*, *Australia – Tobacco Plain Packaging*. The context of each case law including their rulings is explained in the following.

4.1.1 *US – Clove Cigarettes*

In order to protect human health and safety, especially to reduce youth smoking, the United States adopted a Family Smoking Prevention and Tobacco Control Act in 2009.[177] This law banned the production and sale of all flavored cigarettes due to the evidence that such cigarettes were particularly attractive to the youth.[178] However, an exception was granted to menthol cigarettes, which was primarily produced in the United States.[179] The US claimed that menthol cigarettes are smoked widely other than the youth and the effects of banning menthol cigarettes were not adequately evaluated.[180] Meanwhile, other flavored cigarettes were almost produced oversea, including clove cigarettes from Indonesia.

With the fact that clove cigarettes are primarily produced in Indonesia while menthol cigarettes are primarily produced in the United States, Indonesia challenged this law under the WTO dispute system, including Article 2.1 and Article 2.2 of the TBT Agreement. The Panel found the ban inconsistent with Article 2.1 while complying with Article 2.2 of the TBT Agreement.[181] The United States raised a conditional appeal under Article 2.2 should Indonesia appealed the Panel's finding that the measure at issue was inconsistent with Article 2.2.[182] However, Indonesia did not raise an appeal under Article 2.2 but only on Article 2.1, therefore, the condition of appeal under Article 2.2 was not met and the Appellate Body did not have chance to further explain the legal standard under Article 2.2 but focused more on Article 2.1. Eventually, Appellate Body upheld the panel's decision on Article 2.1 that the products are

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[177] Family Smoking Prevention and Tobacco Control Act, Pub. L. No. 111–31, 123 Stat. 1776 (2009) (codified in sections of 21 U.S.C.).

[178] Family Smoking Prevention and Tobacco Control Act, § 907 (a) (1) (A), 21 U.S.C.§ 3 8 7 (g) (a) (1) (A) (Supp. 2010).

[179] Ibid.

[180] First Written Submission of the United States, United States-Measures Affecting the Production and Sale of Clove Cigarettes, 11 148-150, WT/DS406 (Nov. 16, 2010), available at http://www.ustr.gov/webfmsend/2396.

[181] Panel Report, *US – Clove Cigarettes*, *supra* note 25 at paras. 7.429-7.432.

[182] Appellate Body Report, *US – Clove Cigarettes supra* note 8.

like products and the measure is a less favourable treatment with different reasoning.[183]

4.1.2 *US – Tuna II (Mexico)*

In 2008, Mexico challenged the United States' "dolphin-safe" labelling regime at the WTO, including Dolphin Protection Consumer Information Act (DPCIA) [184], implementing regulations[185], and *Earth Island Institute v. Hogarth* ruling[186]. The objectives of this voluntary labelling regime are to protect consumers from deceptive practices and to protect dolphins by discouraging certain fishing practices.[187] It was required that the tuna caught by a method involving encircling or settling upon dolphins could not be labelled as "dolphin-safe" in the US market.[188] Such a method is attractive to tuna fishers in the Eastern Tropical Pacific (ETP), where tuna often swim with dolphins, especially for Mexican boats.

Mexico argued that under the U.S. dolphin-safe labelling regime Mexican tuna products were treated less favourable than the tuna produced from other countries including the United States and there was a violation of Article 2.1 of the TBT Agreement. In addition, it proposed a "less trade-restrictive alternative" which was to permit the use of dolphin-safe label on Mexican tuna under the Agreement on the International Dolphin Conservation Program (AIDCP).[189] The panel found the labelling regime consistent with Article 2.1 while inconsistent with Article 2.2 of the TBT Agreement.[190] The United States and Mexico both appealed and the Appellate Body found the US "dolphin-safe" labelling regime inconsistent with Article 2.1, but consistent with Article 2.2.[191] The Appellate Body reversed the Panel's ruling under Article 2.2 because it found that the alternative measure identified by Mexico would contribute to both the consumer information objective and the dolphin protection objective to a less degree with more tuna harvested in the ETP region in conditions that adversely affect dolphins allowed to be labelled "dolphin safe".

The *US – Tuna II (Mexico)* is the first case containing a detailed interpretation regarding Article 2.2 of the TBT Agreement.

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[183] Ibid.

[184] United States Code, Title 16, Section 1385 – "Dolphin Protection Consumer Information Act" (DPCIA)

[185] Code of Federal Regulations, Title 50, Section 216.91 "Dolphin-safe labelling standards" and Section 216.92 "Dolphin-safe requirements for tuna harvested in the ETP [Eastern Tropical Pacific Ocean] by large purse seine vessels"

[186] The ruling by a US federal appeals court in Earth Island Institute v. Hogarth, 494 F.3d 757 (9th Cir.2007)

[187] Panel report, *US – Tuna II (Mexico)*, WT/DS381/AB/R, adopted 13 June 2012, at para. 7.443.

[188] Ibid, at para. 4.71.

[189] A multilateral agreement with the United States. Agreement on the International Dolphin Conservation Program, May 21, 1998, TIAS No. 12956 [hereinafter AIDCP].

[190] Panel Report, *US – Tuna II (Mexico)*, *supra* note 187 at paras.7.377-7.378, 7.618-7.621.

[191] Appellate Body Report, *US – Tuna II (Mexico)*, *supra* note 6 at para 331.

4.1.3 *US – Country of Origin Labelling (US – COOL)*

In 2008, Mexico and Canada challenged United States' mandatory country of origin labelling (COOL) scheme for packaged meat, which includes the Agricultural Marketing Act of 1964, as amended by the Farm Bills 2002 and 2008, and implemented by 2009 Final Rule.[192] The objective of this labelling scheme is to provide consumer information on the origin and it requires labels to indicate whether the meat was exclusively from the US, exclusively foreign, or of mixed origin.[193] Mexico and Canada argued that these requirements violated Article 2.1 and Article 2.2 of the TBT Agreement.[194] The Panel concluded that the COOL measure did not "fulfil" the objective of providing consumer information on the origin, particularly for meat products, thus finding the COOL measure inconsistent with Article 2.2 without completing the comparative analysis of assessing the availability of less trade-restrictive measures that can equally fulfil the identified objective.[195] In 2012, the United States appealed the panel's findings on Article 2.1 and Article 2.2, and Mexico conditionally appealed some aspects of the panel's analysis under Article 2.2.[196] The Appellate Body found the panel erred in its interpretation and application of Article 2.2 with respect to the word "fulfil", and therefore reversed the Panel's finding that the COOL measure was inconsistent with Article 2.2.[197] However, due to the lack of relevant factual findings by the Panel, and sufficient undisputed facts on record, the Appellate Body was unable to complete the legal analysis under Article 2.2 and to determine whether the COOL measure was more trade-restrictive than necessary to fulfil its legitimate objective.[198]

In order to comply with the DSB recommendations and rulings, the United States adjusted its COOL regulation by expanding the amount of required information on labels in 2013.[199] However, Mexico and Canada did not agree that the changes had brought the United States into full compliance and requested the establishment of a compliance panel.[200] In 2014, the panel in *Article 21.5 US – COOL* found that the amended COOL measure violated Article 2.1 and concluded that the complainants had not made a *prima facie* case that the measure violated Article 2.2.[201] The United States and Mexico filed appeals in 2014 and the Appellate Body Report was circulated in 2015.[202] The Appellate Body upheld the panel's finding under Article

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[192] World Trade Organization. (2019). US-COOL (DS384,386). In WTO Dispute Settlement: One-Page Case Summaries (p. 161). Retrieved from https://www.wto.org/english/tratop_e/dispu_e/cases_e/1pagesum_e/ds386sum_e.pdf.

[193] Panel Report, *US – COOL*, WT/DS384/R/WT/DS386/R, adopted 23 July 2012, at para. 7.89.

[194] *See* World Trade Organization, *supr*a note 193.

[195] Panel Report, *US – COOL*, *supra* note 193 at paras.7.719 & 7.720.

[196] *See* World Trade Organization, *supr*a note 193.

[197] *See* World Trade Organization, *supr*a note 193.

[198] Panel Report, *US – COOL*, *supra* note 193 at para.491.

[199] Carroll, E. R. (2015). The TBT Agreement's Failure to Solve U.S.–COOL. *Georgia Journal of International and Comparative Law*, *44*(105), 105–132, at 118.

[200] *See* World Trade Organization, *supr*a note 193.

[201] Panel report, *Article 21.5 US – COOL*, WT/DS384/AB/RW, adopted 29 May 2015, at paras. 7.285 & 7.613

[202] *See* World Trade Organization, *supr*a note 193.

2.1 while reversed the panel's conclusion that Mexico and Canada failed to make a *prima facie* case that the amended COOL measure violated Article 2.2.[203] However, the Appellate Body made no finding as to whether the amended COOL measure is inconsistent with Article 2.2 due to the lack of undisputed facts to complete the legal analysis of the first and second proposed alternative measures proposed by Canada and Mexico on appeal.[204]

4.1.4 *EC – Seal Products*

In *EC – Seal Products*, Canada and Norway challenged the EU Seal Regime which is an EU ban on seal products on the market with certain exceptions, including for seal products derived from hunts traditionally conducted by Inuit or indigenous communities, and hunts conducted for sustainable marine resources management purpose.[205] The EU Seals case is the first WTO dispute focusing on animal welfare concerns and its objective is addressing the public moral concerns on seal welfare.[206] According to the panel's analysis, the EU Seal Regime constitutes a technical regulation therefore within the scope of the TBT Agreement.[207] Panel found the EU ban inconsistent with Article 2.1 because of its exceptions while consistent with Article 2.2 because it fulfilled the objective to a certain extent and no less trade-restrictive alternative reasonably available.[208] However, the Appellate Body reversed the panel's finding that the EU Seal Regime is a "technical regulation" within the meaning of Annex 1.1 to the TBT Agreement, therefore declaring moot and of no legal effect the panel's conclusions under Article 2.1 and 2.2.[209]

4.1.5 *Australia – Tobacco Plain Packaging*

In 2011, Australia adopted several Tobacco Plain Packaging (TPP) measures which regulate the retail packaging and appearance of tobacco products to "improve public health by reducing the use of, and exposure to, tobacco products".[210] Such TPP measures include the Tobacco Plain Packaging Act 2011, the Tobacco Plain Packaging Regulation, the Trade Marks Amendment Act 2011 as well as other related measures.[211] Several countries including

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[203] Appellate Body Report, *Article 21.5 US – COOL*, *supra* note 10 at paras.173-175.

[204] *See* World Trade Organization, *supr*a note 193; Appellate Body Report, *Article 21.5 US – COOL*, *supra* note 10 at para. 5.323.

[205] World Trade Organization. (2019). EC–Seal Products (DS400,401). In WTO Dispute Settlement: One-Page Case Summaries (p. 169). Retrieved from https://www.wto.org/english/tratop_e/dispu_e/cases_e/1pagesum_e/ds401sum_e.pdf.

[206] Herwig, A. (2014). Lost in Complexity? The Panel's Report in European Communities – Measures Prohibiting the Importation and Marketing of Seal Products. *European Journal of Risk Regulation*, *5*(01), 97–101. https://doi.org/10.1017/S1867299X00003020, at 97; panel report, EC–Seals, para.7.415.

[207] Panel report, EC-Seals Products, WT/DS400/R / WT/DS401/R, and Add.1, adopted 18 June 2014, at para.7.84–7.125.

[208] *See* Herwig, *supra* note 206, at 97; *See* World Trade Organization, *supra* note 206.

[209] Appellate Body Report, *EC – Seal Products*, *supra* note 9 at para. 5.70.

[210] Panel Report, *Australia – Tobacco Plain Packaging*, *supra* note 11 at para. 7.246.

[211] Panel Report, *Australia – Tobacco Plain Packaging*, *supra* note 11 at para. 2.2-2.5.

Ukraine, Cuba, Honduras, Dominican Republic, and Indonesia requested consultations with Australia and claimed that TPP measures appear to be inconsistent with Article 2.2 of the TBT Agreement in the WTO.[212] Among those countries, Ukraine requested the panel to suspend its proceeding in 2015 and eventually, the panel's jurisdiction lapsed following the suspension of the panel proceeding.[213] The panel report was circulated in 2018 and the panel found that the complainants had not demonstrated that the TPP measures are inconsistent with Article 2.2 of the TBT Agreement on the basis that they are more trade-restrictive than necessary to achieve a legitimate objective.[214] Honduras and Dominican Republic have filed appeals to the panel's findings under Article 2.2 of the TBT Agreement on the contribution of the TPP measures, on the trade-restrictiveness of the TPP measures and the availability of less trade-restrictive alternative measures. The final ruling of the Appellate Body has not come out yet and will be delayed.

A summary of all relevant case law has been made in Figure 2. It lists out the types of regulation, legitimate objectives of the measures, and their rulings in the TBT Agreement of the above-mentioned five disputes.

Types of regulation	Disputes	Legitimate objectives	Adjudicators	Article 2.1	Article 2.2
Ban with exceptions	*US – Clove Cigarettes*	Human health and safety	Panel	Inconsistent	Consistent
			AB	Inconsistent	Not addressed (condition of appeal not met)
Voluntary labelling	*US – Tuna II (Mexico)*	Consumer information; Dolphin protection.	Panel	Consistent	Inconsistent (degree of contribution)
			AB	Inconsistent	Consistent
Labelling	*US – COOL*	Consumer information	Panel	Inconsistent	Inconsistent (fulfil)
			AB	Inconsistent	Reversed panel finding of inconsistency but unable to complete legal analysis
	Article 21.5 US – COOL		Panel	Inconsistent	Consistent
			AB	Inconsistent	Reversed panel finding of complainants had not made a *prima facie* case that the measure violates Article 2.2 but unable to complete the legal analysis, thus making no finding as to whether the amended COOL measure is inconsistent
Ban with exceptions	*EC – Seal Products*	Public moral	Panel	Inconsistent	Consistent
			AB	Moot and of no legal effect	
Labelling	*Australia – Tobacco Plain Packaging*	Public health	Panel	/	Consistent

Figure 2. Overview of disputes regarding Article 2.2 of the TBT Agreement

[212] Atkins, M. (2018). Australia's Restrictive Tobacco Laws: Are Australia's Trade Agreements Going up in Smoke Comments. *International Trade and Business Law Review*, *21*, 333–360, at 339.

[213] World Trade Organization. (n.d.). DS434: Australia–Certain Measures Concerning Trademarks and Other Plain Packaging Requirements Applicable to Tobacco Products and Packaging. Retrieved July 31, 2019, from https://www.wto.org/english/tratop_e/dispu_e/cases_e/ds434_e.htm.

[214] World Trade Organization. (2019). Australia–Tobacco Plain Packaging (DS435, 441, 458, 467). In WTO Dispute Settlement: One-Page Case Summaries (p. 186). Retrieved from https://www.wto.org/english/tratop_e/dispu_e/cases_e/1pagesum_e/ds467sum_e.pdf.

To sum up, there has been no incompliant case under the provision of Article 2.2 of the TBT Agreement from all the relevant case laws. Instead, it was found in *US – Clove Cigarettes*, *US – Tuna II (Mexico)*, and *US – COOL* that the measures at issue are inconsistent with Article 2.1 of the TBT Agreement. The final ruling of *EC – Seal Products* falls outside the scope of the TBT Agreement; therefore, it has less impact in understanding the legal interpretation of Article 2.2 of the TBT Agreement. The case of *Australia – Tobacco Plain Packaging*, as a non-discriminatory measure, is the first case which only relates to Article 2.2 without referring to Article 2.1 of the TBT Agreement. Still, it was found by the Panel to be consistent with TBT Article 2.2.

4.2 The Necessity Test under Article 2.2 of the TBT Agreement

Article 2.2 of the TBT Agreement consists of four sentences. The first two sentences establish the obligations with which WTO Members must comply when preparing, adopting, and applying technical regulations.[215] The first one sets out a general principle, reflected in the fifth recital of the preamble of the TBT Agreement and Article 2.5 of the TBT Agreement, that Members shall not create unnecessary obstacles to international trade through such preparation, adoption and application of technical regulations.[216] The second one informs the scope and meaning of the obligation contained in the first sentence that technical regulations "shall not be more trade-restrictive than necessary to fulfil a legitimate objective, taking account of the risks non-fulfilment would create".[217] The third sentence lists several examples of legitimate objectives, including "national security requirements, the prevention of deceptive practices, protection of human health or safety, animal or plant life or health, or the environment".[218] The last sentence mentions some relevant elements to be considered when assessing such risks, which are "available scientific and technical information, related processing technology or intended end-uses of products".[219]

The terms of Article 2.2 call for a two-step analysis, requiring that a technical regulation must pursue a "legitimate objective" and not be "more trade-restrictive than necessary to fulfil a legitimate measure, taking account of the risks non-fulfilment would create".[220] This first step is to identify the objective of the measure and to assess whether the identified objective is legitimate within the meaning of Article 2.2.[221] Next, the necessity test, in the context of Article 2.2, begins in earnest, which involves a relational analysis of "the trade-restrictiveness of the technical regulation, the degree of contribution that it makes to the achievement of a legitimate objective, and the risks non-fulfilment would create", and in most cases, a

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[215] Appellate Body Report, *US – COOL*, *supra* note 7 at para. 369.

[216] Panel Report, *US – COOL*, *supra* note 193 at para. 7.551.

[217] Appellate Body Report, *US – COOL*, *supra* note 7 at para. 369.

[218] Article 2.2, the TBT Agreement.

[219] Ibid.

[220] Panel Report, *US – Clove Cigarettes*, *supra* note 25 at para. 7.333.

[221] Appellate Body Report, *US – Tuna II (Mexico)*, *supra* note 6 at para. 314. *See* also Appellate Body Report, *US – COOL*, *supra* note 7 at paras. 371-372.

comparative analysis of the above-mentioned factors with potential alternative measures to ascertain whether a challenged measure is more trade-restrictive than necessary.[222]

4.2.1 "Legitimate objective"

In *US – Tuna II (Mexico)*, the Appellate Body referred to *Shorter Oxford English Dictionary* and noted that the word "objective" describes a "thing aimed at or sought; a target, a goal, an aim" and the word "legitimate" means "lawful; justifiable; proper".[223] Taken together, "legitimate objective" refers to "an aim or target that is lawful, justifiable, or proper."[224] In the context of Article 2.2, the word "inter alia" suggests that the provision does not prescribe a closed list of legitimate objectives, rather, several examples are listed to serve as a reference for which other objectives may be considered to be legitimate.[225] In addition, the sixth and seventh recitals of the preamble of the TBT Agreement, as well as the objectives recognized in the provisions of other covered agreements such as Article XX of the GATT 1994 may act as the context of analyzing whether the objective pursued is considered to be legitimate under Article 2.2.[226] However, different from Article XX, which has an exhaustive list of legitimate objectives, the list of legitimate objectives under Article 2.2 is non-exhaustive.

Before the analysis of the legitimacy of the objectives, the panel shall make an independent and objective assessment of what a Member seeks to achieve by means of technical regulation, taking into account of "the texts of statutes, legislative history, and other evidence regarding the structure and operation of the measure".[227] They shall not be bound by a Member's characterization of the objectives it pursues through the measure.[228] As for the number of the objective for a single technical regulation, it is entirely possible to have more than one objective both as a factual and a legal matter, for instance, there are the two objectives including consumer information and dolphin protection in *US – Tuna II (Mexico)*.[229] Overall, the identification of the objective of a challenged measure is designed to clarify its "underlying purpose", and it is neither the identification of the level at which a Member aims to achieve that objective nor the question of how or through what means the objective is to be pursued.[230]

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[222] Appellate Body Report, *US – Tuna II (Mexico)*, *supra* note 6 at paras.313, 318, 320; Appellate Body Report, *US – COOL*, *supra* note 7 at paras. 369&375; "Repairing the Defects" of Article 2.1 of the WTO Technical Barriers to Trade Agreement: An Amendment Proposal. *Legal Issues of Economic Integration*, *43*(1), 65–95, at 86.

[223] Appellate Body Report, *US – Tuna II (Mexico)*, *supra* note 6 at para. 313.

[224] Ibid.

[225] Ibid.

[226] Ibid.

[227] Ibid., at para. 314. *See* also Appellate Body Reports, *US – COOL*, paras. 371-372.

[228] Appellate Body Report, *US – Tuna II (Mexico)*, para. 314. *See* also Appellate Body Report, *US – COOL*, *supra* note 7 at paras. 371-372.

[229] Panel report, *US – Tuna II (Mexico)*, *supra* note 187 at para. 7.407.

[230] Panel Report, *Australia – Tobacco Plain Packaging*, *supra* note 11 at para. 7.197.

In practice, it is unlikely that a panel will put into question the legitimacy of the objective pursued.[231] In the previous disputes, the legitimacy of the objectives is usually self-evident and does not need many justifications. For example, the Panel in *US – Clove Cigarettes* considered it to be self-evident that measures to reduce youth smoking aimed at the "protection of protection of human health".[232] So far, the legitimacy of the objectives has not been successfully rebutted. On the one hand, panels are not supposed to take on the task of determining what WTO Members should or should not care about except for a trade protectionist case.[233] On the other hand, it is whether a measure truly pursues the claimed objective that matters to determine its WTO consistency rather than whether the objective itself or the means used in pursuit of that objective.[234]

This research focuses more on the weighing and balancing test after identifying the legitimate objective rather than examine which objective can be seemed as legitimate.

4.2.2 "More trade-restrictive than necessary to fulfil a legitimate objective, taking account of the risks non-fulfilment would create"

The necessity test under Article 2.2 adopts a similar analysis as Article XX of the GATT 1994 and Article XIV of the GATS, which involves a *holistic weighing and balancing* of all the factors, including the degree of contribution made by the measure, the trade-restrictiveness of the measure, as well as the nature of the risks at issue and the gravity of the consequences that would arise from non-fulfilment of the objective(s) pursued by the Member through the measure.[235] The use of the term "more...than" indicts that a comparative analysis of the above-mentioned factors can serve as a "conceptual tool" to establish the existence of an "unnecessary obstacle to international trade".[236] Such comparative character in Article 2.2 can also be confirmed by the context afforded by Article 2.3 of the TBT Agreement, which provides that "[t]echnical regulations shall not be maintained...if ...can be addressed in a less trade-restrictive manner".[237] Therefore, a *comparative analysis* of the challenged measure and possible

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[231] Valinaki, F. (2016). "Repairing the Defects" of Article 2.1 of the WTO Technical Barriers to Trade Agreement: An Amendment Proposal. *Legal Issues of Economic Integration*, *43*(1), 65–95, at 79.

[232] Panel Report, *US – Clove Cigarettes*, *supra* note 25 at para. 7.347.

[233] Appellate Body Report, *US – Tuna II (Mexico)*, *supra* note 6 at para.338; Ming Du, M. (2007). Domestic Regulatory Autonomy under the TBT Agreement: From Non-discrimination to Harmonization. *Chinese Journal of International Law*, *6*(2), 269–306. https://doi.org/10.1093/chinesejil/jmm022, at 279; *See* Valinaki, *supra* note 231, at 79.

[234] Appellate Body Report, *US – Tuna II (Mexico)*, *supra* note 6 at paras 335–339； Ishikawa, Y. (2013). Plain Packaging Requirements and Article 2.2 of the TBT Agreement. *Chinese (Taiwan) Yearbook of International Law and Affairs*, (30), 47.

[235] Appellate Body Report, *Article 21.5 US – COOL*, *supra* note 10 at paras. 5.197-5.198 & 5.202; Appellate Body Report, *US – Tuna II (Mexico)*, *supra* note 6 at fn 643 to para. 318; Brazil – Retreaded Tyres, para. 178; and US – Gambling, paras. 306-308.

[236] Appellate Body Report, *US – Tuna II (Mexico)*, *supra* note 6 at para.320.

[237] Appellate Body Report, *Article 21.5 US – COOL*, *supra* note 10 at para.5.199.

alternatives should be taken to assess "whether the proposed alternative is less trade-restrictive; whether it would make an equivalent contribution to the relevant legitimate objective, taking account of the risks non-fulfilment would create; and whether it is reasonably available".[238] However, if a measure is found to be not trade-restrictive or it makes no contribution to the achievement of the legitimate objective in the relational analysis, the technical regulation would be found automatically to be inconsistent with Article 2.2.[239] Ultimately, it involves a holistic weighing and balancing of all relevant factors.[240]

The sequence and order of analysis under Article 2.2 of the TBT Agreement

As a weighing and balancing test, Article 2.2 does not "explicitly prescribe, in rigid terms, the sequence and order of analysis, nevertheless, a certain sequence and order of analysis may flow logically from the nature of the examination under Article 2.2", which are relational analysis and comparative analysis.[241] As for the relational analysis, there is no particular order as *a priori* required in all cases in assessing the three factors.[242] The sequence and order of analysis in a given case when assessing the relevant factors and in conducting the overall weighing and balancing under Article 2.2 is adaptable and panels are afforded a certain degree of latitude to tailor the sequence and order of analysis based on the specific claims, measures, facts, and arguments at issue.[243] If an appeal is raised challenging the sequence and order of analysis adopted by the panel in a given case, reasons must be given to demonstrate why, by following a particular sequence, the panel committed an error in the specific circumstance of the case at hand.

4.3 Burden of Proof under Article 2.2 of the TBT Agreement

This section explains in detail who bears the burden to proof under Article 2.2 of the TBT Agreement. In addition, the reasons why Article 2.2 under which has been invincible to complain based on the current jurisprudence are summarized, which indicates the unclear level of proof required for a panel to establish a fact under Article 2.2 of the TBT Agreement. In practice, the evidential requirement for the complainant to prove the alternative measure could achieve an equivalent degree of contribution is more demanding than to prove to be less trade-restrictive.

4.3.1 Who should "lose" the dispute if the facts remain unclear?

In the WTO, the Appellate Body has endorsed the burden of proof "rests upon the party, whether complaining or defending, who asserts the affirmative of a particular claim or

[238] Appellate Body Report, *US – Tuna II (Mexico)*, *supra* note 6 at para. 322.

[239] Ibid., fn 647.

[240] Appellate Body Report, *Article 21.5 US – COOL*, *supra* note 10 at para. 5.202.

[241] Appellate Body Report, *Article 21.5 US – COOL*, *supra* note 10 at para. 5.202.

[242] Panel Report, *Australia – Tobacco Plain Packaging*, *supra* note 11 at para. 7.420.

[243] Appellate Body Report, *Article 21.5 US – COOL*, *supra* note 10 at paras.5.205, 5.229.

defense".[244] Although the WTO Panels referred to the jurisprudence under Article XX of the GATT 1994 to understand the legal standard under Article 2.2 of the TBT Agreement, the allocation of the burden of proof imposed on respondents and complainants under the respective provisions are different.[245] Under GATT Article XX, the respondent needs to prove that its measure is necessary to have, therefore it is an exception to the allegedly violated obligation, while under TBT Article 2.2, the complainants bear the burden to prove that the measure is not necessary for the regulating Member to implement. In specific, under TBT Article 2.2, the burden is on the complainant to make a *prima facie* case that a less trade-restrictive alternative measure, which also achieves an equivalent contribution to the relevant objective, would be reasonably available.[246]

4.3.2 What level of proof suffices for a panel to establish a fact?

In *US – Clove Cigarettes*, the Panel found the US ban on Clove Cigarettes was consistent with Article 2.2 of the TBT Agreement as the complainant failed to establish a *prima facie* case with a mere listing of two dozen possible alternative measures.[247] In *US – Tuna II (Mexico)*, the Appellate Body reversed the Panel's ruling that the voluntary tuna safe labelling regime was inconsistent with Article 2.2 because they found that the alternative proposed by Mexico, which was the coexistence of the AIDCP and US standard, would contribute to both objectives to a lesser degree than the measure at issue.[248] In *US – COOL*, the Panel held that the complainants had demonstrated that the mandatory labelling scheme under the COOL measure did not fulfil the objective of providing consumer information on the origin, thus finding that the COOL measure was inconsistent with Article 2.2 without continuing with the comparative analysis.[249] However, the Appellate Body reversed that Panel's ultimate finding because it erred in its analysis of the word "fulfil".[250] Also, the Panel erred by relieving the complainants of the part of their burden of proof with regards to the alternative measures.[251] In compliance procedure under *Article 21.5 US – COOL*, the Appellate Body considered that the Panel did not properly allocate the burden of proof under TBT Article 2.2 and erred in concluding that the complainants did not make a *prima facie* case that any of these proposed alternatives. For the first and second alternatives, the Panel erred by concluding its inability to ascertain the gravity of the consequences that would arise from the non-fulfilment of the amended COOL measure's objective in quantitative terms, thereby ceasing its analysis failing to determine whether they

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[244] World Trade Organization. (n.d.). 10.6 Burden of proof - Legal issue arising in WTO dispute settlement proceedings. Retrieved August 11, 2019, from https://www.wto.org/english/tratop_e/dispu_e/disp_settlement_cbt_e/c10s6p1_e.htm#txt1.

[245] Appellate Body Report, *Article 21.5 US – COOL*, *supra* note 10 at para. 5.333.

[246] Ibid. at para.5.337; Appellate Body Report, *US – Tuna II (Mexico)*, *supra* note 6 at para. 323.

[247] Panel Report, *US – Clove Cigarettes, supra* note 8 at para. 7.423.

[248] Appellate Body Report, *US – Tuna II*, *supra* note 6, at paras. 329 - 331.

[249] Panel Report, *US – COOL*, *supra* note 193 at para. 7.719.

[250] Appellate Body Report, *US – COOL*, *supra* note 7 at para.468.

[251] Appellate Body Report, *US – COOL*, *supra* note 7 at para.469.

can achieve an equivalent degree of contribution.[252] For the third and fourth proposed measures, the Panel was found to err in allocating the burden of proof under Article 2.2 of the TBT Agreement in finding that the complainants had not provided sufficient explanation of how their third and fourth proposed alternative measures would be implemented in the United States, and of the costs associated with those alternative measures.[253] In *Australia – Tobacco Plain Packaging*, the Panel found that none of the alternatives proposed by complainants would be less trade-restrictive and achieve an equivalent contribution as the TPP measures in the particular broader regulatory context of tobacco control.[254]

To sum up, from the current jurisprudence, the WTO Panels have asked for a strict burden of proof for the complainant to bear under TBT Article 2.2, which may lead to the fact that the complainants fail in all the cases under such provision. Except for that the Panel of *US – Tuna II* erred in comparing the respective of degree of contribution, the Panel of *US – COOL* erred in understanding the term "fulfil", and the Panel of *Article 21.5 US – COOL* erred in finding itself unable to ascertain the gravity of the consequences of non-fulfilment, the complainants in the rest cases were found to fail to establish a *prima facie* case by providing a less trade-restrictive, equivalent contribution, reasonably available alternative, taking into account of the risks non-fulfilment would create. Although the Panel in *US – Clove Cigarettes* claimed that merely providing a list of alternatives is not enough and Appellate Body in *Article 21.5 US – COOL* has considered the Panel erred in asking the complainants to provide sufficient explanation of how the alternative measure would be implemented and their costs, the level of proof required by the WTO Panels for the complainant to establish a *prima facie* case is still unclear.

Chapter 5: Conceptualizing the Elements in the Necessity Test

This chapter analyses the meaning of the key elements including "trade-restrictiveness", "degree of contribution", "the risks non-fulfilment would create" and "reasonably available" in the necessity test based on the panel and Appellate Body decisions. Also, possible evidence which can substantialize "trade-restrictiveness" and "the risks non-fulfilment" are provided to conceptualize the elements.

5.1 Trade-restrictiveness

5.1.1 The Panel and Appellate Body Decisions

Article 2.2 of the TBT Agreement recognizes that a technical regulation shall not create "unnecessary obstacles" to international trade. This provision thus envisages that some trade-restrictiveness may arise from a technical regulation. However, the technical regulation would not be inconsistent with Article 2.2 unless it is found to constitute an "unnecessary obstacle to international trade".[255]

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[252] Appellate Body Report, *Article 21.5 US – COOL*, *supra* note 10 at para. 5.306.

[253] Ibid. at para.5.340.

[254] Panel Report, *Australia – Tobacco Plain Packaging*, *supra* note 11 at para.7.1732.

[255] Appellate Body Report, *US – Tuna II (Mexico)*, *supra* note 6 at para. 338.

What is the meaning of trade-restrictiveness under Article 2.2 TBT?

In *US – Tuna II (Mexico)*, the Appellate Body recalled that in the context of Article XI:2(a) of the GATT 1994, that the word "restriction" refers generally to something that has a limiting effect[256], in conjunction with the word "trade" in Article 2.2, the term means something having a limiting effect on trade.[257] In *Australia – Tobacco Plain Packaging*, the Panel added the context of "international" by referring to "unnecessary obstacles to international trade" in the first sentence of Article 2.2 and other key provisions of the TBT Agreement, such as "restriction to international trade" in the sixth recital and "obstacles to international trade" in the fifth recital of the preamble.[258] Therefore, according to the panel and Appellate Body, the concept of "trade-restrictiveness" under Article 2.2 is interpreted as "having a limiting effect on international trade.[259] Specifically, if a technical regulation has a limiting effect on international trade, it is deemed to be trade-restrictive.

How to understand "a limiting effect on international trade"?

In order to further understand "limiting effect on international trade", the Panel in *Australia – Tobacco Plain Packaging* took Article 2.9 and 5.6 of the TBT Agreement, the phrase "a significant effect on trade of other Members" in specific, as an interpretative context for "trade-restrictiveness" in Article 2.2.[260] The Panel also took Article 2.5 as an interpretative context, whose first sentence regulates that "a Member preparing, adopting or applying a technical regulation which may have a significant effect on trade of other Members shall, upon the request of another Member, explain the justification for the technical regulation in terms of the provisions of paragraphs 2 to 4".[261] Considering that both "trade-restrictiveness" and "a significant effect on trade of other Members" need to be "justified" on the basis of the necessity test under Article 2.2, there is at least some overlap between the concept of "a significant effect on trade of other Members" and "trade-restrictiveness".[262]

As for "a significant effect on trade of other Members" in Article 2.9 and Article 5.6, the Committee on Technical Barriers to Trade published a Recommendation which explained its concept and listed some elements that Members should take into account when assessing the significance of the effect on trade of technical regulations.[263] Although such Recommendation

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[256] The Appellate Body addressed this question in the context of Article XI:2(a) of the GATT 1994 in Appellate Body Reports, *China – Raw Materials*, para. 319.

[257] Appellate Body Report, *US – Tuna II (Mexico)*, *supra* note 6 at para. 319.

[258] Panel Report, *Australia – Tobacco Plain Packaging*, *supra* note 11 at para.7.1072.

[259] Ibid.

[260] Ibid., at paras.7.1079-7.1082.

[261] Ibid., at para.7.1087.

[262] Ibid.

[263] Committee on Technical Barriers to Trade, Secretariat Note, "Decisions and Recommendations Adopted by the WTO Committee on Technical Barriers to Trade Since 1 January 1995", WTO Document G/TBT/1/Rev.12 (21 January 2015), Section 4.3.1.1, p. 20 (entitled "Significant effect on trade of other Members").

'bears specifically' on the interpretation and application of the term "significant effect on trade of other Member" and this term is not identical to the concept of "limiting effect on international trade", the Recommendation provides a relevant context in understanding the term "trade-restrictiveness" under Article 2.2.[264] To be more specific, since the Recommendation frames the concept of "significant effect on trade of other Members" as the effect on trade in a specific product, group of products or products in general between two or more Members.[265] It confirms that the complaining party does not need to demonstrate the existence of a trade-restrictive effect on the trade of all WTO Members in all products that are subject to the technical regulation, which means that a Member could demonstrate the existence of a trade restriction on a particular product in which it trades, even if the trades of other Members have increased.[266] In addition, according to the Panel in *Australia – Tobacco Plain Packaging*, it was suggested that the elements including "the value or other importance of imports in respect of the importing and/or exporting Members concerned", as well as "both import-enhancing and import-reducing effects on the trade of other Members", might be given consideration when assessing whether the technical regulation has "a limiting effect on trade".[267] For example, the level of "initial compliance costs" itself cannot demonstrate the "trade-restrictiveness" because the costs of the adoption of a technical regulation may not exclusively ongoing in nature and it may happen that a regulatory environment will be created in which operating costs are reduced, thereby enhancing competitive opportunities and facilitating trade.[268] What needs to be assessed is whether such "initial compliance costs" could be of such a magnitude or nature as to limit the competitive opportunities available to imported products and thereby have a limiting effect on trade.[269] As for the penalties arising from the case of incompliances, their existence or level are not demonstrated to be trade-restrictive and costly penalties to ensure the compliance of an important objective will not lead to a greater degree of trade-restrictiveness.[270]

How to substantiate the existence and extent of "trade-restrictiveness"?

The next question is in which way a technical regulation can have a limiting effect on international trade. Often, the challenged measures may result in some alteration of the overall competitive environment for suppliers on the market. However, the existence of some modification "of the conditions under which all manufacturers will compete against each other on the market" would not, in itself, be sufficient to demonstrate its trade-restiveness. Rather, it is how any modification of the conditions of competition gives rise to a limiting effect on international trade that a complainant needs to show.[271] In *Australia – Tobacco Plain*

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[264] Panel Report, *Australia – Tobacco Plain Packaging*, *supra* note 11 at para.7.1086.

[265] *See* G/TBT/1/Rev.12, *supra* note 264.

[266] Panel Report, *Australia – Tobacco Plain Packaging*, *supra* note 11 at para.7.1078.

[267] Ibid., at para.7.1088.

[268] Ibid., at para.7.1235.

[269] Ibid., at para. 7.1234.

[270] Ibid., at para. 7.1254.

[271] Ibid., at para. 7.1166.

Packaging, the Panel noted that the way in which trade-restrictiveness is demonstrated to exist will depend on the circumstances case by case.[272] Qualitative or quantitative arguments and evidence, or both, including evidence relating to the characteristics of the challenged measures as revealed by its design and operation are the sources of such demonstration.[273]

For certain *de jure* discriminatory measures, a detrimental modification of competitive opportunities to imported products, including those happened between imports from different countries and between imported and domestic products, may be self-evident. Under such circumstances, their trade-restrictiveness may be substantiated in qualitative terms.[274] It is when the assessment of whether a technical regulation accorded less favorable treatment to imported products required under Article 2.1 of the TBT Agreement is linked with the assessment of trade-restrictiveness under Article 2.2.[275] In *US – COOL*, Panel referred to the concept of "trade-restrictiveness" under provisions of the GATT 1994 and concluded that the term "trade-restrictive" under Article 2.2 is broad and does not require the demonstration of any actual trade effects but the competitive opportunities available to imported products.[276] It concluded that the complainants have demonstrated that the COOL measure is "trade-restrictive" within the meaning of Article 2.2 with the findings under Article 2.1 that the competitive conditions of imported livestock is affected compared with like domestic livestock because of higher segregation costs on imported livestock.[277] The United States objected to equating "trade-restrictive" with a denial of competitive opportunities on the basis that this entails 'import[ing] into [TBT] Article 2.2 the analytical approach developed for purpose of Article 2.1, as well as for less favorable treatment more generally".[278] However, the Appellate Body did not address the Panel's finding that the challenged measure was trade-restrictive within the meaning of TBT Article 2.2.[279]

For non-discriminatory internal measures that address a legitimate objective, a sufficient demonstration will, in particular, be required to establish the existence and extent of any "limiting effect" on international trade caused by the challenged technical regulation.[280] Under this circumstance, appropriate supporting evidence and argumentation of actual trade effects might be demanded.[281] However, it does not necessarily mean that their trade-restrictiveness have to be demonstrated in quantitative way since "it will not always be possible to quantify a particular factor analyzed under Article 2.2, or to do so with precision, because of, inter alia, the nature of the objective pursued and the level of protection sought, or the nature, quantity

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[272] Ibid., at para. 7.1074.

[273] Ibid., at para. 7.1076.

[274] Appellate Body Report, *Article 21.5 US – COOL*, *supra* note 10 at para. 5.208.

[275] Panel Report, *Australia – Tobacco Plain Packaging*, *supra* note 11, para.7.1073.

[276] Panel Report, *US – COOL*, *supra* note 193 at paras. 7.572&7.573.

[277] Ibid, at paras. 7.574 & 7.575.

[278] Appellate Body Report, *US – COOL*, *supra* note 7 at para. 193.

[279] Ibid., at para. 381.

[280] Appellate Body Report, *Article 21.5 US – COOL*, *supra* note 10 at para. 5.208 fn 643.

[281] Ibid.

and quality of the evidence existing at the time of analysis, or the characteristics of the technical regulation at issue as revealed by its design and structure."[282]

In all, there is no single correct method for the panel and Appellate Body to follow when assessing the trade-restrictiveness of a technical regulation under Article 2.2. However, it is their responsibility to adopt or develop a best available methodology that best suits the particular case at hand, based on the facts and arguments submitted by the parties, and yields a correct assessment of trade-restrictiveness.[283] Either qualitative or quantitative arguments and evidence, or both, can work. It could be in principle based on a qualitative assessment, taking into account, in particular, the design and operation of the measures, or on a quantitative assessment of its actual trade effects or both.[284]

5.1.2 Analysis

Based on the current jurisprudence, the WTO Panels tend to link the concept of "trade-restrictiveness" under Article 2.2 closely with the notion of "competitive opportunities". This term is often used in contradistinction to trade effects; emphasizing the importance of market access to potential imports.[285] In *US – COOL*, Panel referred to the jurisprudence under provisions of the GATT 1994 that the existence of a restriction need not prove actual effects, "as the focus is on the competition opportunities available to imported products", and concluded that the term "trade-restrictiveness" under Article 2.2 shares the same understanding.[286] Accordingly, the Panel established that the original COOL measure was trade-restrictive under Article 2.2 based on the findings under Article 2.1 on changes to competitive conditions for imported livestock vis-à-vis like domestic livestock in the US market, and concluded that the measure has a considerable degree of trade-restrictiveness as it has a limiting effect on the competitive opportunities for imported livestock as compared to the situation prior to the enactment of the COOL measure.[287] In Article 21.5 *US – COOL*, the Panel found that the amended COOL measure increase the detrimental impact on the competitive opportunities of imported livestock as compared to the original COOL measure and concluded that the amended COOL measure has increased the "considerable degree of trade-restrictiveness" found by the Appellate Body in the original dispute.[288] In *Australia – Tobacco Plain Packaging,* the Panel stressed that the level of "initial compliance costs" itself cannot demonstrate the "trade-restrictiveness" and what needs to be accessed is whether such "initial compliance costs" could be of such a magnitude or nature as to limit the competitive opportunities available to the imported products, thereby having a limiting effect on trade.

With the linkage between "trade-restrictiveness" and competitive opportunities, the assessment

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[282] Panel Report, *Australia – Tobacco Plain Packaging*, *supra* note 11, para.7.1076 (footnote 2738)

[283] Ibid. (fn 2739)

[284] Ibid., at para. 7.1168.

[285] *See* Dawar & Ronen, *supra* note 103, at p9.

[286] Panel Report, *US – COOL*, *supra* note 193 at para. 7.572&7.573.

[287] Panel Report, *Article 21.5 US – COOL*, *supra* note 201, at paras. 7.365&7.366.

[288] Ibid., at para. 7.369.

of "trade-restrictiveness" under TBT Article 2.2 can be related to the test regarding less favourable treatment developed under TBT Article 2.1. To be more specific, the existence of discrimination under Article 2.1 may contribute to the establishment of "trade-restrictiveness" under Article 2.2 since discriminatory measures in themselves can limit competitive opportunities for imported products, thus having a limiting effect on international trade. The question comes what constitutes "trade-restrictiveness" and to which extent the assessment of discrimination under TBT Article 2.1 may affect the identification of trade-restrictiveness under TBT Article 2.2.

In practice, the scope of "trade-restrictiveness" has not been explained clearly and a complaint's assertion that a proposed alternative is less trade-restrictive is not routinely challenged, perhaps because a complainant would have little incentive to propose a more trade-restrictive measure.[289] The WTO Panel's analysis often focuses on the extent to which the alternative would contribute to the respondent's objective. In *EC – Seal Products*, the Panel focused on market access when assessing the "trade-restrictiveness" within the meaning of TBT Article 2.2. In the relational analysis, the Panel stated that the EC Seal Regime including the ban and exceptions was trade-restrictive because it prohibited certain seal products from entering the EU market.[290] In the comparative analysis, the Panel concluded that the proposed alternative measure is less trade-restrictive because of its potential market access allowance.[291] In *US – Tuna II (Mexico)*, the Panel stated that the proposed alternative would be less trade-restrictive since it would allow greater competitive opportunities on the US market by providing access to the label to a greater range of tuna products including imported tuna products.[292] In *US – Clove Cigarettes*, with a mere listing of possible alternative measures provided by the complainant, the Panel said that "it seems clear enough that each of these measures would be less trade-restrictive than the ban on clove cigarettes", while holding that "it did not show that such measures would make an equivalent contribution to the achievement of the objective at the level of protection sought by the respondent".[293] It indicated that the Panel recognized the legal restraints to assess the extent of trade-restrictiveness, in a sense that a total ban is more trade-restrictive than the other instruments. In *Article 21.5 US – COOL*, the Panel stated that trade-restrictiveness under Article 2.2 is not limited to actual and quantifiable effects on trade or market access.[294]

The meaning of "trade-restrictiveness" under TBT Article 2.2 has not been discussed in detail until the case of *Australia – Tobacco Plain Packaging*, in which the Panel face the challenge of examining whether a non-discriminatory internal measure is trade-restrictive. Voon (2015) found that trade-restrictiveness and discrimination are "distinct but overlapping" concepts, however, discrimination is not necessary to establish trade-restrictiveness, because trade-

[289] *See* Voon, *supra* note 22, at p 455.

[290] Panel Report, *EC – Seal Products*, *supra* note 208 at para 7.427.

[291] Ibid., at para. 7.472.

[292] Panel report, *US – Tuna II (Mexico)*, *supra* note 187 at para. 7.568.

[293] Panel Report, *US – COOL*, *supra* note 193 at para.7.423.

[294] Panel Report, *Article 21.5 US – COOL*, *supra* note 201, at para. 7.368.

restrictiveness can also exist in measures which create barriers to market access at the border such as an import ban operating in conjunction with corresponding restrictions on domestic production or sales.[295] She further claimed that a non-discriminatory internal measure is unlikely to be seen as trade-restrictive because the reduced sales of both domestic and imported products are unlikely to be seen as affecting the competitive opportunities of imported as opposed to domestic products.[296] The Panel in *Australia – Tobacco Plain Packaging* confirmed that a determination of "trade-restrictiveness" does not depend on the existence of discriminatory treatment of imported products, moreover, it clarified that non-discriminatory internal measures may also be found to be "trade-restrictive" within the meaning of Article 2.2 of the TBT Agreement.[297] In this dispute, three kinds of arguments relating to trade-restrictiveness were examined, including the effect of the TPP measures on the competitive environment, the effect of the TPP measures on the level of trade in tobacco products, as well as the costs of complying with the regulatory requirements arising from the TPP measures.[298] The discussion on competitive environment included competitive opportunities and market barriers to entry. The second argument related to lost sales with the effect on the volume and value of trade and the last one was about the compliance costs. In the end, the Panel recognized the evidence under the second argument and concluded that the TPP measures have a "limiting effect" on trade because by reducing the use of tobacco products, they reduce the volume of imported tobacco products on the Australian market.[299] However, it is exactly what the TPP measures are designed to achieve with the objective of "improving public health by reducing the use of, and exposure to, tobacco products" with the fact that the Australian market is supplied entirely through imported tobacco products.[300] In the comparative analysis, the Panel found that the proposed alternatives including an increase in minimal legal purchase age, increased taxation, as well as improved social marketing campaigns, would not be less trade-restrictive compared with the TPP measures with the view that "if it were at least as effective as the TPP measures in reducing tobacco consumption, it would entail at least the same degree of impact on the total volume of imported tobacco products".[301] Under such circumstance, the assessment of the extent of trade-restrictiveness and the degree of contribution become the flip side of the same coin, which makes it nearly impossible for the complainant to successfully propose a less trade-restrictive measure which can achieve an equivalent degree of contribution.

To sum up, the WTO Panels tend to focus on the "competitive opportunities" in the assessment of trade-restrictiveness within the meaning of Article 2.2 of the TBT Agreement, which caused confusion on the linkage between the assessment of discrimination under TBT Article 2.1 and trade-restrictiveness under TBT Article 2.2. The scholar analysis and the Panel in *Australia – Tobacco Plain Packaging* have clarified that the identification of discrimination under Article

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[295] *See* Voon, *supra* note 22, at p 476-477.

[296] Ibid., at p 477.

[297] Panel Report, *Australia – Tobacco Plain Packaging*, *supra* note 11, para.7.1074.

[298] Ibid., para. 7.1161.

[299] Ibid., at paras. 7.1208 & 7.1255.

[300] Ibid., at para. 7.1207.

[301] Ibid., at paras.7.1414, 7.1491&7.1621.

2.1 can seem as sufficient but unnecessary condition to help establish the existence of trade-restrictiveness under Article 2.2. To be more specific, while the existence of discrimination may contribute to the establishment of "trade-restrictiveness" within the meaning of Article 2.2 since measures which affect competitive opportunities to imported products are self-evident in creating limiting effect on international trade, a determination of "trade-restrictiveness" does not depend on the existence of discriminatory treatment of imported products. The jurisprudence in *Australia – Tobacco Plain Packaging* has enriched the meaning of "trade-restrictiveness" by examining the specific scope behind, including competitive opportunities, barriers to enter the market, limiting effect on the level of international trade, compliance costs as well as the penalties. Except for penalties, all of the rest can be used to demonstrate "trade-restrictiveness". Having an effect on competitive opportunities for imported products are the most common way to demonstrate trade-restrictiveness. Creating barriers to market entry may also have a "limiting effect" on international trade. As for compliance costs, what needs to be assessed is whether such "initial compliance costs" could be of such a magnitude or nature as to limit the "competitive opportunities" available to imported products, thereby having a limiting effect on trade. However, finding that the TPP measures have a "limiting effect" on trade by recognizing the reduced volume of imported tobacco products on the Australian market could be problematic because it is what the TPP measures intend to achieve in order to combat public health issues. It would be nearly impossible for the complainant to propose an alternative measure which can achieve an equivalent degree of contribution while being less trade-restrictive, taking account of the risks non-fulfilment would create.

5.1.3 Evidence

One evidence which can be used to assess the element of "trade-restrictiveness" under TBT Article 2.2 is econometric studies. Economic analysis can help determine whether there is a statistically significant relationship between the measure and the competitive opportunities facing imported products relative to domestic products.[302] In addition, it can be used to identify the magnitude of compliance costs, and examine "whether the measure in question would create costs for economic actors with respect to their ongoing participation in the relevant market".[303]

In *US – COOL*, although the Panel took into account other evidence that was provided through affidavits, it based its decisions on econometric studies.[304] In this dispute, Canada submitted two economic studies on the segregation costs of the COOL measure, including "Informa Report" and "Sumner Econometric Study".[305] The first one asses the implementation costs of the supply chain and the second one measures the impact on the willingness of operators along

[302] Mavroidis, P. C., & Saggi, K. (2014). What is not so Cool about US–COOL Regulations? A critical analysis of the Appellate Body's ruling on US–COOL. *World Trade Review*, *13*(2), 299–320. https://doi.org/10.1017/S147474561400007X, at 311.

[303] Panel Report, Australia – Tobacco Plain Packaging, *supra* note 11, para. 7.1234 (footnote 3033).

[304] *See* Mavroidis & Saggi, *supra* note 302, at 311.

[305] Panel Report, *US – COOL*, *supra* note 193 at para. 7.488.

the supply chain to pay for imported Canadian animals.[306] For the Informa Report, the Panel stated that it could not assess with sufficient certainty whether it is reliable due to the lack of methodology, as well as the sample considered such as time period, geographical zone, and the number of firms surveyed.[307] Eventually, the Panel recognized the findings in the Summer Economic Study and found it make a *prima facie* case that the COOL measure negatively and significantly affected the import shares and price basis of Canadian livestock.[308] Furthermore, the Panel found the USDA Econometric Study provided by the United States, relying on different data and methodology, not to rebut the *prima facie* case for a negative and significant COOL impact established by the Summer Econometric Study.[309]

When assessing the econometric studies, the Panel in *US – COOL* stressed that "it is not their task to establish a unified econometric report or to conduct their own econometric assessment", instead, what they examined is the robustness of the study. Mavroidis & Saggi (2014) commented that it is not appropriate for the WTO Panels to hide behind "in house-expertise", and, refuse to make use of Article 13 DSU and invite experts to testify the econometric evidence and appraise the submitted evidence.[310] WTO staff members that have the appropriate economics training do not have to sign the opinions that they defend and invited experts could have a dis-incentive to take the assessment 'light-heartedly' because they will have to bear the full reputational cost of their opinion.[311]

5.2 Degree of Contribution

5.2.1 The Panel and Appellate Body Decisions

In this section, the meaning of the word "fulfil" is first explained. Next, two main questions in terms of assessing the degree of contribution are discussed. The first question is about how to identify the degree of contribution of a measure in the relational analysis. The second question focuses on how to compare the respective degrees of contribution of the challenged measure and proposed alternatives in the comparative analysis.

"Fulfil"

In *US – Tuna II (Mexico)*, the Appellate Body first found the textual meaning of the word "fulfill" in the *Shorter Oxford English Dictionary*, which is defined as "provide fully with what is wished for".[312] In the context of the phrase "to fulfil a legitimate objective", the Appellate Body recognized that such an objective can be achieved to a greater or lesser degree.[313] Therefore, in Article 2.2, the term "fulfil" does not necessarily mean the complete achievement

[306] Ibid.

[307] Ibid. at para. 7.499.

[308] Ibid. at paras. 7.541&7.542.

[309] Ibid. at para. 7.545.

[310] *See* Mavroidis & Saggi, *supra* note 303, at 318.

[311] Ibid.

[312] Appellate Body Report, *US – Tuna II (Mexico)*, *supra* note 6 at para. 315.

[313] Ibid.

of something, rather, it is concerned with the degree of contribution that the technical regulation makes towards the achievement of the legitimate objective.[314]

Thus, while adjudicating a claim under Article 2.2 of the TBT Agreement, a panel should focus on ascertaining to what degree, if at all, the challenged technical regulation actually contributes to the achievement of its legitimate objective, rather than answering whether the measure fulfils the objective completely or satisfies some minimum level of fulfilment of that objective.[315] In *US – COOL*, the Appellate Body reversed the Panel's ultimate finding that "the COOL measure was inconsistent with Article 2.2 because it failed to convey meaningful origin information to consumers" for the reason that the Panel had erred in "considering it necessary for the COOL measure to have fulfilled the objective completely, or satisfied some minimum level of fulfilment to be consistent with Article 2.2."[316]

As discussed in the meaning of the word "fulfil", when adjudicating a claim under Article 2.2, a panel must seek to ascertain what degree, if all, that the technical regulation actually contributes to its objective in the holistic weighing and balancing test. Under the relational analysis, the degree of contribution should be ensured that the measure at issue at least makes some contribution to the legitimate objective, as once the measure makes no contribution to its objective, it is directly inconsistent with Article 2.2.[317] In addition, the concept of degree of contribution is applied in the comparative analysis that the degree of contribution of proposed alternative measures should achieve at least an "equivalent" degree of contribution as that of the challenged technical regulation.[318] It comports with the principle in the sixth recital preambular that Members have their right to achieve their desired level of protection because such level can be revealed by the actual degree of contribution that a technical regulation makes to its objective.[319]

How to identify the degree to which a measure contributes to its objective?

According to the Appellate Body in *US – Tuna II (Mexico)*, the degree of contribution of a particular objective may be discerned from the design, structure, and operation of the technical regulation, as well as from evidence relating to the application of the measure.[320] In *Australia – Tobacco Plain Packaging*, the Panel identified the degree to which a measure contributes to its objective by first analyzing the "design, structure, and operation of the measures" and then examined the actual "impact" of the measure on smokers' behavior since modifications of such

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[314] Ibid.

[315] Appellate Body Report, *US – COOL*, *supra* note 7 at paras. 373 & 468.

[316] Ibid., at para. 468.

[317] Appellate Body Report, *US – Tuna II (Mexico)*, *supra* note 6 at para. 322 (fn 647).

[318] Ibid.

[319] Panel Report, *US – Clove Cigarettes*, *supra* note 25 at para, 7.370; Appellate Body Report, *US – COOL*, *supra* note 7 at para. 373. The level at which a Member considers it appropriate to pursue a legitimate objective may also be discernible in other ways, such as through an express provision or statement in the instrument at issue.

[320] Appellate Body Report, *US – Tuna II (Mexico)*, *supra* note 6 at para. 317.

behavior was the measure's objective.[321] With regards to the relative weight of evidence relating to the design, structure and intended operation of the measure and empirical evidence relating to their application, it will depend on the nature and quality of such evidence and its proactive value for the measure at issue.[322] Although it is not always possible to quantify a particular factor, or to do so with precision, in respect of the technical regulation itself, the panel and Appellate Body need to ascertain as precisely as possible to what extent the relevant facts have been established, and the extent to which this evidence, taken as a whole, supports a conclusion that the challenged measures contribute to their objective, in light of the nature and quality of the evidence.[323]

In practice, the WTO Panels tend to draw conclusions with regard to the degrees of contribution in a more qualitative rather than a quantitative way, using the words such as "some" to describe the actual degree.[324] It is relatively easy for the WTO Panels to make a judgment whether the technical regulation is effective, however, it is more challenging to assess whether the alternative measure proposed by the complainant can achieve an "equivalent" degree of contribution as the measure it issue. Naturally, the next question is how panels and Appellate Body scrutinize whether an "equivalent" degree of contribution can be achieved in the comparative analysis.

How to assess whether the "equivalence" is achieved?

Firstly, it is important to bear in mind that the "equivalent degree" does not necessarily mean that the complainant must demonstrate that its proposed alternative measure will achieve an "identical" degree of contribution in the same way. Rather, it may achieve an equivalent degree of contribution in ways different from the measure at issue.[325]

Secondly, in the case of the respective degrees of contribution are achieved through various methods or techniques, it is the overall degree of contribution that should be assessed and compared rather than in an isolated manner.[326]

Thirdly, in the case that a proposed measure already exists in some form in the legal system of the respondent, it is the variation proposed by the complainants as a substitute for the challenged measure that would be the subject of the comparative analysis, including whether that variation of an existing one would make an equivalent contribution to the objective pursued by the responding Member.[327] Also, where such a variation is proposed, the respondent will

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[321] Panel Report, *Australia – Tobacco Plain Packaging*, *supra* note 11, paras. 7.488 & 7.499.

[322] Ibid., at para. 7.499.

[323] Ibid., at para. 7.515; Appellate Body Report, *Article 21.5 US – COOL*, *supra* note 10 at para. 5.208.

[324] Panel Report, *Australia – Tobacco Plain Packaging*, *supra* note 11, at para. 7.1045.

[325] Appellate Body Report, *Article 21.5 US – COOL*, *supra* note 10 at para. 5.215.

[326] Ibid. at para. 5.216.; Panel Report, *Australia – Tobacco Plain Packaging*, *supra* note 11, para. 7.1454.

[327] Panel Report, *Australia – Tobacco Plain Packaging*, *supra* note 11, para. 7.1682.

bear the burden of showing why such variation is not a valid alternative.[328]

Last but not the least, when assessing whether a proposed alternative measure can achieve an equivalent degree of contribution, Panels should take into account of "the characteristics of the technical regulation at issue as revealed through its design and structure, as well as the nature of the objective pursued and the nature, quantity, and quality of the evidence available."[329] According to the Appellate Body in *Article 21.5 US – COOL* and the Panel in *Australia – Tobacco Plain Packaging*, the contours of which may vary from case to case, and a new concept of "margin of appreciation" is introduced in the necessity test under TBT Article 2.2.[330] In specific, such a margin of appreciation in assessing equivalence should be informed by the risks that non-fulfilment of the technical regulation's objective would create, the nature of the risks and the gravity of the consequences arising from the non-fulfilment of the technical regulation's objective, the characteristics of the technical regulation at issue as revealed through its design and structure, as well as the nature of the objective pursued and the nature, quantity of the evidence available."[331]

5.2.2 Analysis

From the assessment of "material contribution" to "some contribution" in the relational analysis

US – Clove Cigarettes, as the first case discussing the legal standard under Article 2.2 of the TBT Agreement, is one and the only case in which the Panel adopted the jurisprudence of "material contribution" derived from *Brazil – Retreaded Tyres* under Article XX(b) of the GATT 1994.[332] In this case, the Panel assessed whether Indonesia had demonstrated that the ban on clove cigarettes made no "material contribution" to the objective of reducing youth smoking.[333] It indicates that the Panel believed that there shall be at least some threshold for the measure to fulfil its objective, and a preliminary conclusion may be required before the comparative analysis.

With the development of case law, the meaning of "fulfil" under TBT Article 2.2 gets clarified. What is required under the current legal standard is that the measure should make at least "some contribution" rather than makes no achievement to fulfil its legitimate objective, and the assessment should "focus on ascertaining the degree of contribution achieved by the measure, rather than on answering the questions of whether the measure fulfils the objective completely or satisfies some minimum level of fulfilment of that objective."[334] Therefore, preliminary

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[328] Ibid., at para. 7.1573.

[329] Appellate Body Report, *Article 21.5 US – COOL*, *supra* note 10 at para. 5.125.

[330] Ibid., Panel Report, *Australia – Tobacco Plain Packaging*, *supra* note 11, para.7.1722.

[331] Appellate Body Report, *Article 21.5 US – COOL*, *supra* note 10 at para. 5.215; Panel Report, *Australia – Tobacco Plain Packaging*, *supra* note 11, para.7.1722.

[332] Panel Report, *US – Clove Cigarettes*, *supra* note 25 at para. 7.380.

[333] Ibid.

[334] Appellate Body Report, *US – Tuna II (Mexico)*, *supra* note 6 at para. 322 (fn 647); Appellate Body Report, *US – COOL*, *supra* note 7 at para. 468.

conclusions are not mandatory.

This case illustrates that the WTO Panels used to rely much upon the jurisprudence under Article XX of the GATT 1994 and tend to adopt a GATT-think to interpret the TBT Article 2.2 without taking into count the text and context of TBT Article 2.2. With the development of case laws, the meaning of the elements gets clearer and the sequence and order of the necessity test under Article 2.2 of the TBT Agreement gets more structured.

Two factors identified to help assess the degree of contribution

Two main factors considered by the WTO Panels when assessing the degree of contribution of the measure are identified, including time effect and broader regulatory context. Under some circumstances such as public health issue, these two factors may be given a due account in both relational analysis and comparative analysis.

Time effect

The time period for which evidence of application of the measures is available may have an impact on the nature and extent of the conclusions regarding the degree of contribution that may be drawn from the evidence. Similar to what the Appellate Body observed in *US – Gasoline* under Article XX(g) of the GATT 1994 concerning the effect of time during the implementation of a given measure in the field of conservation of exhaustible natural resources, the Panel in *Australia – Tobacco Plain Packaging* recognized that sometimes it may take time for certain measures, especially for those aiming to protect public health, to materialize fully or be measurable in the relevant data.[335] For the TPP measures, its contribution to improving public health by reducing the use of and exposure to tobacco products takes time to reveal and the empirical evidence in the early period of application may not provide a complete picture of the degree of contribution.[336] Therefore, the possible limitations in, or unavailability of certain evidence need to be understood by the panel in the light of that possibility.[337] Under such circumstances, "quantitative projections" and "qualitative reasoning based on a set of hypotheses that are tested and supported by sufficient evidence" may be taken into account in a panel's assessment in addition to the data relating to the past and the present.[338] Also, the effect of time may also be pertinent in assessing the degree of contribution that a proposed alternative may make if the effects of a measure may be expected to arise in a time-frame.[339]

Broader regulatory context

If the technical regulation is operated in a broader context of a comprehensive strategy, the panel and Appellate Body tend to take due weight in assessing the degree of contribution of the measure and the proposed alternatives as to the jurisprudence under Article XX (b) of the

[335] Panel Report, *Australia – Tobacco Plain Packaging*, *supra* note 11, para. 7.938.

[336] Ibid, at paras. 7.939 & 7.940.

[337] Ibid, at para. 7.940.

[338] Ibid, at para. 7.982.

[339] Ibid, at para. 7.1462.

GATT.[340] Also, the broader regulatory context in which the challenged measure exists, and how it works with other measures to achieve the same objective is taken into account when assessing the proposed alternative measures.[341]

In *Australia – Tobacco Plain Packaging*, for the fact that the TPP measures are not intended to operate as a stand-alone policy, but as part of "a comprehensive suite of reforms to reduce smoking and its harmful effects", the Panel considered that taking due account of the broader regulatory context is essential to their understanding of the degree of contribution to Australia's objective.[342] In addition, when assessing how each proposed alternative would contribute to Australia's objective, as a substitute to the TPP measures, the Panel took the jurisprudence of *Brazil – Retreaded Tyres* as a context that "[s]ubstituting one element of this comprehensive policy for another would weaken the policy by reducing the synergies between its components, as well as its total effect."[343] Hence, the Panel took due account of the fact that the TPP measures form part of a broader policy scheme with multiple complementary elements designed to pursue a public health objective in a comprehensive policy strategy.[344]

Hence, the broader regulatory context is a relevant consideration in the assessment of the degree of contribution because it informs and affects the manner in which the measures are applied and operate in a comprehensive policy strategy. However, it does not reduce the need for a panel to identify as precise as possible the contribution made by the challenged measures themselves.[345]

5.3 The Risks Non-fulfilment Would Create

5.3.1 The Panel and Appellate Body Decisions

Unlike "degree of contribution" and "trade-restrictiveness" which are the subjects to be compared, "the risks non-fulfilment would create" served as a factor which needs to be taken into account in the weighing and balancing test. Textually, the "risks" here are "those that would be created by 'non-fulfillment' of the 'legitimate objective' of the technical regulation at issue.[346] Therefore, this determination is directly related to the objective pursued by the challenged measure.[347] When assessing the risks, relevant elements of consideration are

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[340] Appellate Body Report, *Brazil – Retreaded Tyres*, para. 172; Panel Report, *Australia – Tobacco Plain Packaging*, *supra* note 11, para. 7.1528.

[341] Panel Report, *Australia – Tobacco Plain Packaging*, *supra* note 11, para. 7.1391.

[342] Ibid, at para. 7.1729.

[343] Ibid, at para. 7.1528; Appellate Body Report, *Brazil – Retreaded Tyres*, para. 172.

[344] Panel Report, *Australia – Tobacco Plain Packaging*, *supra* note 11, para. 7.1730; *See* Appellate Body Reports, *EC – Seal Products*, paras. 5.212-5.213. *See* also Appelate Body Report, *Brazil – Retreaded Tyres*, para. 172.

[345] Panel Report, Australia – Tobacco Plain Packaging, *supra* note 11, para. 7.506.

[346] Appellate Body Report, Article 21.5 US – COOL, *supra* note 10 at para. 5.277. Panel Report, Australia – Tobacco Plain Packaging, *supra* note 9 at para.7.1292, fn 3187.

[347] Panel Report, *Australia – Tobacco Plain Packaging*, *supra* note 11, para. 7.1260.

specifically listed under Article 2.2, "inter alia: available scientific and technical information, related processing technology or intended end-uses of products."[348]

According to the Appellate Body in *US – Tuna II (Mexico)*, the obligation to consider "the risks non-fulfilment would create" suggests that the comparison of the challenged measure with a possible alternative measure should be made in the light of the nature of the risks at issue and the gravity of the consequences that would arise from non-fulfilment of the legitimate objective.[349] Later in the case *Article 21.5 US – COOL*, the Appellate Body opined that in order to take account of the risks non-fulfilment would create, "the nature of the risks at issue" and "the gravity of the consequences that would arise from non-fulfilment" themselves should in the first place, to be identified.[350] Therefore, the first step is to identify "the risks non-fulfilment would create" and the subsequent step is to take account of it in the necessity test. The two steps are distinct from each other.

How to assess the "the risks non-fulfilment would create"?

Since Article 2.2 neither prescribes a particular methodology for assessing "the risks non-fulfilment would create" nor defines how it should be "taken account of", Appellate Body used Article XX of the GATT 1994 as a context in which risks may be assessed in either qualitative or quantitative terms.[351] Appellate Body recalled that risks might not be susceptible to quantification in some cases and some types of risk assessment methods might not help with some objectives. The same goes to Article 2.2 of the TBT Agreement that it might be difficult to determine or quantify the elements separately with precision due to the nature of the relevant risks or the gravity of the consequences of non-fulfilment of the objective of the measure at issue. Therefore, should it be possible and appropriate to determine the nature of the risks and to quantify the gravity of the consequences that would arise from non-fulfilment, the two aspects shall be assessed separately to identify the risks non-fulfilment would create. Otherwise, it may be more appropriate to conduct a conjunctive analysis of both the nature of the risks and the gravity of the consequences of non-fulfilment, in which "the risks non-fulfilment would create" are assessed in qualitative terms.[352] In any cases, difficulties and imprecision should not in and of themselves relive a panel from its duty to assess the factor and a panel should proceed further with a holistic weighing and balancing of all relevant factors, and reach an overall conclusion under Article 2.2. For example, Appellate Body found the Panel erred in concluding that it was unable to ascertain the gravity of the consequences of non-fulfilment of the amended COOL measure's objective.[353] In all, it is not a must to assess the "risks non-fulfilment" quantitatively and panels must adopt or develop a methodology that is suited to

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[348] Article 2.2, the TBT Agreement.

[349] Appellate Body Report, *US – Tuna II (Mexico)*, *supra* note 6 at para. 321.

[350] Appellate Body Report, *Article 21.5 US – COOL*, *supra* note 10 at para. 5.217; Panel Report, *Australia – Tobacco Plain Packaging*, *supra* note 11, para. 7.184.

[351] Appellate Body Report, *Article 21.5 US – COOL*, *supra* note 10 at para. 5.218.

[352] Ibid, at para.5.306.

[353] Ibid, at para.5.206

yielding a correct assessment of the relevant factors under Article 2.2 case by case.[354]

The nature of the risks at issue

According to the Panel in *Australia – Tobacco Plain Packaging*, since the "risks" are "those that would be created by 'non-fulfillment' of the 'legitimate objective' of the technical regulation at issue and such objective is constant, the nature of the risks associated with its non-fulfilment will also be constant, independently of the choice of instrument to address these risks.[355] Naturally, the identification of "the nature of the risks" is directly related to the objective of the technical regulation. In the TPP case, the Panel found the objective is "to improve public health by reducing the use of, and exposure to, tobacco products" and accordingly the nature of the risk not fulfilling the TPP measures' legitimate objective was found as "public health would not be improved, as the use of, and exposure to, tobacco products would not be reduced".[356]

Linkage with "likelihood"

Discussions on whether identifying the risks non-fulfilment, nature of the risks in specific, would entail an investigation on the "likelihood" of risks were brought up in the panel report of *Australia – Tobacco Plain Packaging*. The complainants referred to the dictionary definition of "risk" to argue that the likelihood of "risk" should be taken into account when determining the risks non-fulfilment would create, in particular, the nature of such risks. Another evidence supported this argument is that the Panel in *US – Tuna II (Mexico)*, once used the phrase "the likelihood and the gravity of potential risks (and any associated adverse consequences) that might arise in the event that the legitimate objective being pursued would not be fulfilled" to describe the "the risks that non-fulfilment would create".[357] The Panel in *Australia – Tobacco Plain Packaging* rebutted this argument by claiming that the Appellate Body of *US – Tuna II (Mexico)* referred to the "nature" rather than the "likelihood" of the risks at issue.[358] In addition, from an analytical perspective, the Panel argued that if the identifying "the risks non-fulfilment would create" entails "an assessment of the 'likelihood' of the challenged measure not fulfilling its objective or how likely it is that the challenged measure will not achieve its objective as compared with the proposed alternatives", it would deprive the role of "taking account of the risks non-fulfilment would create" as a distinct element in the text of Article 2.2.[359] However, the Panel did not rule out the possibility that "this may be a relevant consideration in other parts of the analysis under Article 2.2, including in the context of a comparative analysis of the challenged and alternative measures' respective degrees of contribution to the objective and whether the proposed measures 'would make an equivalent contribution to the relevant

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[354] Ibid, at para.5.295.

[355] Panel Report, *Australia – Tobacco Plain Packaging*, *supra* note 11 at para.7.1292.

[356] Panel Report, *Australia – Tobacco Plain Packaging*, *supra* note 11 at para. 7.1287.

[357] Panel report, *US – Tuna II (Mexico)*, *supra* note 187 at para. 7.467.

[358] Panel Report, *Australia – Tobacco Plain Packaging*, *supra* note 11 at para.7.1291.

[359] Ibid., at para.7.1293.

legitimate objective, taking account of the risks non-fulfilment would create".[360]

The gravity of the consequences that would arise from non-fulfilment of the legitimate objective

This factor does not get much attention and get explained in the past rulings probably because the phrase itself is kind of self-explaining in a sense that it means the gravity of the consequences should the legitimate objective of the technical regulation not be fulfilled. Although it is best to quantify this element, in practice, qualitative descriptions such "particularly grave" have been used to conclude "the gravity of the consequences that would arise from non-fulfilment of the legitimate objective.[361] In *Australia – Tobacco Plain Packaging*, the specific age groups were also distinguished when looking into the gravity of the consequences, and the Panel found the consequences of not fulfilling the objective of reducing the use of, and exposure to, tobacco products, to be "especially grave for youth".[362] In *Article 21.5 US – COOL*, the Appellate Body found the Panel erred by concluding that it was unable to ascertain the gravity of the consequences of non-fulfilment of the amended COOL measure's objective. According to Appellate Body, in some contexts, where it might be difficult to determine separately the nature of the risks and to quantify the gravity of the consequences, a conjunctive analysis shall be assessed in qualitative terms.[363]

Linkage with "relative importance of the objective"

Discussions on whether the assessment of "the gravity of the consequences that would arise from non-fulfilment of the legitimate objective" relates to the relative importance of the objective compared with other objectives were presented in *Article 21.5 US – COOL*. In this dispute, Canada and Mexico claimed that the Panel erred by failing to consider the relative importance of the objective compared with other objectives when assessing "the risks non-fulfilment would create".[364] They argued that providing the information on country of origin, compared with other objectives such as public health and the protection of the environment, would not be so important, therefore the consequence of not providing such information would be relatively low.[365]

Considering that the "risks" need to be taken into account were those that would be created by the non-fulfilment of the legitimate objective of the technical regulation at issue, Appellate Body held that the phrase "taking account of the risks non-fulfilment would create" would not provide a direct textual basis for a comparison between the relative importance of the objective at issue and that of other objectives.[366] Also, the Appellate Body confirmed such interpretation by referring to the terms listed in the final sentence of Article 2.2, including "scientific and

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[360] Ibid.

[361] Ibid., at para.7.1322.

[362] Ibid., at para.7.1317.

[363] Appellate Body Report, *Article 21.5 US – COOL*, *supra* note 10 at para. 5.295.

[364] Ibid., at para.5.276.

[365] Ibid.

[366] Appellate Body Report, *Article 21.5 US – COOL*, *supra* note 10 at para. 5.277.

technical information", "related processing technology", and "intended end-uses of products", etc. Although the list is not exhaustive, the Appellate Body understood that it indicated neutral and observable considerations in terms of fulfilling the objective of the technical regulation at issue.[367] The arguments derived from those neutral considerations would not be necessary to determine whether one objective is more or less important than other objectives.[368] However, "unlike the *relative* importance of an objective against other potential objectives, the importance of the objective to *the Member implementing the technical regulation at issue"*, was found by the Appellate Body to be correlated, at least to some extent, to the gravity of the consequences arising from the non-fulfilment of the technical regulation's legitimate objective.[369] It is because the importance of the objective to the Member implementing the technical regulation at issue, may reflect the level considered appropriate by the Member to pursue the relevant objective, and "evidence pertaining to the importance a Member places on an objective might inform an assessment of the degree of contribution made by the technical regulation to its objective".[370]

How to "take account of" the risks non-fulfilment would create?

After identifying the risks non-fulfilment, the next step is to take account of it. The Appellate Body explained in *US – Tuna II (Mexico)* that it is in the comparative analysis that the nature of the risks at issue and the gravity of the consequences that would arise from non-fulfilment of the legitimate objective should be taken account.[371] The Appellate Body in *Article 21.5 US – COOL* said that "the term 'taking account of" calls for the active and meaningful consideration of 'the risks non-fulfilment would create', even where there is imprecision as to the nature and magnitude of such risks, in the weighing and balancing under Article 2.2 of the TBT Agreement".[372] Meanwhile, how to take account of such consideration is adaptable to the particularities of a given case.

In *Article 21.5 US – COOL*, Appellate Body explained in detail how it could be taken into account. The Appellate Body pointed out that there is a margin of appreciation in assessing whether a proposed alternative measure could achieve an equivalent degree of contribution, "whose contours may vary from case to case".[373] The risks non-fulfilment would create, in particular, the nature of the risks and the gravity of the consequences arising from the non-fulfilment of the technical regulation's objective can inform such margin of appreciation.[374]

5.3.2 Analysis

The assessment of the element of "the risks non-fulfilment would create" closely relates to the

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[367] Ibid., at para 5.278.

[368] Ibid., at para 5.278.

[369] Ibid., at para 5.279.

[370] Ibid.

[371] Appellate Body Report, *US – Tuna II (Mexico)*, *supra* note 6 at para. 321.

[372] Appellate Body Report, *Article 21.5 US – COOL*, *supra* note 10 at para. 5.218.

[373] Ibid., at para. 5.215.

[374] Ibid.

objective pursued by the challenged measure. In *Australia – Tobacco Plain Packaging*, with the linkage between the nature of the risks and likelihood being explained, the meaning of "the nature of the risk" got clarified. Logically speaking, if the legitimate objective of technical regulation is p, then the nature of the risk of not fulfilling the measure's legitimate objective is not p, which is not dependent on the means of achieving the legitimate objective. With the rulings under *Article 21.5 US – COOL,* the gravity of the consequences of not fulfilling the objective, seems also to be a constant irrespective of the means to achieve the objective, which is more correlated to the importance of the objective to the regulating Member. It is quite different from the necessity test under Article XX of the GATT 1994, in which the relative importance of the non-trade values pursued might be compared with other legitimate objectives.

Based on the latest jurisprudence, "the risks non-fulfilment would create" seems to be a constant irrespective of the means to achieve the objective. In addition, the precise meaning of "taking account of" is that this element could inform the "margin of appreciation" in the comparative analysis when assessing whether the proposed alternative achieves an equivalent degree of contribution.

However, such understanding is different from the panel's previous rulings, in which the element of "the risks non-fulfilment would create" is considered to be a variable which needs to be compared between that of the measure at issue and of the proposed alternatives, and the comparison results have a negative impact in assessing the equivalence of the respective degrees of contribution. In *US – Clove Cigarettes*, the Panel rejected each of the proposed alternatives because it believed that comparing with the current outright ban, all of the alternative measures appeared to involve a greater "risks non-fulfilment would create of the objective".[375] The Panel referred to the jurisprudence developed under Article XX(b) of the GATT 1994, and held that the requirement of "taking account of" the risks non-fulfilment would create by terms of Article 2.2 suggested that "if an alternative measure would entail a greater the risks non-fulfilment would create of the objective, it would be difficult to find that it would make an "equivalent" contribution to the achievement of the objective, at the level of protection sought".[376] Also, the Panel in *US – Tuna II (Mexico)* stated that "an alternative means of achieving the objective that would entail greater 'the risks non-fulfilment would create' would not be a valid alternative, even if it were less trade-restrictive".[377] However, those arguments did not get any chance to be further discussed because the condition of appeal under Article 2.2 was not met in *US – Clove Cigarettes*, and the comparison of the respective degrees of contribution of the measure and of the proposed alternatives was found to be erred in *US – Tuna II (Mexico)*.

Although the extent to which the latest jurisprudence and previous rulings conflict with each other is unclear, I argue that the latest jurisprudence under *Australia – Tobacco Plain Packaging* and *Article 21.5 US – COOL* in understanding the meaning and the role of "the risks non-

[375] Panel Report, *US – Clove Cigarettes*, *supra* note 25 at para. 7.423.

[376] Ibid., at para. 7.424.

[377] Panel report, *US – Tuna II (Mexico)*, *supra* note 187 at para.7.467.

fulfillment would create" is more appropriate and consistent with VCLT since this element is written with the text of "taking into account" under TBT Article 2.2 rather than being an individual factor to be compared.

5.3.3 Evidence

As discussed above, "the gravity of the consequences that would arise from non-fulfilment of the objectives pursued by the Member" is correlated to "the relative importance of the legitimate objective to the implementing country". In order to know the relative importance of the legitimate objective to the regulating Member, it depends on which legitimate objective a Member wants to achieve.

If the technical regulation aims to provide consumers more information to help them make informed choices based on their preferences. Then consumer studies on their willingness to pay to have extra information or opinion poll may help to evaluate the importance of the information to the consumers. For example, the Appellate Body in *US – COOL* concluded that the consequences that may arise from non-fulfilment of the objective would not be particularly grave with the lack of evidence presented by the United States to show that consumers want information on those particular aspects.[378] In specific, the US consumers' unwillingness to bear all the relevant costs and the fact that most US consumers are not prepared to pay for that extra information informs that obtaining such information is not a high priority for the consumers.[379] However, asking consumer preferences cannot be applied in the case of combating public health issue such as smoking warning information. It is because the consumers who smoke have been already addicted to tobacco, therefore they cannot make a rational choice anymore. In addition, the legislative history may also be evidence to inform the importance of the objective to the regulating country, therefore indicating the "the gravity of the consequences arising from the non-fulfilment of the technical regulation's legitimate objective".

5.4 Reasonably Available

The element of "reasonably available" was first mentioned in *US – Tuna II (Mexico)* as a relevant factor to consider in the comparative analysis under TBT Article 2.2.[380] The Appellate Body in *Article 21.5 US – COOL* referred to the jurisprudence under Article XIV(a) of the GATS and Article XX(a) of the GATT 1994 as the interpretive context to understand the "reasonably available" under Article 2.2 of the TBT Agreement.[381] Unlike Article XX of the GATT 1994, the burden is on the complainant under Article 2.2 of the TBT Agreement to make a *prima facie* case that a less trade-restrictive alternative measure, which also achieves an equivalent contribution to the relevant objective, would be reasonably available.[382] The nature

[378] Appellate Body Report, *US – COOL*, *supra* note 7 at para.478.

[379] Ibid.

[380] Panel report, *US – Tuna II (Mexico)*, *supra* note 187 at para. 322.

[381] Appellate Body Report, *US – COOL*, *supra* note 7 at para. 5.330.

[382] Appellate Body Report, *US – Tuna II (Mexico)*, *supra* note 6 at para. 323; Appellate Body Report, *US – COOL*,

and degree of evidence required for a complainant to establish the "reasonably availability" of a proposed alternative measure as part of a claim under Article 2.2 of the TBT Agreement will necessarily vary from measure to measure and from case to case.[383]

5.4.1 How to assess the element of "reasonably available"?

Economic and technical feasibility has been mentioned as two aspects for the panel and Appellate Body to consider when assessing the reasonably availability of a proposed alternative under Article 2.2. For the complainant, the evidence providing sufficient indications that the costs of the proposed alternatives would not be "*a priori* prohibitive" is needed.[384] Meanwhile, the potential difficulties associated with the implementation of the proposed measures should not be of such a substantial nature that they would render the proposed alternative "merely theoretical in nature".[385] As for the respondent, in order to argue that the proposed alternative is not reasonably available to the regulating country, evidence should be submitted to substantiate that the proposed measure is indeed merely theoretical in nature or would entail an undue burden because of its prohibitively high costs or substantial technical difficulties.[386] The relevant costs needed to be considered may include not only the enforcement and implementation costs incurred by the regulating Member, but may also include "significant costs or difficulties faced by the affected industry, in particular where such costs or difficulties could affect the ability or willingness of the industry to comply with the requirements of that measure".[387] A proposed alternative measure involving "some change or administrative cost" may still be reasonably available.[388]

5.4.2 What nature and degree of evidence are required to establish the "reasonably availability" of a proposed alternative measure?

Considering the hypothetical nature of alternative measures as conceptual tools in the comparative analysis under Article 2.2, and the lack of knowledge for the complainant on the capacity and particular circumstances of the regulating Member, a detailed plan on implementing a proposed alternative in practice, and precise and comprehensive estimates of the cost that would occur are not required for the complainant to provide.[389] Instead, once the *prima facie* case has been established by the complainant, the respondent would need to adduce

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supra note 7 at para.5.337.

[383] Appellate Body Report, *Article 21.5 US – COOL*, *supra* note 10 at para.5.327.

[384] Ibid, at para.5.339.

[385] Ibid.

[386] Appellate Body Report, *Article 21.5 US – COOL*, *supra* note 10 at para.5.339.; Panel Report, *Australia – Tobacco Plain Packaging*, *supra* note 11 at para 7.1709.

[387] Panel Report, *Australia – Tobacco Plain Packaging*, *supra* note 11 at para 7.1709; Appellate Body Report, Article 21.5 US – COOL, *supra* note 10 at para. 5.330 (quoting Appellate Body Report, EC – Seal Products, para. 5.277).

[388] Appellate Body Report, *Article 21.5 US – COOL*, *supra* note 10 at para.5.338. (quoting Appellate Body Report, China – Publications and Audiovisual Products, para. 327. (emphasis original)

[389] Appellate Body Report, *Article 21.5 US – COOL*, *supra* note 10 at para.5.338.

specific evidence to show that implementation of such an alternative would entail an undue burden because of prohibitively high costs, or substantial technical difficulties faced by the regulating Member.[390] In *Article 21.5 US – COOL*, the Appellate Body found the Panel erred in properly allocating the burden of proof under Article 2.2 in finding that the complainants had not provided sufficient explanations of how the third and fourth proposed alternative measures would be implemented in the regulating country and of the costs that the alternative measures would entail.[391]

To sum up, the WTO Panels developed an analysis on the element of "reasonably available" mainly based on the previous jurisprudence under Article XIV(a) of the GATS and Article XX(a) of the GATT 1994. It is not required for the complainant to provide a detailed plan or precise estimates of the cost that would arise from the proposed measures in order to make a *prima facie* case in terms of reasonably availability. Rather, the respondent should provide specific evidence to substantiate that the proposed alternative is merely theoretical in nature or would entail an undue burden because of prohibitively high costs or substantial technical difficulties.

[390] Ibid.

[391] Ibid., at para.5.340.

Chapter 6: Conclusion

The legal standard under Article 2.2 first identifies the objective(s) of the technical standard and assesses its legitimacy, then the necessity test begins in earnest to avoid unnecessary obstacles to international trade. The necessity test under TBT Article 2.2 adopts a similar analysis as Article XX of the GATT 1994 and Article XIV of the GATS, which involves a holistic weighing and balancing of the degree of contribution made by the measure, the trade-restrictiveness of the measure, as well as the nature of the risks at issue and the gravity of the consequences that would raise from non-fulfilment of the objective(s) pursued by the Member through the measure. As a weighing and balancing test, Article 2.2 does not prescribe a rigid sequence and order of analysis. However, a logic order may flow naturally from a relational analysis in which the elements mentioned above are assessed, to a comparative analysis which assess whether the proposed alternative is less trade-restrictive, makes an equivalent degree of contribution, taking account of the risks that non-fulfilment would create. There is no prescribed methodology to assess each element in the necessity test under TBT Article, and they should be assessed case by case.

The term "trade-restrictiveness" under TBT Article 2.2 is interpreted as "having a limiting effect on international trade". Various concepts have been used by the WTO Panels to substantialize it, including competitive opportunities, market barriers to entry, actual trade effects, compliance costs, and legal restraints. Among those concepts, "competitive opportunities" tend to be a focus of the Panels. With the linkage between "competitive opportunities" and "trade-restrictiveness", the identification of discrimination under TBT Article 2.1 can seem as sufficient but unnecessary condition to help establish the existence of trade-restrictiveness under TBT Article 2.2. The close relationship between Article 2.1 and Article 2.2 may also be reflected in their same-origin during the negotiating history. In addition, non-discriminatory internal public health measures can be found to be trade-restrictive because of the reduced volume of imported products, which is the aim of the measure. Under such circumstance, the trade-restrictiveness of the measure and its degree of contribution become the flip side of the same coin, and it would be nearly impossible for the complainant to propose an alternative measure which can achieve an equivalent degree of contribution while being less trade-restrictive, taking account of the risks non-fulfilment would create. Econometric studies can be used as evidence to assess trade-restrictiveness by determining whether there is a statistically significant relationship between the measure and the competitive opportunities facing imported products, or by assessing whether the magnitude of compliance costs have an effect on economic actors with their ongoing participation in the relevant market.

The assessment of the degree of contribution has developed from an assessment of "material contribution" to "some contribution" and there is no mandatory preliminary determination before the comparative analysis. In the relational analysis, a panel should focus on ascertaining to what degree the challenged technical regulation actually contributes to the achievement of its legitimate objective, rather than answering whether the measure fulfills the objective completely or satisfies some minimum level of fulfilment of that objective. As for the comparative analysis, a new concept of "margin of appreciation" is introduced when assessing

the equivalence of the respective degrees of contribution between the measure at issue and the proposed alternatives. In specific, such margin of appreciation can be informed by the risks that non-fulfilment of the technical regulation's objective would create, the characteristics of the technical regulation at issue as revealed through its design and structure, as well as the nature of the objective pursued and the nature, quantity of the evidence available. Two factors including time effect and broader regulatory context are given due account by the WTO Panels when assessing the degree of contribution, especially for a public health issue.

"The risks non-fulfilment would create" is directly related to the objective pursued by the challenged measure. It can be assessed by the determination of "the nature of the risks" and the quantification of "the gravity of the consequences that would arise from non-fulfilment of the legitimate objective" or assessed by a conjunctive analysis of both elements in qualitative terms. "The nature of the risks" is constant to the extent that the objective is constant. "The gravity of the consequences that would arise from non-fulfilment of the legitimate objective" is correlated to the importance of the objective to the Member implementing the technical regulation at issue rather than the relative importance of an objective against other potential objectives. It is different from the necessity test under GATT Article XX, in which the relative importance of the non-trade values pursued might be compared with other legitimate objectives. The evidence to prove the relative importance of the legitimate objective to the regulating Member may inform "the gravity of the consequences that would arise from non-fulfilment of the legitimate objective" and help assess the "the risks non-fulfilment would create". The role of "the risks non-fulfilment would create" is understood differently in the early case laws and latest jurisprudence. In the early case laws, it is understood as a factor which needs to be compared between the measure at issue and the proposed alternatives, while with the latest rulings in *Article 21.5 US – COOL* and *Australia – Tobacco Plain Packaging*, it seems to be a constant which can inform margin of appreciation in the comparative analysis when assessing the equivalence in respective degrees of contribution.

Under TBT Article 2.2, the complainant bears the burden of proof to establish a *prima facie* case that a less trade-restrictive alternative measure, which also achieves an equivalent contribution to the relevant objective, would be reasonably available. Economic and technical feasibility are the two factors considered by the WTO Panels when assessing the reasonably availability of a proposed alternative. It is not required for the complainant to provide a detailed plan or precise estimates of the cost that would arise from the proposed measures in order to make a *prima facie* case in terms of reasonably availability. Rather, the respondent should provide specific evidence to substantiate that the proposed alternative is merely theoretical in nature or would entail an undue burden because of prohibitively high costs or substantial technical difficulties.

Chapter 7: Recommendations

- WTO Panels should consult experts to testify and appraise the submitted evidence.
- Complainants can use economic analysis to demonstrate the linkage between the measure and competitive opportunities to the imported products, or the linkage between the magnitude of compliance costs and the ongoing participation of economic actors, to demonstrate the existence and extent of trade-restrictiveness.
- Respondents can provide evidence to show the relative importance of the objective to them to the demonstrate the gravity of the consequences that would arise from non-fulfilment of the legitimate objective, thus demonstrating the risks non-fulfilment would create.

Further research ideas

1. To explore the weighing and balancing process for a non-discriminatory internal measure, when the degree of contribution and extent of trade-restrictiveness become the flip side of the same coin.
2. To further examine to what extent the assessment of the non-discrimination principle under TBT Article 2.1 has an effect on the assessment of "trade-restrictiveness" under TBT Article 2.2.
3. To examine if the risks that non-fulfilment would create is a constant irrespective of the means of the measure by exploring whether other factors can demonstrate the gravity of the consequences that would arise from non-fulfilment of the legitimate objective.

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