



# Why RTAs mitigate non-tariff protectionism: an analysis of non-tariff measures, RTAs, and WTO Ministerial Conferences

*Por que os ACRs mitigam o protecionismo não tarifário: uma análise das medidas não tarifárias, dos ACRs e das Conferências Ministeriais da OMC*

*Por qué los ACRs mitigan el proteccionismo no arancelario: un análisis de las medidas no arancelarias, los ACRs y las conferencias ministeriales de la OMC*

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## ABSTRACT

*This paper aims to assess the effectiveness of large and small-scale negotiations to mitigate non-tariff measures (NTMs). The hypothesis hereby raised is the higher the number of WTO-plus and WTO-extra provisions in Regional Trade Agreements (RTAs), the lower the growth of the stock of NTMs reported to the WTO, and the higher the number of NTMs withdrawn by WTO members. To test it, linear regression tests are employed with data on RTAs and protectionism. In addition to being an unprecedented analysis of all NTMs notified to the WTO from 1995 to 2020, the main findings of this paper are: there is a moderate/weak negative correlation between the NTMs stock growth, WTO-extra, and WTO-plus provisions, as well as a moderate/weak positive correlation between these provisions and NTMs withdrawn by WTO members. These findings strengthen theories supporting RTAs as trade creators.*

**KEYWORDS:** *large-scale negotiations; small-scale negotiations; non-tariff measures; WTO-plus provisions; WTO-extra provisions.*

## RESUMO

*Este artigo tem como objetivo avaliar a eficácia de negociações de grande e pequena escalas para mitigar medidas não-tarifárias (MNTs). A hipótese aqui levantada é que quanto maior o número de cláusulas OMC-plus e OMC-extra nos Acordos Comerciais Regionais (ACR), menor será o crescimento do estoque de MNTs reportado à OMC, e maior será o número de MNTs retiradas por seus membros. Para testá-la, são empregados testes de regressão linear com dados sobre ACRs e protecionismo. Trata-se de uma análise inédita de todas as MNTs*

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*notificadas à OMC entre 1995 e 2020. As principais conclusões encontradas neste artigo são: existe uma correlação negativa moderada/fraca entre o crescimento do estoque de MNTs e as cláusulas OMC-extra e OMC-plus; ademais, também há uma correlação positiva moderada/fraca entre tais cláusulas e as MNTs retiradas por membros da OMC. Essas conclusões fortalecem as teorias que apoiam o fato de ACRs serem criadores de comércio.*

*PALAVRAS-CHAVE: negociações de larga escala; negociações de pequena escala; medidas não-tarifárias; cláusulas OMC-plus; cláusulas OMC-extra.*

## RESUMEN

*Este artículo tiene como objetivo evaluar la eficacia de negociaciones a gran y pequeña escala para mitigar las medidas no arancelarias (MNA). La hipótesis que aquí se plantea es que cuanto mayor sea el número de disposiciones OMC-plus y OMC-extra en los Acuerdos Comerciales Regionales (ACRs), menor será el crecimiento del stock de MNAs reportadas a la OMC y mayor será el número de MNAs retiradas por sus miembros. Para probarla, se emplean pruebas de regresión lineal con datos sobre ACR y proteccionismo. Además de ser un análisis sin precedentes de todas las MNAs notificadas a la OMC entre 1995 y 2020, las principales conclusiones de esta investigación son: hay una correlación negativa moderada/débil entre el crecimiento del stock de MNAs y las disposiciones OMC-extra y OMC-plus; además, existe una correlación positiva moderada/débil entre estas disposiciones y las MNAs retiradas por los miembros de la OMC. Estos hallazgos fortalecen las teorías que respaldan a los ACR como creadores de comercio.*

**PALABRAS CLAVES:** *negociaciones a gran escala; negociaciones a pequeña escala; medidas no arancelarias; disposiciones OMC-plus; disposiciones OMC-extra.*

## INTRODUCTION

The World Trade Organization (WTO) held eleven Ministerial Conferences from 1995 to 2017. These conferences are the highest decision-making body of WTO. Most part of them, mainly those that occurred between 1995 and 2005, resulted in small progress due to disagreement concerning many agendas, especially non-tariff-related ones. Consequently, this persistent discord has led to the stagnation of the WTO, as well as the discrediting of multilateralism (Fraga, 2016).

Within this context, the number of non-tariff measures (NTMs) reported to WTO grew significantly. In 1995, the world trading system accumulated 3.344 NTMs reported by WTO members. In 2018, this figure raised to

46.960. For the United Nations Conference on Trade and Development (UNCTAD, 2017), NTMs are policy “measures other than ordinary customs tariffs that might have an economic effect on international trade in goods, changing prices or quantities traded, or both”. The increase in the use of non-tariff measures, especially in the face of a stagnant WTO, promoted the development of alternative minilateral regimes, such as RTAs, aimed at a less ambitious project of trade liberalization.

As stated in Naim (2009), minilateralism consists of bringing to the negotiation the smallest number of players needed to achieve the best solution to a problem. The most common examples of minilateralism in the international trading system are Regional Trade Agreements (RTAs). They are defined as any

reciprocal trade agreement between two or more partners that do not necessarily belong to the same region. Typically, they contain three kinds of provisions, namely WTO-equal, WTO-plus, and WTO-extra or WTO-beyond provisions. The first one generally incorporates or reaffirms WTO's agreements. The "plus" provisions, in turn, besides mirroring WTO obligations, introduce new policies. Lastly, "extra" or "beyond" provisions create new obligations that do not exist in WTO agreements (Dür; Baccini; Elsig, 2014).

In the period from 1995 to 2020, the number of RTAs agreed increased significantly. Interestingly, themes not addressed in WTO agreements dominated their agendas, especially non-tariff matters due to the complexity of dealing with them at WTO. In the face of this scenario, there is a need for a clear sense of the determinants of NTMs and RTAs. Nevertheless, the literature production connecting NTMs and RTAs has been insufficient to understand how both things are connected. Unfortunately, by the literature reviewed herein and shown on the next pages, it is noticed that scholars have been limited to a dichotomous debate on the potential of RTAs promoting trade diversion or creation, with a special focus on tariffs and not on NTMs.

Given the lack of an extensive academic production connecting RTAs and NTMs, the main goal of this paper is to assess the relationship between the conclusion of RTAs and the growth of NTMs reported to the WTO. Hence, it is an assessment of non-tariff protectionism made under the lens of two independent variables: the results from Ministerial Conferences and the conclusion of RTAs with WTO-plus and WTO-extra provisions.

## RESEARCH PROBLEM AND HYPOTHESIS

According to Lauria (2017), negotiations taking place at ministerial conferences end up with three possible results: cooperation, discord, and harmony. As stated in Keohane (1984), cooperation means the existence of compatibilization of negotiators' policies during a conflictive situation through a process of coordination. Discord appears when members refuse to negotiate or when they try to negotiate, they do it unsuccessfully. Harmony, in turn, is the last possible outcome of a negotiation. It consists of an automatic convergence of preferences between players negotiating (Keohane, 1984). Each of these outcomes results in a different effect on the number of NTMs reported to WTO, in consonance with the table below:

Table 1 - Ministerial Conferences outcomes and their effects on NTMs

Ministerial Conference outcome	Expected effects on the number of NTMs notified
Discord	Growth <i>above</i> historical average rate or <i>above</i> this average plus its standard deviation <sup>2</sup>
Cooperation	Growth <i>below</i> the historical average rate or <i>below</i> this average plus its standard deviation
Harmony	Growth <i>near</i> the average rate

Source: Lauria (2018) with adaptations.

Most part of the recent Ministerial Conferences, as stated in Lauria (2018), resulted in discord, as shown below:

2 Bob Hancké (2009) describes that the standard deviation gives a sense of the extent to which individual observations deviate from the mean.

Table 2 - Cooperation, harmony, and discord in Ministerial Conferences

Year	Ministerial Conference	Outcome
1996	Singapore	Discord
1998	Geneva	Discord
1999	Seattle	Discord
2001	Doha	Discord
2003	Cancun	Discord
2005	Hong Kong	Discord
2009	Geneva	Cooperation
2011	Geneva	Cooperation
2013	Bali	Cooperation
2015	Nairobi	Cooperation
2017	Buenos Aires	Discord

Source: Lauria (2018).

During the periods of occurrence of these MCs (1996-2017), the growth of NTMs introduced by 149<sup>3</sup> countries behave very differently, as presented below:

Table 3 - Growth of NTMs reported to the WTO (1997-2020)

Year	Ministerial Conference	Period of analysis <sup>4</sup>	Non-tariff measures growth
1996	Singapore	1997-1998	24%
1998	Geneva	1999	25%
1999	Seattle	2000-2001	18%
2001	Doha	2002-2003	14%
2003	Cancun	2004-2005	11%
2005	Hong Kong	2006-2009	48%
2009	Geneva	2010-2011	7%
2011	Geneva	2012-2013	8%
2013	Bali	2014-2015	8%
2015	Nairobi	2016-2017	7%
2017	Buenos Aires	2018-2020	14%

Source: author with data retrieved from WTO (2021a).

<sup>3</sup> They are all WTO members who reported NTMs to WTO in the period from 1995 to 2018.

<sup>4</sup> The period of analysis refers to the years after the occurrence of the Ministerial Conference.

The average for NTMs growth presented in the fourth column of Table 3 is 13.15% and its standard deviation is 8.2%. Thus, based on these figures and on table 1, it is possible to state that discord occurred in Singapore, Geneva (1998), Seattle, Doha, Hong Kong, and Buenos Aires, since their growth rates are higher than the average. On the other hand, cooperation occurred in Cancun, Geneva (2009, 2011), Bali, and Nairobi.

Given these results, it is possible to identify a research puzzle. Why? Because the result of the Ministerial Conference held in Cancun differs significantly when we compare tables 2 and 3. While table 2 indicates the occurrence of discord in Cancun, the patterns found on the growth of NTMs indicate the opposite scenario, because Cancun presents a growth below the historical average rate. This analysis is consolidated below:

Table 4 - Outcome of MCs according to documents and statements versus effects on NTMs reported to the WTO

Year	Ministerial Conference	Outcome	What NTM data has shown?	Research puzzle?
1996	Singapore	Discord	Discord	No
1998	Geneva	Discord	Discord	No
1999	Seattle	Discord	Discord	No
2001	Doha	Discord	Discord	No
2003	Cancun	Discord	Cooperation	<b>Yes</b>
2005	Hong Kong	Discord	Discord	No
2009	Geneva	Cooperation	Cooperation	No
2011	Geneva	Cooperation	Cooperation	No
2013	Bali	Cooperation	Cooperation	No
2015	Nairobi	Cooperation	Cooperation	No
2017	Buenos Aires	Discord	Discord	No

Source: author with data retrieved from WTO (2021a) and Lauria (2018).

Bearing in mind the results above, it is necessary to ask: what was responsible for promoting such pattern of cooperation if the WTO failed at this MC? As a tentative explanation, we state that RTAs were probably the cause since their WTO-plus and WTO-extra provisions deal with NTMs. Therefore, our hypothesis is the *higher* the volume of WTO-plus and WTO-extra provisions in RTAs in force, the *lower* the growth of NTMs notified to WTO, and the *higher* the amount of NTMs withdrawn.

METHODOLOGY

The development of this paper counts on numerous quantitative and qualitative methods. Regarding the analysis of NTMs, we execute a large-N descriptive inference aimed at identifying NTMs growth patterns and compare them to the outcomes of MCs presented in the introduction. The source used to extract data on NTMs was the Integrated Trade Intelligence Portal (I- TIP). It consists of a WTO database with information on measures notified by its members. With respect to the 149 countries analyzed, it is important to state they are all WTO members who reported NTMs to WTO in the period from 1995 to 2020.

Regarding the data on RTAs, the source used was the WTO Regional Trade Agreements Information System (RTA-IS). It is a WTO dataset with information and documents on trade agreements concluded by its members. This paper analyzes RTAs that entered into force from January 1995 to December 2018 due to data availability, and the analysis of the relationship between RTAs and NTMs aims at analyzing whether RTAs are effective in mitigating non-tariff protectionism or not. In this analysis, the

independent variables are the WTO-plus and “extra” provisions in RTAs, while the dependent variables are the variations in the stock of NTMs reported to WTO and withdrawn. To map all the WTO-plus and “extra” provisions in RTAs, we employ the same methodology used by Dür, Baccini and Elsig (2014), who mapped all RTAs that entered into force from 1958 to 2015, and classified their content according to these two categories. We repeat this exercise to analyze the remaining agreements that came into force from 2015 to 2018. Once this mapping is done, it is possible to relate all the “plus” and “extra” provisions of agreements that entered into force between 1995 and 2018 to the amount of NTMs reported during the same period.

The method employed to assess the relationship between all variables was the simple linear regression model since it allows us to measure the correlation between the dependent and independent variables (Hinkle; Wiersma; Jurs, 2003). The following table contains the parameters to interpret the R<sup>2</sup> value:

Table 7 - Parameters to interpret the regression results

Possible R <sup>2</sup> results	Interpretation
From -1 to -0.9	Strong negative correlation
From -0.9 to -0.5	Moderate negative correlation
From -0.5 to 0	Weak negative correlation
From 0 to +0.5	Weak positive correlation
From 0.5 to 0.9	Moderate positive correlation
From 0.9 to 1	Strong positive correlation

Source: Lauria (2018).

That said, this paper is organized into two sections. The first one contains a historical perspective on the relationship between multilateralism, minilateralism, and NTMs, while the second one contains a comprehensive data overview of NTMs and RTAs.

## THE DEBATE ON THE RISE OF NTMs AND RTAs

From the 1970s on, many changes to the international trading system challenged the GATT principles proving it to be fragile. Thereupon, the fall of the Bretton Woods system became inevitable while the embedded liberalism (Ruggie, 1992), which used to be a hallmark of the liberal trading system, lost its legitimacy (Spero; Hart, 2009).

This happened because, during the post-war era, the great powers used to resolve all challenges the multilateral arrangements faced through multilateral coordination. Hence, these excluding concertations caused the weakening of the system's political principles, mainly because the multilateral organizations were created to include multiple actors (Ruggie, 1992; Spero; Hart, 2009). To change such a scenario, it was necessary to create new schemes of governance, rules, and new agendas, especially those focused on including and assisting developing countries (Kahler, 1992).

It was clear that, as a tariff reduction agreement, the GATT needed a reform to meet the new challenges caused by the economic imbalances that haunted the international economy, especially with respect to non-tariff matters (Bhagwati, 1992, 2016; Spero; Hart, 2009). Although GATT progressed in terms of reducing the level of tariffs, NTMs made it wake. In this context, the use of tariffs decreased, and other forms of protectionism rose (Spero; Hart, 2009).

NTMs poses a significant political challenge to trade cooperation since they promote many distortions to the international trading system (UNCTAD, 2017). Due to the very thin threshold between unfair trade practices

and legitimate trade interests of these such types of restrictions, it has been difficult to address them multilaterally. The main reason for it is that NTMs generally verses on topics not yet fully complied with by WTO members, notably by developing economies. That is why these actors have chosen to address them unilaterally, especially in RTAs (Lauria, 2018).

In the face of a stagnant WTO, RTAs are useful to negotiate new themes and establish deeper commitments (Bagwell; Bown; Staiger, 2016; Baldwin, 2016). Until today, from the literature found and reviewed in the next pages, we see no consensus on whether RTAs divert or create trade. There are scholars that state that RTAs, in addition to being building blocks for trade liberalization, are more effective than WTO since they reduce transaction costs due to their leaner scopes and a smaller number of members. Other authors, in turn, explore the risks of RTAs, affirming they are stumbling blocks for the liberalization of trade. In the face of this dichotomy, a brief literature review follows in the next paragraphs.

There are numerous scholars who point out the advantages of the small number of actors for the success of negotiations. Briefly, they say when there are fewer players in negotiations, information and bargaining costs are mitigated (North, 1992). On the other hand, when talking about large-scale negotiations, we see there is an increased information demand, as multiple parties need to understand multiple interests. Additionally, in these large negotiations, it is seen the need for decision rules to determine the conditions that define an agreement. Also, there are more complex interpersonal relationships, including variable power structures and the potential for coalitions (Las-ki, 2016; Simmel, 1950; James, 1951; Hare,

1952; Olson, 1965). In larger groups, unanimity is hard to obtain and the probability of impasses often outweighs its benefits. As more members take part in negotiations, the number of topics is likely to increase, and the pattern of preferences becomes more complex. In such a scenario, concluding an integrative agreement is hard because it depends upon group members to reveal their preferences and to understand the preferences of multiple parties (Komorita; Hamilton; Kravitz, 1984; Lax; Sebenius, 1986; Mannix; Thompson; Bazerman, 1989; Kahler, 1992; Lejarraga, 2013). Hence, the reduction of bargaining and information costs is frequently seen in small-scale negotiations to the detriment of large ones. RTAs, within this context, have stood out as “building blocks” for trade liberalization, especially due to the fact that RTAs have allowed their members to liberalize trade beyond the extent that can be achieved multilaterally, a fact that can reinforce, deepen or complement WTO agreements depending on the clauses agreed regionally (Lauria, 2018). According to Baldwin (2016) and Bagwell, Bown and Staiger (2016), during the last two decades, WTO members lowered barriers to trade, services, and investment unilaterally, bilaterally, regionally, and — indeed, everywhere except through the WTO.

Scholars writing on the positive side of RTAs, usually, emphasize them as trade creators (at least more than diverters) and welfare promoters. Pfaffermayr (2020), for instance, when analyzing 65 countries in the period from 1994 to 2012 observed significant trade creation as a product of economic integration agreements. Similarly, with the use of numerous econometric models, authors such as Baier and Bergstrand (2007), Felbermayr *et al.* (2015), Anderson and Yotov (2016), Ma-

gee (2016), Pfaffermayr (2020), Baier, Yotov and Zylkin (2019), Ahcar-Olmos and Rodríguez-Barco (2020), and Chafer, Gil-Pareja and Llorca-Vivero (2021), all find that RTAs create more trade than divert. Baldwin and Freund (2011), in a similar direction, says that preferential trade agreements (PTAs) are “building blocks” for trade because they create a political-economy momentum that makes it easier to achieve liberalization multilaterally. The authors raise four lines of logical thought to affirm that PTAs ease multilateral liberalization.

The so-called juggernaut logic is the first one. It states that liberalization begets liberalization because an initial reciprocal tariff decrease starts a liberalization juggernaut rolling. The reason behind it is the economic redesigning that takes place during the phase-in of the initial tariff cuts (Baldwin; Freund, 2011). Agreeing with this position, Summers (1991) states that regionalism gives governments a way to sustain trade liberalization. Going in the same direction, Irwin (1993) shows that bilateral agreements historically promoted broader tariff liberalization. Moreover, Calvo-Pardo *et al.* (2009) conclude that RTAs are positive the reduction of external tariffs of their members. Likewise, Foroutan (1998), Bohara, Gawande and Sanguinetti (2004), and Estevadeordal, Freund and Ornelas (2008) argue regionalism has good effects to the liberal trading system because it reduces tariff-trade barriers. Finally, Baldwin and Seghezza (2010) show that regionalism has not led to higher external tariffs.

The second logic is known as the Frankel and Wei momentum. It states that information asymmetry makes governments uncertain as to whether they will win or lose from global free trade (Baldwin; Freund, 2011). PTAs, however, reduce this asymmetry because once

members sign it, they show what is their real comparative advantage. Interestingly, in some situations, global free trade might be politically feasible only after a PTA, because it modifies the political economy's scenario with high-quality information (Baldwin; Freund, 2011). Other scholars, such as Riezman (1999), state that RTAs might provide trading blocs with stronger incentives to pursue multilateral trade liberalization, and that RTAs ease free trade achievement by convincing uncooperative countries to cooperate in areas where cooperation is possible.

The third logic is the Kemp-Wan theorem (Kemp; Wan, 1976; Baldwin; Freund, 2011). Basically, it affirms that trade blocs raise the collective welfare of their members and triggers a "domino effect" that increases the success of multilateral free trade. Reinforcing RTA's advantages to create trade and welfare, Koo, Kennedy and Skripnitchenko (2006) point out that PTAs are not harmful to non-member countries because it improves global welfare. Moreover, McLaren (2002) and Lawrence (1996) point out the longer a market is part of a PTA, the more benefits from trade creation it gains.

The fourth logic is called by Baldwin and Freund (2011) of veto avoidance. In brief, it says that even if bloc members might veto multilateral trade liberalization on the grounds that stronger reciprocity might be achieved regionally, they don't have the possibility of vetoing the conclusion of more PTAs that contribute to cut tariffs globally (Baldwin; Freund, 2011). Exploring that perspective, Snape (1993) says that RTAs are key for the stability of the multilateral trading system. According to him, if it were not for the exception provided by the GATT and GATS for the existence of RTAs,

members of the multilateral trading system would probably opt out. Additionally, Perroni and Whalley (1996) affirm that regionalism, beyond causing trade liberalization incrementally, does not put the multilateral trading system under fire.

Along with scholars writing on the benefits of RTAs, there are many others who discuss both their advantages and their risks. Yi (1996) and Saggi and Yildiz (2010), for instance, say that if regionalism is open, it generates benefits, otherwise, it is a stumbling block for trade liberalization. Moreover, Winters (1996, 1998) finds it difficult to define whether regionalism is good or not for a freer trade scenario, but he states they are similar to street gangs: "you may not like them, but if they are in your neighborhood, it is safer to be in one" (WINTERS, 1998).

There are authors, finally, that describe only the supposed negative effects of RTAs, saying they are stumbling blocks for trade liberalization. Generally, they forecast a world crowded with trading blocs with high barriers between them. Within this scenario, according to them, trade diversion would be the norm (Viner, 1950; Krugman, 1991; Vamvakidis, 1999; Limão, 2006). These authors also affirm that countries engaging in RTAs benefit from trade diversion when it takes place as an outcome of these agreements. In this situation, RTAs members would oppose multilateral liberalization (Bhagwati; Panagariya, 1996). In addition, these scholars have stated that RTAs distract attention from multilateral liberalization since countries are investing their scarce resources to negotiate them (Krueger, 1993, 1995; McLaren, 2002). Lastly, another part of the academic production, such as Bhagwati (1991), Krishna (1998), and Menon (2014) say



that RTAs fragment the world economy into what they call the spaghetti bowl effect<sup>5</sup>, a fact that appears as an antithesis to GATT. Other authors, such as Hayakawa (2013), Dai, Yotov and Zylkin (2014), and Sorgho (2016) all present evidence on the existence of the spaghetti bowls' negative effects on international trade.

Despite more academic production on the positive sides of RTAs has been found and reviewed in the last pages, we recognize the existence of an unsolved debate regarding the potential of RTAs to promote trade diversion or creation. From the literature reviewed, the lack of studies overcoming this dichotomous debate remains clear. In other words, we see a major part of literature focused on tariff preferences and not on NTMs.

From the relevant academic production mapped on the relationship between NTMs and RTAs, it is worth quoting Lesser (2007), Dür, Baccini and Elsig (2014), and Baldwin and Low (2009). Lesser (2007) emphasizes that RTAs foster convergence of technical regulations produced nationally towards international standards and guides, such as the SPS and TBT agreements from WTO. Dür, Baccini and Elsig (2014), in turn, says that RTAs lower tariffs and increase competitiveness among their members due to their provisions on themes such as government procurement, mutual recognition of standards, services, investments, competition policy, and intellectual property. Finally, Baldwin and Low (2009) state that RTAs' clauses on NTMs mitigate non-tariff

protectionism and have not promoted the spaghetti bowl effect.

Having analyzed the theoretical debate on RTAs and NTMs, we proceed to the next section, which contains an extensive data overview of RTAs and NTMs.

## **DATA OVERVIEW OF NTMs AND RTAs**

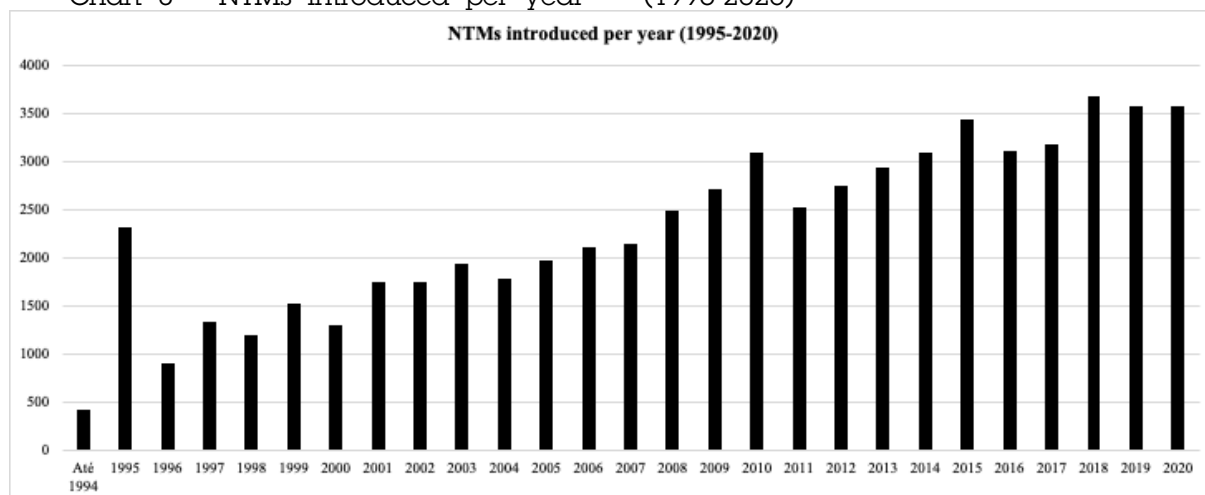
### **Patterns found on NTMs**

Due to the transparency commitments assumed at the WTO by its members, NTMs have historically had an increasing trend towards notification. In 1994, their notifications were timid with less than 500 NTMs widely known. In 1995, with the establishment of the WTO, the international trading system witnessed the notification of 2329 measures. From this moment onwards, the system saw many more measures being notified:

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5 According to Bhagwati (1995), the spaghetti bowl phenomenon refers to a problem of FTAs in rules of origin that designate which country a product comes from. With too many rules in different countries belonging to several different agreements, the multilateral trade liberalization ends up hampered. This crisscrossing of jurisdictions, thus, seems to be like a spaghetti tangled in a bowl.

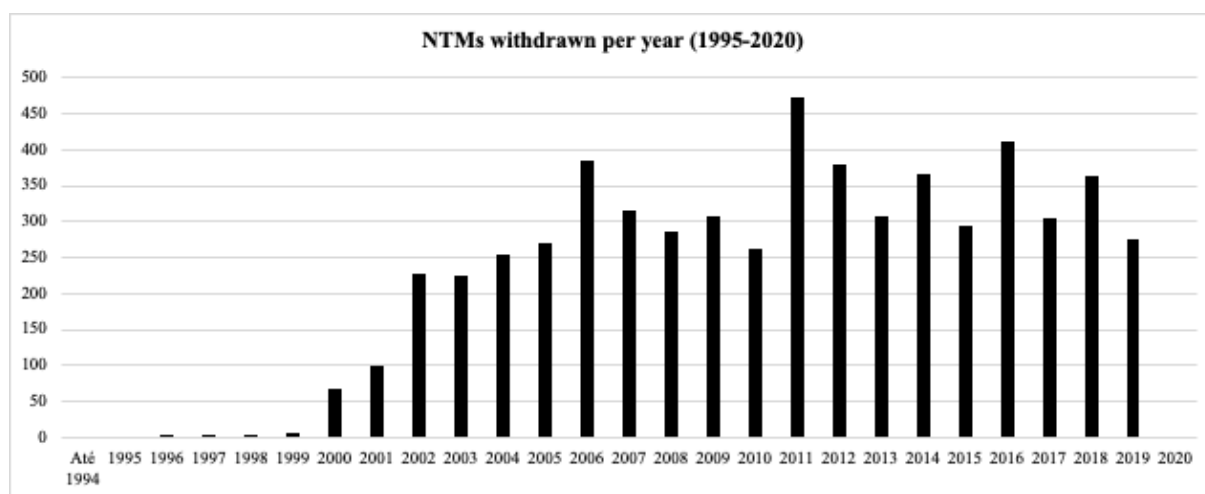
Chart 3 – NTMs introduced per year (1995-2020)



Source: author with data retrieved from WTO (2021a).

Once reported, members may withdraw NTMs due to their temporary character or as a product of negotiations. The chart below shows NTMs withdrawn in the period between 1995 and 2020:

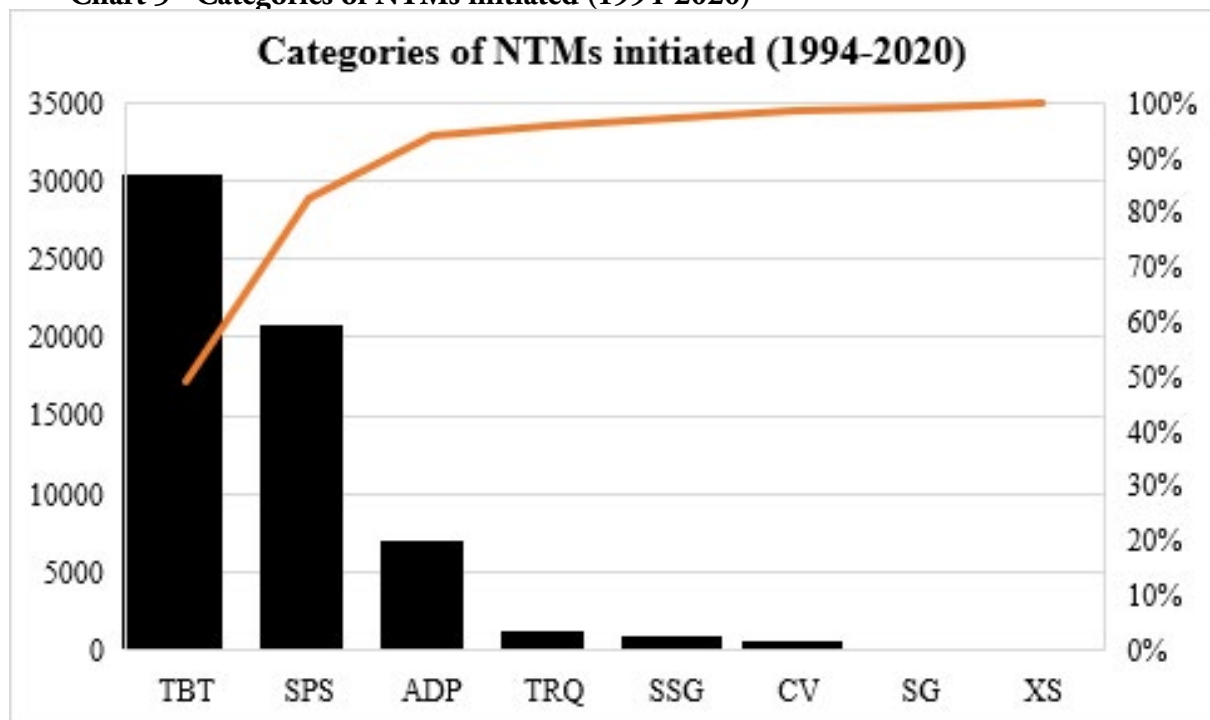
Chart 4 – NTMs withdrawn per year (1995-2020)



Source: author with data retrieved from WTO (2021a).

Since 1995, the average of measures withdrawn per year was 226, a very small number when it is compared to the average of NTMs reported. Such an imbalance considerably increases the number of NTMs. At the end of 2020, there were almost sixty thousand NTMs reported to the WTO. Such measures belong to several categories of NTMs, as presented in chart 5

**Chart 5 - Categories of NTMs initiated (1994-2020)<sup>6</sup>**

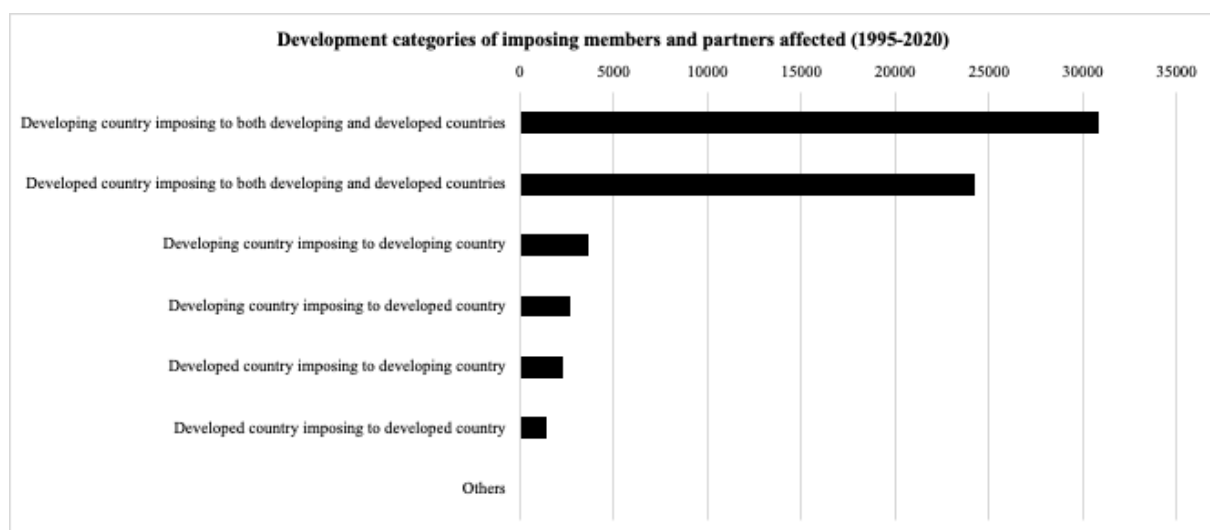


Source: author with data retrieved from WTO (2021a).

According to the Pareto chart above, across ten categories of NTMs, TBT and SPS account for more than 80% of all notifications from 1994 to 2020. In relation to the profile of members imposing such measures, we see developing

countries playing a major role because they are responsible for 57% of all NTMs reported. In Chart 6, below, it is possible to see more details on the level of development of NTMs reported from 1995 to 2020:

**Chart 6 - Development categories of imposing members and partners affected (1995-2020)**



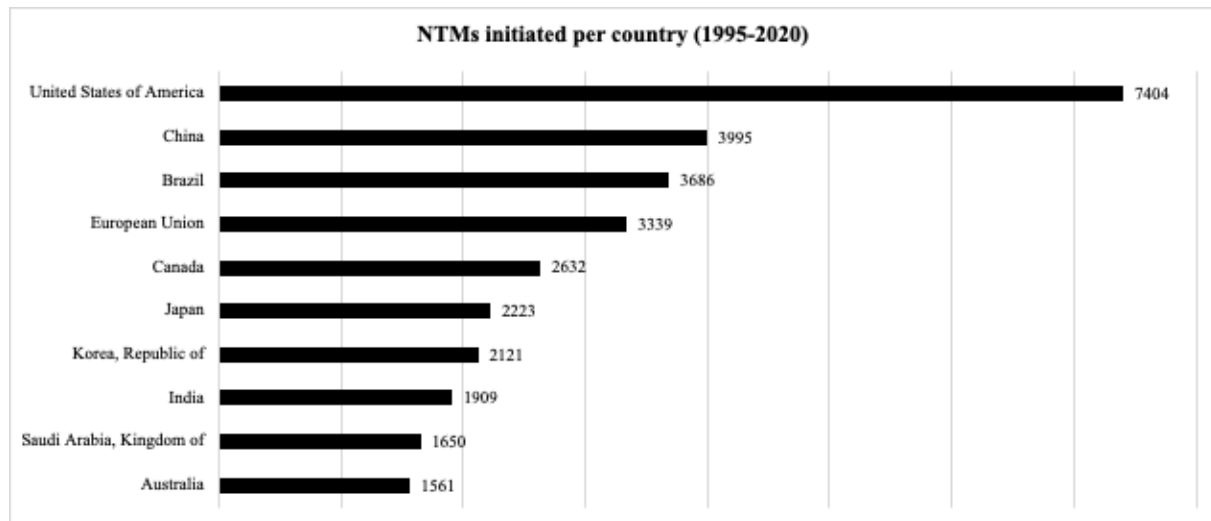
Source: author, with data retrieved from WTO (2021a).

<sup>6</sup> Technical barriers to trade (TBT), sanitary and phytosanitary measures (SPS), antidumping (ADP), tariff rate quota (TRQ), special safeguards (SSG), countervailing (CV), safeguards (SG), export subsidies (XS).

As per Chart 6, developing economies account for 47% (30.872) of measures targeting both developed and other developing countries simultaneously. Developed economies, in turn, respond to 37% (24.285) of NTMs that target both developing and developed economies.

Hence, 84% of NTMs notified from 1995 to 2020 affected members at all levels of economic development. In Chart 7, it is possible to see that just a small number of countries and the E.U. account for the largest number of NTMs reported:

Chart 7 – NTMs initiated per country (1995-2020)

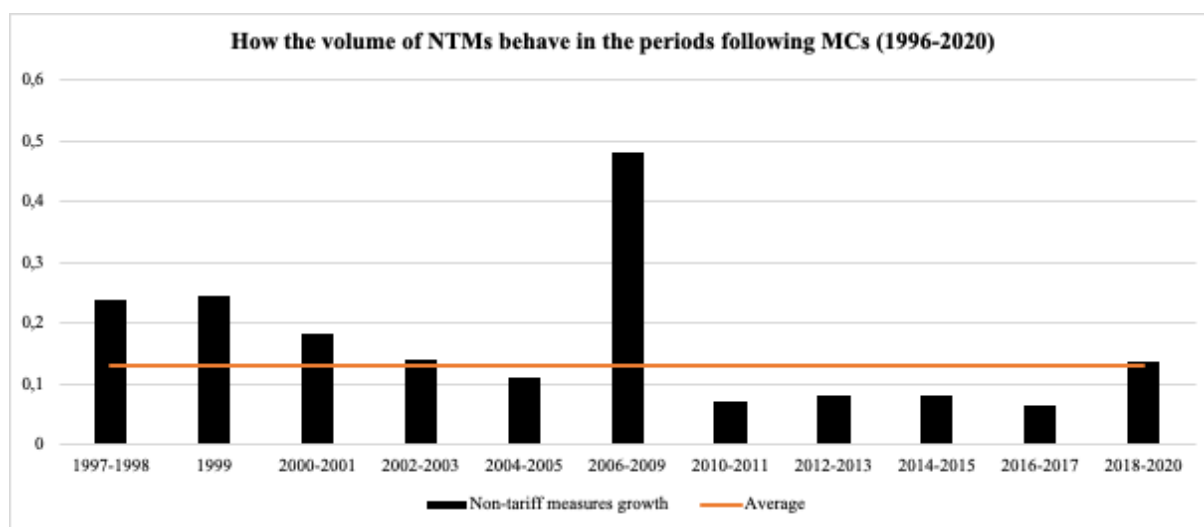


Source: author, with data retrieved from WTO (2021a).

In detail, the top ten countries/blocs are responsible for 47% of all NTMs initiated during the period from 1995 to 2020. The USA, for instance, accounts for 11.3% of the total, while China responds for 6.1%, and Brazil accounts for 5.6% of NTMs. The remaining 53% were introduced by more than 100 members. It is worth noting that most of these countries played an important role during WTO

Ministerial Conferences. Thus, it is necessary to ask: how did the volume of NTMs behave after each MC? As already said during the introduction, we affirm that each conference has an expected effect on the number of NTMs notified. The chart below contains data on the growth of NTMs in the periods following MCs:

Chart 8 – How the volume of NTMs behave in the periods following MCs (1996-2020)



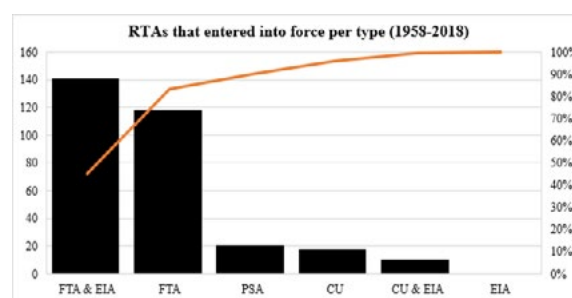
Source: author, with data retrieved from WTO (2021a).

The growth of NTMs *above* the average occurred in the periods following the meetings held in Singapore (1996), Geneva (1998), Seattle (1999), Doha (2001), Hong Kong (2005), and Buenos Aires (2018). According to the parameters set in Table 1, this growth above the average corresponds to discord in negotiations. On the other hand, cooperation, or the growth *below* the average, appeared right after the meetings occurred in Geneva (2009, 2011), Cancun (2003), Bali (2013), and Nairobi (2015). These results reveal the research puzzle mentioned during the introduction for the meeting held in Cancun (2003), which raises the following research question: what was responsible for promoting such a pattern of cooperation if the WTO failed at this MC? As a tentative explanation, we state that RTAs that entered in force after the meeting were probably the cause since their WTO-plus and WTO-extra provisions contribute to reduce NTMs. To verify whether this is true or not, a detailed analysis of RTAs is developed on the following pages.

### Patterns found on RTAs.

From 1958 to 2018, the number of RTAs in force has grown more than 3000%. During this period, the average of agreements entering into force per year was 7.4. In Chart 10 it is possible to see which types of RTAs were the most frequent for these years<sup>7</sup>:

Chart 10 – RTAs that entered into force per type (1958-2018)



Source: author with data retrieved from WTO (2021).

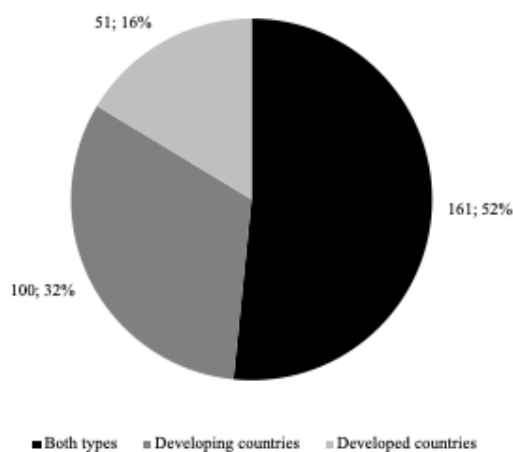
Most of the agreements (45%) that entered into force in this period were free trade agreements (FTAs) and economic integration agreements (EIA). In addition, FTAs respond to 38% of all RTAs in force. These two first categories account for more than 80% of all agreements analyzed. After them, there are Partial Scope

<sup>7</sup> Some these RTAs are not in force anymore.

Agreements (PSAs), with 7%, followed by Customs Unions (CUs), with 6%, Custom Unions and EIA, with 4%, and EIA, with less than 1%. Besides analyzing RTAs' typology, it is important to assess the profile of their members. In Chart 11 it is possible to see this information:

Chart 11 - RTAs members and their development levels (1958-2018)

RTAs members and their development levels (1958-2018)



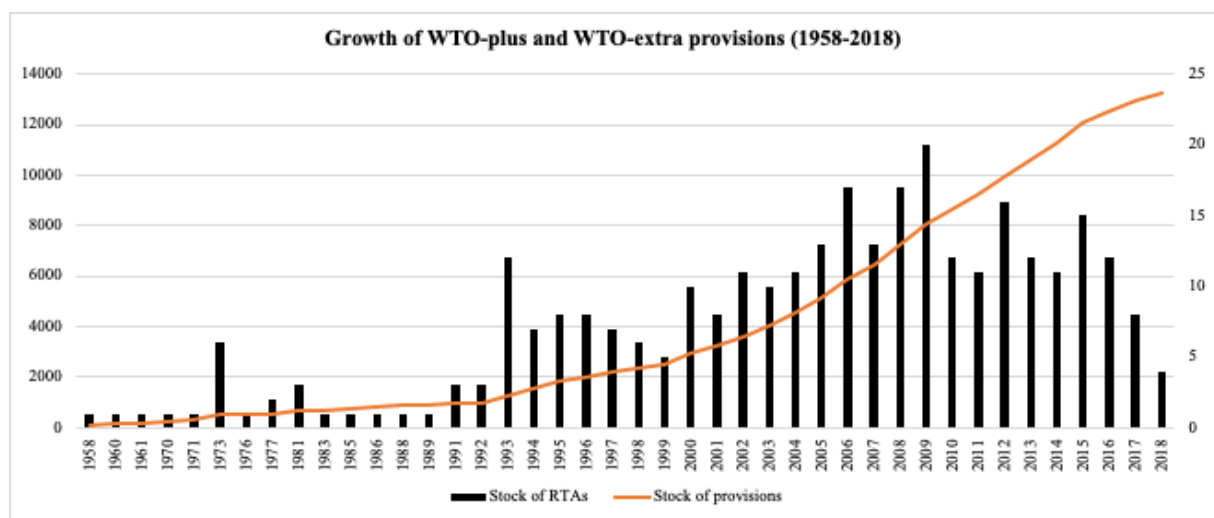
Source: author with data retrieved from the WTO (2021a).

According to Chart 11, both developing and developed economies respond for 52% of

RTAs analyzed. In addition, developing economies negotiated more RTAs between them (32%) than developed countries did (16%). According to the literature reviewed on the previous pages, this can be explained because developing countries, within the scope of the WTO, find it difficult to honor all the commitments made during the creation of the organization. For this reason, they choose more frequently than developed economies to deal with different themes in multilateral regimes, especially with other countries at the same stages of development.

Besides assessing RTAs typology and the profile of their members, it is relevant to check their content. In Chart 12 it is possible to see the evolution of WTO-plus and WTO-extra provisions. As previously explained, “plus” provisions, besides mirroring WTO obligations, introduce new policies. “Extra” provisions, on the other hand, create new obligations that do not exist in WTO agreements (Dür; Baccini; Elsig, 2014):

Chart 12 – Growth of WTO-plus and WTO-extra provisions (1958-2018)



Source: author with data retrieved from Dür, Baccini and Elsig (2014) and WTO (2021b).

As seen, the amount of WTO-plus and WTO-extra provisions grew significantly. Dür, Baccini and Elsig (2014), the creator of such ca-

tegories, mapped all RTAs that entered into force from 1958 to 2015, and classified their content according to these categories, as presented below:

Table 8 - WTO-plus and WTO-extra provisions

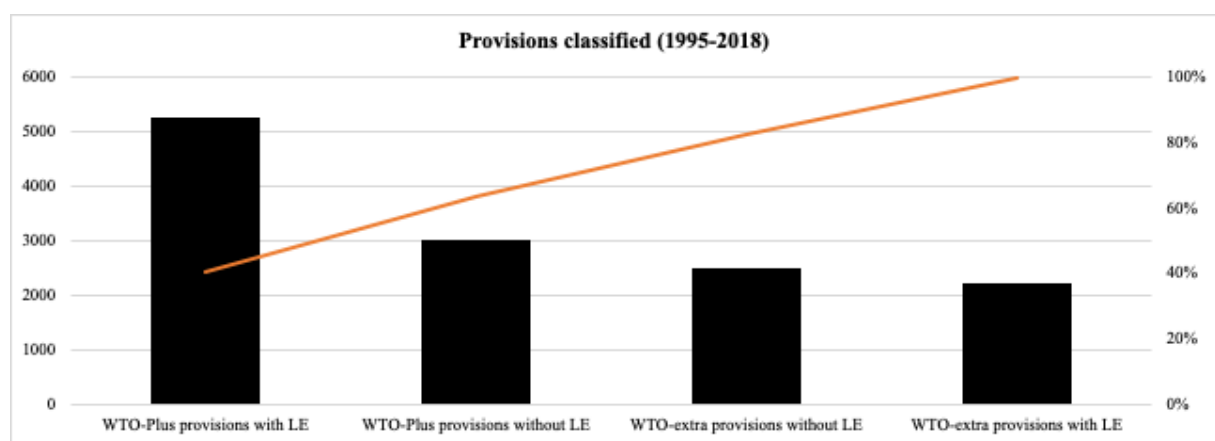
Classification	Themes
WTO-Plus	Tariffs industrial goods, Tariffs agricultural goods, Customs administration, Export taxes, SPS measures, State trading enterprises, TBT measures, Countervailing measures, Antidumping, State aid, Public procurement, TRIMS measures, GATS, TRIPS
WTO-Extra	Anti-corruption, Competition policy, Environmental laws, IPT, Investment measures, Labor market, Movement of capital, Consumer protection, Data protection, Agriculture, Approximation of legislation, Audiovisual, Civil protection, Innovation policies, Cultural cooperation, Economic policy, Education and training Energy, Financial assistance, Health, Human rights, illegal immigration, Illicit drugs, Industrial cooperation, Information society, Mining, Money laundering, Nuclear safety, Political dialogue, Public administration, Regional cooperation, Research and technology, SMEs, Social matters, Statistics, Taxation, Terrorism, Visa and asylum

Source: Lauria (2018).

Besides running a theme classification according to “plus” or “extra” provisions, Dür, Baccini and Elsig (2014) assessed their levels of legal enforcement (LE). According to them, a provision with legal enforcement contains verbs and statements such as “shall” or “neither party may”. Without them, RTAs provisions do not have le-

gal enforcement and appear to be recommendations. Hence, the same methodology developed by Dür, Baccini and Elsig (2014) is used in this paper to classify the provisions of the remaining 36 agreements that came into force from 2015 to 2018. The results of this exercise are shown below for the period from 1995 to 2018:

Chart 13 - Provisions classified (1995-2018)



Source: author with data retrieved from Dür, Baccini and Elsig (2014) and WTO (2021b).

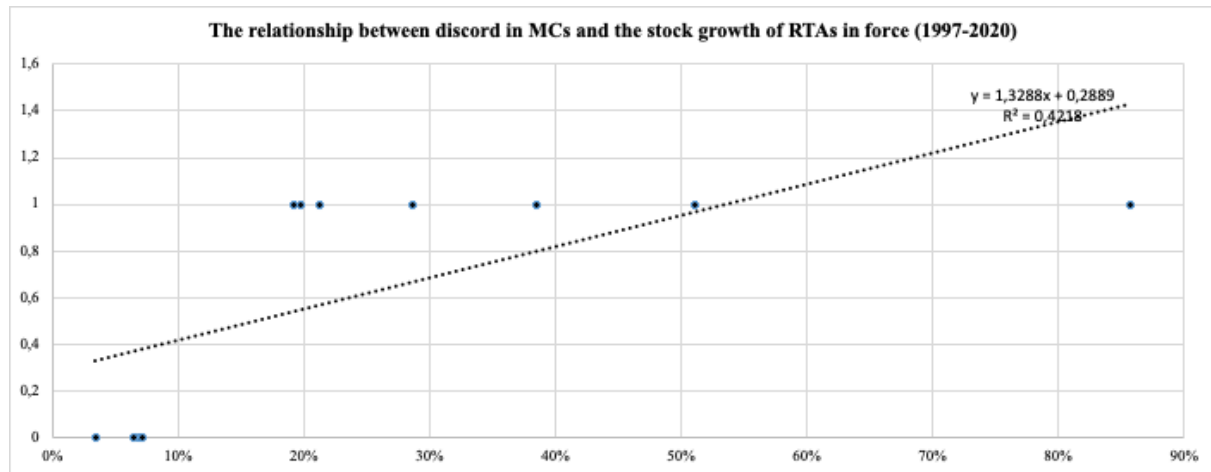
As per Chart 13, we see that “plus” provisions with legal enforcement are the most recurrent ones (40%), followed by “plus” provisions without legal enforcement (23%). With respect to “extra” provisions, we have those without LE accounting for 19% of all cases, while

“extra” provisions with LE responding for only 17%. Based on all the patterns presented on RTAs, we must ask: how did the number of RTAs behave after MCs in which discord prevailed? A simple linear regression analysis shows that discord in MCs and RTAs are not meanin-

fully correlated. In other words, the number of RTAs did not grow meaningfully due to dis-

cord in most of the conferences analyzed. The regression result is plotted in Chart 14:

Chart 14 - The relationship between discord in MCs and the stock growth of RTAs in force (1997-2020)<sup>8</sup>.



Source: author.

<sup>8</sup> N = 11; P value = 0.03.

Chart 14 indicates that discord occurring in MCs can explain 42% of variances in the number of RTAs. Thus, according to the criteria presented in Table 7, we have for this case a weak positive correlation. Although we know that this value is statistically fragile, it is interes-

ting to observe the patterns in the table below. We see, in fact, a difference with the growth of RTAs in the periods following meetings that ended in discord versus the meetings that ended in cooperation:

Table 9 – Relationship between discord in MCs and the RTAs stock growth

Year	Ministerial Conference	Outcome	Period of analysis	RTAs stock growth
1996	Singapore	Discord	1997-1998	86%
1998	Geneva	Discord	1999	38%
1999	Seattle	Discord	2000-2001	29%
2001	Doha	Discord	2002-2003	21%
2003	Cancun	Discord	2004-2005	19%
2005	Hong Kong	Discord	2006-2009	51%
2009	Geneva	Cooperation	2010-2011	7%
2011	Geneva	Cooperation	2012-2013	6%
2013	Bali	Cooperation	2014-2015	7%
2015	Nairobi	Cooperation	2016-2017	3%
2017	Buenos Aires	Discord	2018-2020	20%

Source: author.

From the data presented in chart 14 and table 9, we concluded that the research puzzle identified in Cancun (2003) can be partially

explained by the analysis of RTAs. Despite the existence of a non-meaningful statistical correlation between discord in MCs and RTAs, we



see that both variables are correlated. Hence, the growth of RTAs might be a reasonable explanation for this phenomenon. That said, in the following paragraphs, we proceed with the test of the hypothesis proposed during the introduction, which is the *higher* the number of WTO-plus and WTO-extra provisions in Regional Trade Agreements (RTAs), the *lower* the growth of the stock of NTMs reported to the WTO, and the *higher* the number of NTMs withdrawn by WTO members.

#### HYPOTHESIS TEST: IS THERE A RELATIONSHIP BETWEEN NTMs AND RTAs?

To answer this question, eight sub-hypotheses are drawn and tested from the main hypothesis proposed. Why? Because it is necessary to assess in detail the effectiveness of each type of provision in relation to the variations in the volume of NTMs reported to WTO or withdrawn by its members. The eight sub-hypotheses are listed below:

1. The *more* WTO-plus provisions with LE the *lower* the NTMs stock growth;
2. The *more* WTO-plus provisions with LE the *higher* the number of NTMs withdrawn;
3. The *more* WTO-plus provisions without LE the *lower* the NTMs stock growth;
4. The *more* WTO-plus provisions without LE the *higher* the number of NTMs withdrawn;
5. The *more* WTO-extra provisions with LE with LE the *lower* the NTMs stock growth;
6. The *more* WTO-extra provisions with LE the *higher* the number of NTMs withdrawn;
7. The *more* WTO-extra provisions without LE the *lower* the NTMs stock growth;
8. The *more* WTO-extra provisions without LE the *higher* the number of NTMs withdrawn.

With all 8 sub-hypotheses listed, we run the simple linear regression analysis for each test and summarize the results below:

Table 10 – Summary of hypothesis tests using simple linear regression

#	Independent variable	Dependent variable	R <sup>2</sup> value	N	P-value	Result interpretation
1	WTO-plus provisions with LE	NTMs stock growth	0.4140	23	0.0009	Weak negative correlation
2	WTO-plus provisions with LE	NTMs withdrawn	0.4520	23	0.0004	Weak positive correlation
3	WTO-plus provisions without LE	NTMs stock growth	0.3843	23	0.0016	Weak negative correlation
4	WTO-plus provisions without LE	NTMs withdrawn	0.4107	23	0.0009	Weak positive correlation
5	WTO-extra provisions with LE	NTMs stock growth	0.4736	23	0.0002	Weak negative correlation
6	WTO-extra provisions with LE	NTMs withdrawn	0.5228	23	0.0000	Moderate positive correlation
7	WTO-extra provisions without LE	NTMs stock growth	0.5660	23	0.0000	Moderate negative correlation
8	WTO-extra provisions without LE	NTMs withdrawn	0.5092	23	0.0001	Moderate negative correlation

Source: author.

From the results presented in Table 10, we end up with 7 main conclusions. The first and more important one is that RTAs and their provisions, when analyzed in isolation, are correlated to NTMs but weakly and/or moderately, depending on the type of provision (plus or extra). For NTMs stock growth, the correlation is negative, while the correlation for NTMs withdrawn is positive. It is, thus, possible to confirm the main hypothesis proposed by this paper. The second conclusion is that WTO-plus provisions with LE ( $R^2$  0.4140) were more effective than WTO-plus provisions without LE ( $R^2$  0.3843) in reducing the NTMs stock growth. The third conclusion is that WTO-plus provisions with LE ( $R^2$  0.4520) were more effective than WTO-plus provisions without LE ( $R^2$  0.4107) in increasing the number of NTMs withdrawn. The fourth conclusion is that legal enforcement is not necessarily better for “extra” provisions since the “extra” ones with LE ( $R^2$  0.4736) had a worse performance when compared to the “extra” ones without LE ( $R^2$  0.5660) in reducing the NTMs stock growth. The fifth conclusion is that WTO-extra provisions with LE ( $R^2$  0.5228) were more effective than WTO-extra provisions without LE ( $R^2$  0.5092) in increasing the number of NTMs withdrawn. The sixth conclusion is that WTO-extra provisions without LE ( $R^2$  0.5660) were the best ones to reduce the stock growth of NTMs. Lastly, the seventh conclusion is that WTO-extra provisions with LE ( $R^2$  0.5228) were the best kind of provision to increase the number of NTMs withdrawn. Therefore, when negotiating RTAs, WTO members should prioritize the negotiation of “extra” provisions since they are more correlated with NTMs. That said, we proceed with the concluding remarks for this paper.

## CONCLUDING REMARKS

The main goal of this paper is to assess the relationship between MCs, RTAs, and NTMs. During the first section, we addressed a brief literature review. There, as per the literature found, we saw that RTAs, as meaningful representatives of minilateral arrangements, seem to promote trade cooperation more effectively than large-scale negotiations. However, it remains clear the existence of an unsolved debate on whether RTAs create or divert trade.

During the second section, we assessed possible patterns related to RTAs and NTMs. Regarding NTMs, we found an increasing trend towards the reporting of measures. In addition, we saw the existence of an imbalance between the volume of NTMs notified and withdrawn, a fact that progressively increases the global stock of NTMs in force. Moreover, we discovered NTMs were more imposed by developing economies than by developed ones. Finally, we noticed a high concentration of NTMs reported since 10 markets responded to 47% of all NTMs analyzed, with the USA, China, Brazil, and the EU standing out.

Right after the analysis of NTMs, patterns for RTAs were assessed. We could notice these agreements have been used as complementary alternatives to the WTO for achieving trade cooperation, especially with respect to non-tariff matters. In addition, we discovered that 52% of all RTAs analyzed comprised both developing and developed economies. Besides, we realized there are more RTAs closed among developing countries than among developed ones. Importantly, we found there are more RTAs with provisions endorsing WTO's agreements than creating new obligations not yet negotiated multilaterally. This is important to

help WTO in achieving more results in terms of trade liberalization. Finally, we concluded that the research puzzle identified in Cancun (2003) can be partially explained by the analysis of RTAs, according to the information presented in chart 14. Although we did not find a meaningful statistical correlation ( $R^2$  0,4218) between discord in MCs and RTAs, we saw that both variables are correlated. Hence, the growth of RTAs might be a reasonable explanation for this phenomenon, especially considering the patterns presented in table 9. Despite that, future studies with more variables mapped are needed to further elaborate on this correlation.

Besides the presentation of patterns for NTMs and RTAs, in section two we addressed the tests of the main hypothesis and its eight sub-hypotheses. The main conclusion of the tests is that RTAs and their provisions are correlated to NTMs but weakly and/or moderately, depending on the type of provision (plus or extra). Hence, we confirm the main hypothesis proposed, contributing to the debate by showing that RTAs are an interesting complementary alternative to WTO for non-tariff protectionism mitigation.

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