A Framework for Analyzing Safeguards at the World Trade Organization

Research Paper at the Ostrom Workshop

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Abstract

This paper seeks to develop a framework for the analysis of institutional interplay within and among country members at the World Trade Organization (WTO) using the Institutional Analysis and Development Framework (IAD). To do so, it will focus on the interactions at the Safeguard Committee and how its institutional arrangements along with the context in which international trade happens among countries, contribute to the pattern in safeguards and increasing tariffs in response to a sudden increase in imports. Section one provides an overview of Safeguards at the WTO and the decision of countries over applying safeguards or instead, using up their tariff overhang. Section two introduces the IAD framework and applies it to the Safeguard Committee. Sections three reviews the economic literature on the institutions discussed in the paper. Section four introduces the data and section five concludes.

1 Safeguards at the WTO

Safeguards are legal reliefs provided at the World Trade Organization (WTO) and its precedent, General Agreement on Tariffs and Trade (GATT) for the temporary restrictions of imports in the event that imports from one country are a cause of substantial injury in another. The law of safeguard measures in the WTO/GATT system originates with Article XIX of the original GATT. With the creation of WTO in 1994, Article XIX was supplemented, but not replaced, by the Agreement on Safeguards, so that safeguard measures must now comply with both sets of obligations (Sykes, 2006, page 1).

1-1 Agreement on Safeguards

History: The Safeguard Agreement was negotiated in large part because GATT Contracting Parties increasingly had been applying a variety of so-called "grey area" measures to limit imports of certain products: bilateral voluntary export restraints (VERs), orderly marketing agreements, and similar

measures. The legality of such measures under the GATT was doubtful. The Agreement now clearly prohibits such measures and has specific provisions for eliminating those that were in place at the time the WTO Agreement entered into force.

Importance of safeguards[1]: Safeguard provides flexibility for countries to adjust to uncertainties in the economic environment within which international trades are transacted. This flexibility has encouraged many countries to sign the WTO Agreements for free trade. Crowley (2009) observes that countries which undertook larger tariff reductions during the Uruguay Round of negotiations[2] in 1986-1993, were more frequent users of safeguards investigations after the establishment of the WTO. The study thus suggests that the availability of flexibility offered by a safeguard clause in the WTO agreement may have facilitated greater tariff reductions during the Uruguay Round.

1-2 Safeguard Committee

Article 13 of Agreement of Safeguards establishes a "Committee on Safeguards", which reports to the Council for Trade in Goods. Participation in this Committee is open to any WTO member that wish to join.

According to Sykes (2006- page 86), the role of this Committee is to monitor compliance and implementation of the Agreement on Safeguards by national authorities (Article 12). The Committee is the recipient of various notifications that national authorities must make and may at the request of any member investigate whether the requirements of the Agreement have been met in connection with any safeguard measure or proposed retaliatory measure.

[1] Nyarko and Taheri (2020)

[2] The Uruguay Round was the 8th round of multilateral trade negotiations conducted within the framework of the GATT, spanning from 1986 to 1993 and embracing 123 countries as "contracting parties". The Round led to the creation of the World Trade Organization, with GATT remaining as an integral part of the WTO agreements (Wikipedia-Uruguay Round).

1-3 Safeguards

Article XIX (1)(a) of GATT specifies the conditions needed for a safeguard to apply:

"If, as a result of **unforeseen developments** and of the effect of the obligations incurred by a contracting party under this Agreement, including tariff concessions, any product is being imported into the territory of that contracting party in **such increased quantities** and under such conditions as to **cause or threaten serious injury** to domestic producers in that territory of like or directly competitive products, the contracting party **shall be free, in respect of such product, and to the** extent and for such time as may be **necessary to prevent or remedy such injury**, to **suspend the obligation in whole or in part or to withdraw or modify the concession** (emphasis added).

Safeguard measures are applied by countries using either quantitative import restrictions or increases in duties to higher than applied and at times, higher than the bound tariff rates. Such actions are temporary suspension of the country's commitments. Safeguard measures cover imports from all sources, although imports from developing country members with a small share of imports are exempted through special and differential treatment provisions.

Table 1- Forms of Safeguard Measures between January 1995 and 20th February 2018 (Yano, 2018)

Forms of safeguard measure	Number of Measures	Percentage of total safeguard measures
Tariff increase- specific	72	43%
Tariff increase- ad valorem	50	30%
Quantitative restriction/quota	10	6%
Tariff rate quota	24	14%
Variable tariff	8	5%
Other	3	2%
Total	167	100%

Application requirements: According to Article (5) of the Agreement, safeguard measures may only be applied to the extent necessary to remedy or prevent serious injury and to facilitate adjustment, within certain limits. If the measure takes the form of a quantitative restriction, the level must not be below the average import level of the most recent three representative years, unless there is clear

justification for doing otherwise. Rules also apply as to how quota shares are to be allocated among supplier countries, as to compensation to Members whose trade is affected.

Investigation requirements: According to Article (3), a member may apply a safeguard measure only following an investigation by the competent authorities of that member pursuant to procedures previously established and made public in consonance with Article X of GATT 1994. This investigation shall include reasonable public notice to all interested parties and public hearings or other appropriate means in which importers, exporters and other interested parties could present evidence and their views, including the opportunity to respond to the presentations of other parties and to submit their views, inter alia, as to whether or not the application of a safeguard measure would be in the public interest. The competent authorities shall publish a report setting forth their findings and reasoned conclusions reached on all pertinent issues of fact and law.

Duration of safeguards: According to Article (7), the maximum duration of any safeguard measure is four years, unless it is extended consistent with the Agreement's provisions. A measure may be extended only if its continuation is found to be necessary to prevent or remedy serious injury, and only if evidence shows that the industry is adjusting. In case of extension, the initial period of application plus any extension normally cannot exceed eight years.

Special and differential treatment of developing countries: According to Article (9), safeguard measure shall not be applied to low volume imports from developing country members, that is, where a single developing country member's products account for no more than 3 percent of the total subject imports, as long as products originating in those low-import-share developing country Members collectively do not exceed 9 percent of imports. On the other hand, in applying safeguard measures, developing country members may extend the application of a safeguard measure for an extra two years beyond that normally permitted.

Compensation and retaliation: The Article 8 of Agreement on Safeguard has softened the GATT rules on compensation and retaliation with the aim of making safeguard measures more palatable to importing nations (Sykes, 2006, pages 245-246). Formerly, under paragraph 2 of GATT Article XIX, members employing safeguard measures were obliged to consult with affected trading partners, with the objective of negotiating "compensation" for the trade benefit lost due to the imposition of a safeguard measure. If those negotiations failed to reach an accord, affected trading partners had the right under paragraph 3 to withdraw "substantially equivalent concessions." Under Article XIX therefore, an importing nation that employed a safeguard measure would always pay a price: it had to choose between offering alternative trade concessions as compensation, or suffering retaliation through a withdrawal of substantially equivalent concessions.

According to Article 8 of the Agreement on Safeguards, which prevails over provisions of Article XIX, "a Member proposing to apply a safeguard measure or seeking an extension of a safeguard measure shall endeavour to maintain a substantially equivalent level of concessions and other obligations to that existing under GATT 1994 between it and the exporting Members which would be affected by such a measure… To achieve this objective, the Members concerned may agree on any adequate means **of trade compensation** for the adverse effects of the measure on their trade." Then Article (8)(2) continues by explaining that what should happen in absence of such an agreement: "**If no agreement is reached within 30 days in the consultations** under paragraph 3 of Article 12, **then the affected exporting Members shall be free, not later than 90 days after the measure is applied, to suspend**, upon the expiration of 30 days from the day on which written notice of such suspension is received by the Council for Trade in Goods, **the application of substantially equivalent concessions or other obligations under GATT 1994, to the trade of the Member**

applying the safeguard measure, the suspension of which the Council for Trade in Goods does not disapprove (emphasis added)."

Final paragraph of this Article clarifies that: Article (8)(3): "The right of suspension referred to in paragraph **2 shall not be exercised for the first three years that a safeguard measure is in effect, provided that the safeguard measure has been taken as a result of an absolute increase in imports** and that such a measure conforms to the provisions of this Agreement (emphasis added)."

This new language has a clear consequence: The country that applies safeguards can make a less generous offer of compensation, knowing that if the offer is rejected, the affected trading partners will be unable to retaliate for three years.

Pattern of safeguards: The frequency and pattern of participant countries in safeguard measures have changed under the WTO compared to the GATT.

Table 2- Number of safeguard applications under the GATT and the WTO

Measures	Safeguard Applications under the GATT and WTO	
	Frequency of Application	Number of Countries
Safeguard under WTO (1995-2018)	172	36
Safeguard under GATT (1948-1994)	150	24

Safeguards in presence of tariff overhang: Trade negotiations happen over the bound tariff rates, while countries can choose any tariff level below that amount, called applied tariff rate. The gap between these two values is called tariff overhang. Data shows that countries apply safeguards while having an applied tariff below their bound tariff (i.e., while having tariff overhang), so a legitimate space for increasing their applied tariffs. Some countries even apply safeguards on products that do not have bound tariffs, so theoretically, they can apply any tariff as they wish. These observations together with the insight of Beshkar and Bond (2017) that the applied tariffs are the optimal tariff rates from the country's perspective by the revealed preference theory, make a case for the paradoxical

behavior of countries: countries *can* increase their applied tariffs up to their bound tariff as they wish and when they want, but they do not. Instead, they apply safeguards to increase their tariff rates. For an example of this observation, Table 4 in Annex 1 shows that all but the last safeguard measure taken by India, were over the industries that had tariff overhang.

2- The Institutional Analysis and Development Framework

The Institutional Analysis and Development Framework (IAD) is a general tool for the analysis of any kind of situation in which human beings repeatedly interact. It provides the most general set of variables that can be used to analyze relevant settings in an attempt to identify the universal elements that any relevant explanation needs to include. Rather than serving as a theory in its own right, the framework seeks to provide a "metatheoretical language" that can be used to select and compare the theories needed to explore the aspects of rules and norms that guide human interaction, and their choice of strategies and behavior (Ostrom 1990 Ostrom et al. 1994; Ostrom 2009).

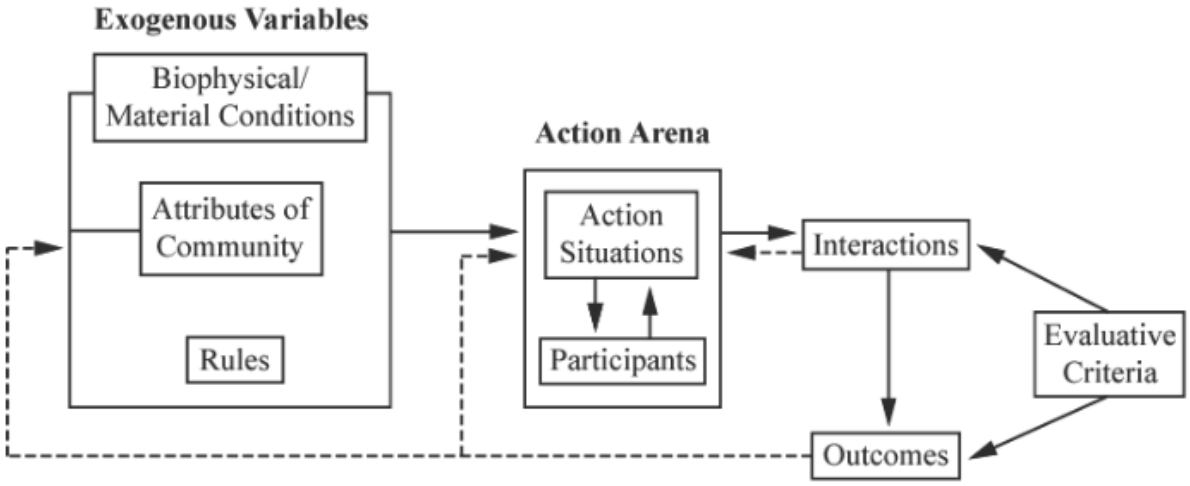

Figure 1- the Institutional Analysis and Development Framework (IAD) (Ostrom, 2009)

The IAD framework directs the attention of the analyst towards specific sets of variables that can serve to explain the emergence of particular patterns of interaction. At the core of the framework is

the action arena in which participants interact with an action situation that is determined by exogenous variables, to produce outcomes that in turn affect the participants and the action situation (Ostrom 2009). Action arenas exist on any level of interaction, including household, community, national and international.

2-1 The relationship among countries at the Safeguard Committee and the IAD Framework

The interplay between countries at the Safeguard Committee and between governments and the domestic interest groups in the particular products, can be conceptualized as interactions between action arenas on the international and national levels, respectively. The outcomes of these interactions are interdependent, in the sense that at the international level, the decisions of participants in one action arena affects the future decisions of other participants. On the other hand, at the domestic level, decisions are interrelated, as their history in terms of the way they were shaped, and the way they affected the decisions in the internal arena, affect the future decisions of the domestic interest groups. At the international level, the Agreement on Safeguards and Article XIX of GATT specify the common objectives of country members from using safeguards, conditions for doing so and behavioral norms to be followed. At the domestic level, the formal procedures established by the authorities for applying safeguards, along with the informal power dynamics among the representatives of industries and the authorities, from the decisions and the behaviors.

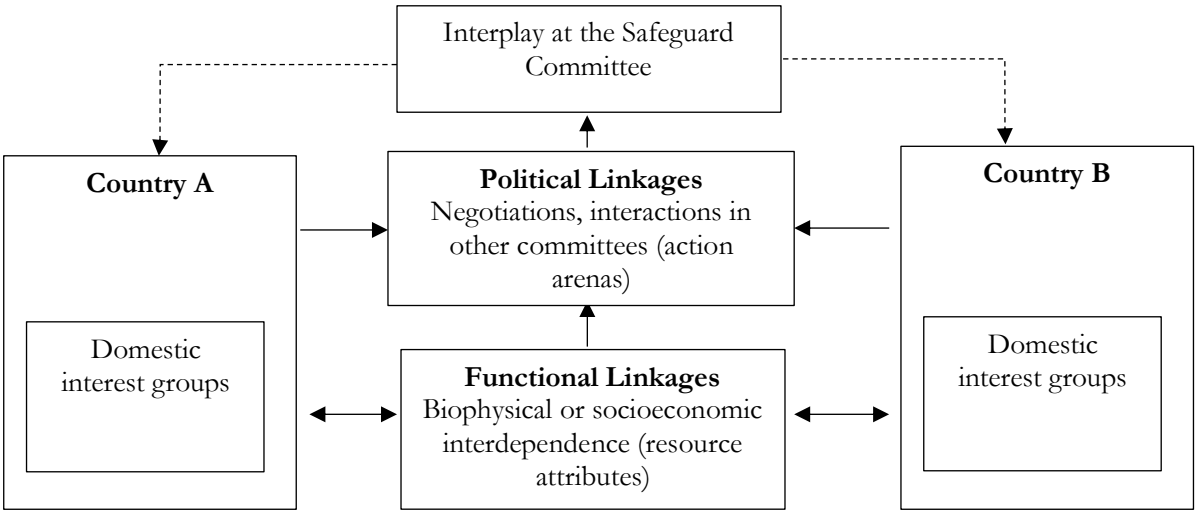

Figure 2- Analytical Framework on interplay between countries at the Safeguard Committee (complied by the author)- inspired by Figure 3 in Jungcurt (2011).

Several studies, like Sykes (2003, 2006) and Bagwel and Staiger (1990) have analyzed Safeguards. Nevertheless, a comprehensive framework for the analysis of the causes and determinants Safeguard actions is yet to be developed. The aim of this paper is to develop such a framework, using the Institutional Analysis and Development Framework.

Common Pool Resource: The resource of interest in this setup is the revealed preferred tariff rates of countries, i.e., the applied tariff rates. This resource is rival, as ceteris paribus an increase in import market share that it provides for one trading partner can be realized at the cost of decreased market share of other trading partners.

Table 3- Attributes and Types of Goods (Ostrom, 2003)

	Consumption in rival	Consumption is not rival
Exclusion is feasible	Private goods (fossil fuels)	Toll/club goods (internet)
Exclusion is not feasible	Common pool resources (atmosphere as CO2 sink)	Pure public goods (information/knowledge)

Exclusion is not possible for this resource, as applied tariffs are held on the Most Favoured Nation (MFN)[3] basis. It means any concessions, privileges, or immunities granted to one nation in a trade agreement are also granted to all other WTO member countries. Rivalry, together with quality of being nonexcludable, identify the resource as a common pool resource (Table 3).

Action arena: action arena includes 1) the Safeguard Committee at the WTO, and 2) interaction among the lobby groups and the national governments. Participants in the Safeguard Committee are all WTO members as they wish. Beside the Member countries, observer governments in the General Council of the WTO, the International Monetary Fund (IMF), World Bank and United Nations Conference on Trade and Development (UNCTAD) have observer status at the committee. The

[3] Britannica defines MFN as the guarantee of trading opportunity equal to that accorded to the most-favored nation; it is essentially a method of establishing equality of trading opportunity among states by making originally bilateral agreements multilateral.

Organization of African, Caribbean and Pacific States (OACPS) and the Organisation for Economic Co-operation and Development (OECD) also attend Committee meetings on an ad hoc basis.

Nested action situations: The governance structure of the WTO system is organized int various councils and committees. Biannual ministerial conferences decide over major concerns, while in the meantime the General council, consisting of representatives of all WTO members is the governing body. In the lower level, the Council for Trade in Goods, the Council for Trade in Services, and the Council for Trade-Related aspects of Intellectual Property Rights operate under the guidance of the General Council. The Committee on Safeguards reports to the Council for Trade in Goods (Sykes, 2006, page 86)[4].

Constitutional, Collective and Operational rules: The operational level choices about the implementation of practical decisions, happens at the country, as well as between country levels. At the country level, authorities in individual countries pursue procedures established and publicly announced, following Article 3 of the Agreement on Safeguards. Article 8 of this agreement also delineates the implementation rule between countries.

The Safeguard Committee is where countries bring their notifications and present their cases. This is where the collective choices about operational rules are made. The constitutional rules are set at the biannual ministerial meetings that have safeguards in their agenda. These rules set the structural baseline that defines how the other two, operational and collective, are being managed and acted upon.

Community-based management of safeguards: According to GATT Article (1) and Articles 3 and 5 of the Safeguard Agreement mentioned above, countries are allowed to apply safeguards, once they satisfy all the requirements mentioned in them. Unless there is a trading partner objecting the safeguard decisions of other members countries through the dispute settlement system of the WTO, countries can initiate unlimited number of safeguards and can put an extra tariff charge as they wish,

[4] I am not aware of any feedback loop in this hierarchical relationship among the nested action situations.

under their safeguard. This freedom of choice, as Sykes (2003) mentions, was intentional by the WTO negotiators at the Uruguay round of negotiations. The fact that the global trading system is still functional with this freedom of individual countries for slowing it down, suggests that there is a self-regularization mechanism at the Safeguard Committee that supports the continued functionality of the system.

Enforcement tool: the central enforcer of obligations at the WTO is the Dispute Settlement System. According to the WTO[5], if a dispute arises when one country adopts a trade policy measure that one or more other members consider to be inconsistent with the obligations set out in the WTO Agreement, any member that feels aggrieved is entitled to invoke the procedures and provisions of the dispute settlement system in order to challenge that measure.

If the parties to the dispute do not manage to reach a mutually agreed solution, the complainant is guaranteed a rules-based procedure in which the merits of its claims will be examined by an independent body (panels and the Appellate Body). If the complainant prevails, the desired outcome is to secure the withdrawal of the measure found to be inconsistent with the WTO Agreement. Compensation and countermeasures (the suspension of obligations) are available only as secondary and temporary responses to a contravention of the WTO Agreement (Article 3.7 of the Dispute Settlement Understanding).

2-2 Policy Interdependence and Functional Linkages

Policy interdependence[6]: safeguards provide flexibility in trade agreements such that they could undermine the commitment of trading partners to liberal trade. Staiger and Tabellini (1987) provide an argument against safeguards by showing that safeguards could reduce the credibility of a trade

[5] Dispute Settlement System Training Module, Chapter 1.
[6] This part draws on analysis of Crowley (2009).

agreement. If governments are not fully committed to liberal trade, the productive factors in their economies may not efficiently reallocate because firms expect their governments to utilize safeguards in the future. Because productive factors are not efficiently allocated in a trade agreement with a safeguard but would be in a trade agreement that did not include a safeguard, there is a relative welfare loss associated with the inclusion of the safeguard in a trade agreement.

Increasing the applied tariff rates to use up the tariff overhang has a similar effect in this regard. While countries are only committed to their bound tariffs, the level of applied tariff that they charge works at the duty level that other countries rely on. So, such increase in applied tariff rates damages the perspective of the countries for a joint future trade growth.

Functional Linkages (Resource Attributes): Interdependence has two distinct sources: the attributes of the resource and the attributes of the resource users (Jungcurt, 2011).

2-3 Attributes of resource Users

The country members of the Safeguards Committee are the resource users. One important dimension that distinguishes the frequent users of safeguards from others, is their development status. Nyarko and Taheri (2020) show that developing countries, particularly middle-income countries, have been more frequent users of safeguard measures compared to developed countries under the GATT.

The top 5 frequent safeguard users were developing countries and accounted for almost 35 percent of the total number of measures, whilst top 7 countries accounted for slightly above 50 percent of total safeguards during the period. India was the most frequent user of safeguard measures, initiating 12 percent (22 applications) during the period. Indonesia followed with 18 applications, whilst Turkey occupied the third position with 16 applications, accounting for 10 percent and 9 percent of the total safeguard cases, respectively. Chile and Jordan were the fourth most frequent users of safeguard measures during the period, with each country initiating 8 cases. The United States is the only

developed country among the top 10 users of safeguard measures, with 6 applications representing 5 percent of the total number of safeguard cases, similar to Philippines.

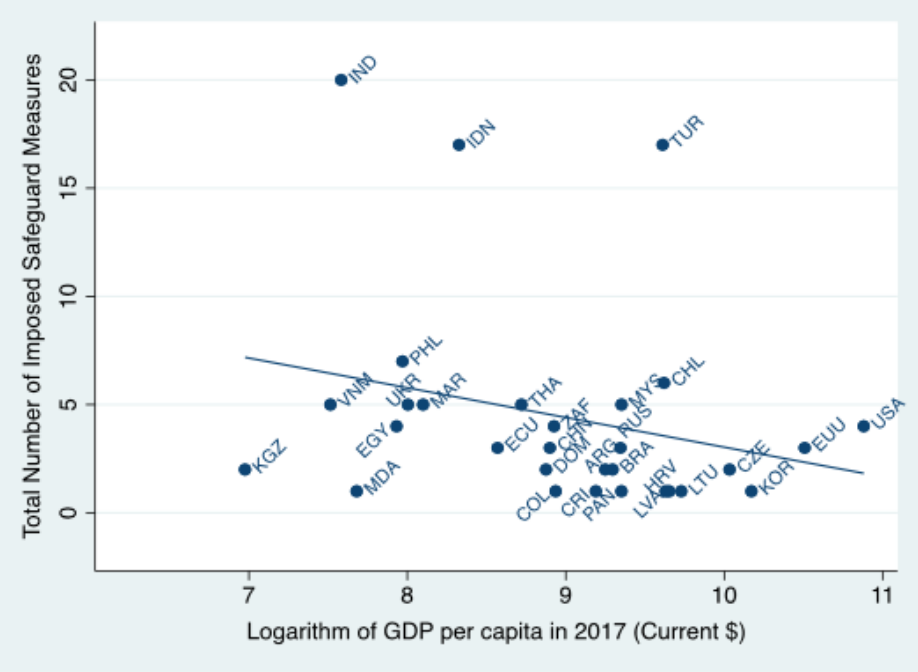

Figure 3- Total Safeguard Measures by Countries at the WTO- 1995-2017 based on data from WTO and WDI (Nyarko and Taheri, 2020)

Australia was the most frequent user of safeguard measures under the GATT, initiating 25 percent (38 applications) during the period. USA followed with 27 applications, whilst Canada occupied the third position with 23 applications, accounting for 18 percent and 15.3 percent of the total safeguard cases, respectively. European Economic Community (EEC) was the fourth most frequent user of safeguard measures, with 21 applications, representing 14 percent of the total number of safeguard cases under the GATT.

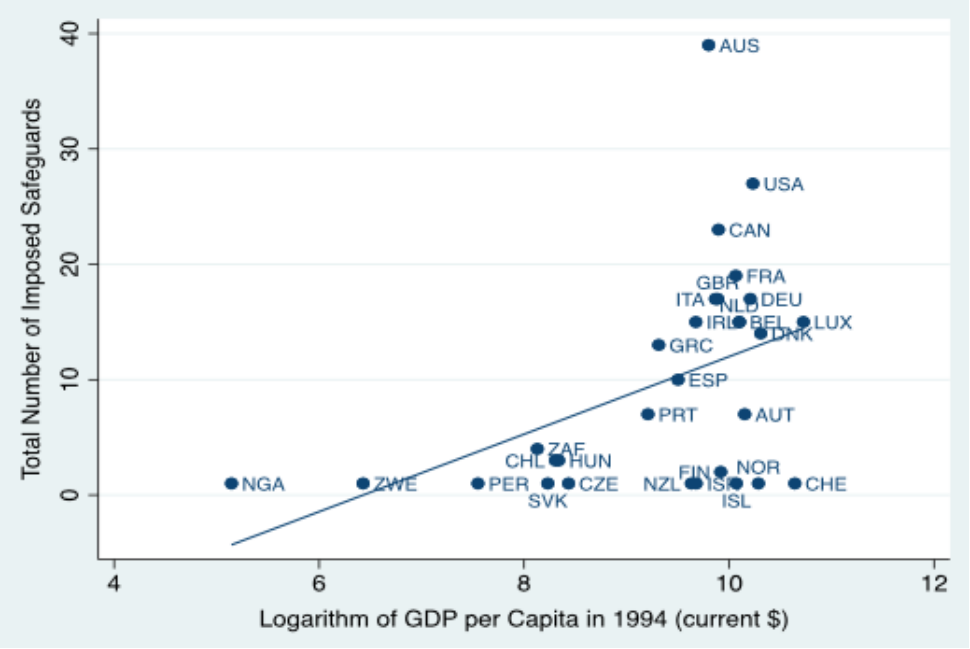

Figure 4- Total Safeguard Measures by Countries under the GATT- 1947-1994, based on data from Pierola (2014) (Nyarko and Taheri, 2020)

3- Literature Review

Institutional analysis of GATT: Bagwell and Staiger (1999) did one of the earliest institutional studies of GATT from an economic perspective. In this paper, they seek to understand what governments can gain from a trade agreement. To this end, this paper proposes a unified theoretical model within which it interprets and evaluates the principles of reciprocity[7] and non-discrimination[8], on which GATT is founded. In this paper, government preferences are represented in a way that is consistent with national income maximization but also allows for the possibility of distributional concerns as emphasized in leading political-economy models. Authors establish that GATT's principles of reciprocity and non-discrimination can be viewed simple rules that assist governments in their effort to implement efficient trade agreements.

[7] Britannica defines "reciprocity" in international trade as the granting of mutual concessions in tariff rates, quotas, or other commercial restrictions.
[8] Non- discrimination is based on the MFN principle.

Domestic commitment of governments: Maggi and Rodriguez-Clare (2007) study trade agreements when governments have a domestic commitment problem. They show that giving discretion to governments to choose a tariff below the binding reduces the inefficiency due to domestic commitment problem. In this model, the governments always apply a tariff equal to binding and, thus, no overhang is predicted by the theory. The essence of domestic commitment problem in this paper originates from the fact that assuming that capital can move across sectors, there will be excessive investment in those sectors that are expected to be the recipients of investment. Since this happens before the government and lobbies negotiate over protection, the government is not compensated for this "long run" distortion.

Authors assume that, in each country, the capital owners in the import competing sector get organized as a lobby and offer contributions to their government in exchange for protection. This is a simple lobby structure that generates trade protection in the political equilibrium. This paper models the interaction between lobby and government in a similar way as Grossman and Helpman (1995). The government's and the lobbies' objective functions are (1) and (2), respectively:

$$U^G = aW + C \qquad (1)$$

$$U^L = px - C \qquad (2)$$

Here, C denotes contributions from the import competing lobby. The parameter *a* capture (inversely) the importance of political considerations in the government's objective: when *a* is lower, "politics" is more important. The lobby collects contributions in proportion to the amount of capital in the manufacturing sector, x. Thus, total contributions are given by C=cx, where c is the contribution per unit of capital.

Other papers in this field are Maggi and Rodríguez Clare (1998) and Devashish Mitra (2002) that have highlighted the role of politics in creating demand for commitment, while Staiger and Guido Tabellini

(1987) have focused on purely economic considerations. However, these three papers focus on a single small economy and do not attempt a fully-fledged analysis of trade agreements.

Conconi and Perroni (2004) considers a two-country model of trade agreements in the presence of domestic commitment problems. They focus on the implications of the self-enforcement constraints and argue that they can explain the granting of temporary special and differential treatment to developing countries in the WTO[9].

Negotiation over bound tariff (instead of applied tariff): The political economy model of Maggi and Rodriguez-Clare (2007) show that setting bound tariffs at the trade negotiations are preferred to accepting exact tariff commitments. The broad intuition is that, if the commitment takes the form of bound tariff, lobbies will be induced to pay contributions ex post, and this will lower the net return to capital, thus mitigating the overinvestment problem mentioned above.

Horn et al. (2005) provide an alternative explanation for the use of bound tariff in trade agreements. They examine the optimal structure of trade agreements in the presence of contracting costs. They show that in order to save on contracting costs, it may be optimal to specify rigid (i.e., noncontingent) bound tariff. Finally, Bagwell and Staiger (2005) propose a model where tariff ceilings are motivated by the presence of privately observed—and therefore non-verifiable—shocks in the political pressures faced by governments[10].

Tariff overhang: Beshkar, et al. (2015) observes two phenomena in the tariff data at the WTO. First, applied tariffs are often lower than the bound tariffs, providing governments with substantial policy flexibility. Second, the extent of flexibility varies substantially across sectors and countries. To interpret these regularities, this paper models the trade-off between discipline and flexibility in the design of trade agreements and argues that recognizing this trade-off is the key to explain the observed patterns

[9] The last two paragraphs are based on the analysis of Maggi and Rodríguez Clare (2007) about these papers.
[10] This paragraph is based on the analysis of Maggi and Rodríguez Clare (2007) about these papers.

in the tariff binding commitments and applied tariffs under the WTO. This paper also models the interaction between lobby and government in a similar way as Grossman and Helpman (1995) as in equation (3). This paper assumes that a government's preferences over tariffs can be described by a weighted social welfare function in which the producers' surplus in the import-competing sector receives a weight of 1 + θ, where θ is a random variable.

$$V(t,\theta) = S\big(\tilde{p}(t)\big) + (1+\theta)\pi\big(\tilde{p}(t)\big) + t\tilde{p}(t)^{*}m\big(\tilde{p}(t)\big) \qquad (3)$$

Here, V(.) denote the payoff to the country arising from a representative importable sector, S(.) is consumer surplus, m is import volume, $\tilde{p}(t)$ is the price level as a function of tariff rate and $\pi(.)$ is producers' surplus in the import-competing sector.

Authors find that 1) the levels of bound tariff rates under the WTO are inversely related to measures of import market power. It means that for instance increasing a country's market power in a sector (as measured by import share) from the median level to the 75th percentile reduces its binding by 15% when evaluated at the median binding. 2) The political environment plays a role in determining the size of the optimal tariff binding, such that a greater volatility in political pressure parameter increases the level of optimal binding. 3) Since the non-cooperative tariff is increasing in market power and the binding is decreasing in market power, it must be the case that the expected overhang is decreasing in market power. These findings together, suggest an explanation for the fact that developing countries are typically the ones that have highest tariff overhang.

Beshkar and Bond (2017) shows how a separate focus on either the applied or bound tariff rates overlooks the WTO agreements. Authors model the political welfare function e la. Baldwin (1987) in which countries maximize a welfare function, having the terms of trade as the channel for the spillover of trade policies. They first use this model to find the optimal bound tariff in absence of temporary

protection actions (TP) flexibilities[11]. Next it introduces the possibility for TP accompanied by a monitoring cost. This gives a threshold based on which countries decide to use either of two flexibility mechanisms, have a tariff overhang or using TP. This bundled mechanism predicts a negative relationship between tariff overhang and the incidence of TP activity, independent of the past tariff reductions.

This paper finds that tariff overhang is most effective at providing flexibility in a trade agreement when the magnitude of negative externality of trade policy is small. The latter means when the difference between the country's noncooperative tariff and the world's optimal tariff is small. On the other hand, contingent protection is the optimal type of flexibility when the gap between noncooperative and global optimal tariffs is large.

Kuenzel (2020) also develops a theoretical link between tariff overhang and TP actions in the context of WTO disputes. In that model, the incentive of WTO members to apply temporary protection or non-tariff barriers when their applied tariff is close to or at the bound tariff increases in response to an exogenous shock. If trading partners perceive at least some of these measures as unjustified, an inverse link should emerge between tariff overhangs and the incidence of WTO disputes, a prediction which is borne out by the data. When domestic demands for protection arise (e.g., due to productivity shocks, import surges or business cycle downturns), poorer countries are more likely to respond by using their tariff overhang space instead of having to resort to TP proceedings[12].

Lawrence (2021) focuses on the event of applying safeguards while having the policy space of increasing applied tariffs. He points out that this phenomenon suggests that countries with this strategy generally set their applied tariff schedules at rates they determine as being in their interest and

[11] This includes safeguards, anti-dumping, and counter-vailing duties

[12] I think this conclusion that the poorer countries prefer using their tariff overhang space to using TP is in contrast with this observation that the active safeguard users are developing countries like India, Indonesia, Turkey, and Jordan.

then provide additional protection only to industries that can meet the demanding requirements of safeguard provisions. This paper argues that this revealed preference for disciplining their tariff-granting process underscores their commitments to their applied tariff schedules.

Earlier in 2014, Busch and Pelc studied when countries are more likely to rely on TP as opposed to raising MFN tariffs. In terms of how tariff overhang and TP are related across time, Pelc (2009) shows that at the HS six-digit level, overhang is lower in sectors that have used TP in the past.

Safeguards: Sykes (2006) delineates the characteristics of industries that are more likely to be protected by Safeguards. He points out that those declining industries are more likely to meet the conditions for a safeguard measure. Earlier in 2003, Sykes pioneered the study of Safeguard mechanism at the WTO, criticizing its design and implementation at this organization.

On the optimal baseline applied tariff and bound tariff, Bagwel and Staiger (1990) determine the optimal baseline tariff and safeguard tariffs that can be selected when the import volume surges. Their model does not allow for binding overhang and does not feature monitoring, but a substitution relationship is present such that the baseline tariff can be pushed to a lower level when safeguards are available.

4- Data

This research would be based on the publicly available Safeguards application, bound and applied tariff rate on the WTO website. Annex 1 provides sample data for India.

5- Conclusion

This paper is a first attempt for analyzing the Safeguard Committee at the World Trade Organization using the IAD framework. It identifies the nested action arenas, participants in the action arenas, and different levels of rules in the system. This study analyses a simplified version of interactions between the action arenas. Further work would be needed for studying the feedback loop between them.

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7- Appendix

Table 4- Safeguard cases of India, 1995-2020.

Product	T [13]	Year of Safeguard Measure	HS code (Number of digits for applied tariff)	Bound Tariff	Applied Tariff (Report year)
Solar Cells whether or not assembled in modules or panels[14]	D	July, 2018	85414011 (6 digits)	Avg=0 Max=0 Min=0	Avg=0 Max=0 Min=0 (2018)
Hot-rolled flat sheets and plates (excluding hot rolled flat products in coil form) of alloy or non-alloy steel having nominal thickness less than or equal to 150 mm and nominal width of greater than or equal to 600 mm	D	November, 2016	72254013 (6 digits)	Avg=40 Max=40 Min=40	Avg=10 Max=10 Min=10 (2017)
			72254019 (6 digits)		Avg=10 Max=10 Min=10 (2017)
			72254020 (6 digits)		Avg=10 Max=10 Min=10 (2017)
			72254030 (6 digits)		Avg=10 Max=10 Min=10 (2017)

[13] Type of safeguard measure. D stands for definite safeguard and P for provisional safeguard.

[14] Harmonized Commodity Description and Coding System, popularly called HSN of the Indian Customs Tariff Classification.

			72259900 (6 digits)		Avg=10 Max=10 Min=10 (2017)
Hot-Rolled flat products of non-alloy and other alloy Steel in coils of a width of 600 mm or more	D	March, 2016	72253090 (6 digits)	Avg=40 Max=40 Min=40	Avg=10 Max=10 Min=10 (2017)
Hot-rolled flat products of non-alloy and other alloy steel in coils of a width of 600 mm or more	P	September, 2015	72253090 (6 digits)	Avg=40 Max=40 Min=40	Avg=10 Max=10 Min=10 (2017)
Saturated Fatty Alcohols	D	March, 2015	38237010 (6 digits)	Avg=50 Max=50 Min=50	Avg=7.5 Max=7.5 Min=7.5 (2015)
			38237020 (6 digits)		
			38237040 (6 digits)		
			38237090 (6 digits)		
			29051700 (6 digits)	Avg=40 Max=40 Min=40	Avg=7.5 Max=7.5 Min=7.5 (2015)
Tubes, Pipes and Hollow Profiles, Seamless of iron, alloy or non-alloy steel (other than cast iron and stainless steel)	D	August, 2014	73041910 (6 digits)	Avg=40 Max=40 Min=40	Avg=10 Max=10 Min=10 (2017)
			73041920 (6 digits)		
			73041990 (6 digits)		
			73042310 (6 digits)	Avg=40 Max=40 Min=40	Avg=10 Max=10 Min=10 (2017)
			73042390 (6 digits)		
			73042910 (6 digits)	Avg=40 Max=40 Min=40	Avg=10 Max=10 Min=10 (2017)
			73042990 (6 digits)		
			73043111 (6 digits)	Avg=40 Max=40 Min=40	Avg=10 Max=10 Min=10 (2017)
			73043119 (6 digits)		
			73043121 (6 digits)		
			73043129 (6 digits)		
			73043131 (6 digits)		
			73043139 (6 digits)		
			73043911	Avg=40	Avg=10

			(6 digits)	Max=40 Min=40	Max=10 Min=10 (2017)
			73043919 (6 digits)		
			73043921 (6 digits)		
			73043929 (6 digits)		
			73043931 (6 digits)		
			73043939 (6 digits)		
			73045110 (6 digits)	Avg=40 Max=40 Min=40	Avg=10 Max=10 Min=10 (2017)
			73045120 (6 digits)		
			73045130 (6 digits)		
			73045910 (6 digits)	Avg=40 Max=40 Min=40	Avg=10 Max=10 Min=10 (2017)
			73045920 (6 digits)		
			73045930 (6 digits)		
			73049000 (6 digits)	Avg=40 Max=40 Min=40	Avg=10 Max=10 Min=10 (2017)
Sodium Nitrite	D	February, 2014	28341010 (6 digits)	Avg=40 Max=40 Min=40	Avg=7.5 Max=7.5 Min=7.5 (2017)
Phthalic Anhydride	D	January, 2012	29173500 (6 digits)	Avg=40 Max=40 Min=40	Avg=7.5 Max=7.5 Min=7.5 (2017)
Rubber chemicals N1, 3-dimethyl butyl-N'Phenylenediamine, also known as PX-13 or 6-PPD	D	August, 2011	3812 (4 digits)	Avg=40 Max=40 Min=40	Avg=8.8 Max=10 Min=7.5 (2017)
			3810 (4 digits)	Avg=40 Max=40 Min=40	Avg=7.5 Max=7.5 Min=7.5 (2017)
			2921 (4 digits)	Avg=40 Max=40 Min=40	Avg=8.1 Max=10 Min=7.5 (2017)
			2925 (4 digits)	Avg=40 Max=40 Min=40	Avg=7.5 Max=7.5 Min=7.5 (2017)

			2934 (4 digits)	Avg=40 Max=40 Min=40	Avg=7.5 Max=7.5 Min=7.5 (2017)
			2942 (4 digits)	Avg=40 Max=40 Min=40	Avg=7.5 Max=7.5 Min=7.5 (2017)
Dimethoate Technical	P	March, 2009 (23 March until 8 October 2009)	38089123 (6 digits)	Avg=40 Max=40 Min=40	Avg=10 Max=10 Min=10 (2017)
Phthalic Anhydride	D	January, 2009	29173500 (6 digits)	Avg=40 Max=40 Min=40	Avg=7.5 Max=7.5 Min=7.5 (2017)
Phthalic Anhydride	P	January, 2009	29173500 (6 digits)	Avg=40 Max=40 Min=40	Avg=7.5 Max=7.5 Min=7.5 (2017)
Epichlorohydrin (ECH)	D	July, 2002	291030 (6 digits)	Avg=40 Max=40 Min=40	Avg=2.5 Max=2.5 Min=2.5 (2017)
Gamma Ferric Oxide/Magnetic Iron Oxide (GFO/MIO)	D	January, 2001	282110 (6 digits)	Avg=40 Max=40 Min=40	Avg=7.5 Max=7.5 Min=7.5 (2017)
Acetone	D	January, 2000	291411 (6 digits)	Avg=40 Max=40 Min=40	Avg=7.5 Max=7.5 Min=7.5 (2017)
Phenol	D	June, 1999	290711 (6 digits)	Avg=40 Max=40 Min=40	Avg=7.5 Max=7.5 Min=7.5 (2017)
Propylene Glycol	D	December, 1998	290532 (6 digits)	Avg=40 Max=40 Min=40	Avg=7.5 Max=7.5 Min=7.5 (2017)
Flexible Slabstock Polyol of molecular weight 3000-4000 used in the manufacture of Slabstock Foam and Polyurethane Foam Mattresses	D	December, 1998	390720 (6 digits)	Avg=40 Max=40 Min=40	Avg=7.5 Max=7.5 Min=7.5 (2017)
Acetylene Black	D	December, 1998	280300 (6 digits)	Avg=40 Max=40 Min=40	Avg=7.5 Max=7.5 Min=7.5 (2017)