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**The Legal Fabric of US and China Bilateral Trade Agreements:
Weaving Trade Remedy and Intellectual Property Rights Rules with
(Dis)Embedded Liberalism**

São Paulo / London
2024

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Remedy and Intellectual Property Rights Rules with (Dis)Embedded
Liberalism**

Thesis presented to the Joint Graduate Programme in International Relations of the Institute of International Relations of the University of São Paulo and King's College London in partial fulfilment of the requirements for the dual degree of Doctor of Philosophy.

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Supervisor: Prof. Dr. James M. Scott (KCL)

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2024

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Abstract

LAMEIRAS, L. D. **The Legal Fabric of US and China Bilateral Trade Agreements: Weaving Trade Remedy and Intellectual Property Rights Rules with (Dis)Embedded Liberalism.** 2024. 237p. Thesis (Joint PhD in International Relations – International Relations Institute, University of São Paulo, São Paulo and King's College London, London, 2024).

The thesis presents a comparative study between the bilateral free trade agreements of the US and China, aiming to qualify the stance of both countries in the multilateral trade regime, specifically regarding their engagement with such trade policy instruments between 2001 and 2021. To conduct the comparative analyses and achieve satisfactory empirical results, an innovative methodological approach of a quantitative nature is employed. This involves using specific *Jaccard* metrics to assess the degree of similarities between agreements and their normative provisions. In addition, the academic research also undertakes a qualitative study from a comparative perspective, focusing exclusively on legal provisions concerning trade remedies and intellectual property rights – two essential regulatory topics within the scope of the US and China bilateral relations. To achieve this, the concept of *embedded liberalism* is revisited, grounded in the constructivist theoretical approach of the discipline of International Relations, with a view of providing a new analytical lens for comparative studies of trade agreements. In this way, an alternative path is suggested, specifically for deepening the quantitative approach and interpreting the exclusive role that China and the US played in those trade issues through their bilateral agreements during the mentioned period.

Keywords: US and China. Bilateral Trade Agreements. Embedded Liberalism. Multilateral Trade Regime.

Resumo

LAMEIRAS, L. D. **O Tecido Normativo dos Acordos Bilaterais de Comércio dos EUA e da China: Costurando Regras de Remédios Comerciais e Propriedade Intelectual com o Liberalismo (Des)Integrado**. 2024. 237p. Thesis (Joint PhD in International Relations – International Relations Institute, University of São Paulo, São Paulo and King’s College London, London, 2024).

A Tese apresenta um estudo comparativo entre os acordos bilaterais de livre comércio dos EUA e da China, a fim de qualificar a posição de ambos os países no regime multilateral de comércio, no que diz respeito, estritamente, ao engajamento desses atores com tais instrumentos de política comercial entre 2001 e 2021. Com vistas a realizar as análises comparativas e, desse modo, alcançar resultados empíricos satisfatórios, faz-se uso de uma abordagem metodológica de natureza quantitativa, ao se recorrer a determinadas métricas de *Jaccard*, com o objetivo de aferir o grau de similaridades entre os acordos e seus dispositivos normativos. De modo complementar, a pesquisa acadêmica também realiza um estudo qualitativo, em perspectiva comparada, com foco exclusivo nos dispositivos normativos sobre remédios comerciais e direitos de propriedade intelectual, dois temas regulatórios essenciais no âmbito das relações bilaterais entre EUA e China. Para tanto, resgata-se o conceito de *embedded liberalism*, fundamentado na abordagem teórica construtivista da disciplina de Relações Internacionais, a fim de fornecer uma nova lente analítica aos estudos comparados de acordos comerciais. Sugere-se, dessa forma, um caminho alternativo para o aprofundamento da abordagem quantitativa e para a interpretação do papel que a China e os EUA desempenharam no domínio exclusivo daqueles temas comerciais por meio de seus acordos bilaterais ao longo do referido período.

Palavras-chave: EUA e China. Acordos Bilaterais de Comércio. Liberalismo Integrado. Regime Multilateral de Comércio.

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Introduction

Competition and confrontation have become widespread words for describing today's relationship between the United States (US) and China in almost all spheres of their daily interactions, ranging from geopolitics to economic and development policies, to cutting-edge technologies, to social and cultural identities (Roach, 2022). The historical forces driving this background of deep transformations entangling both countries have spurred narratives on their stances in international relations (Mahbubani, 2020). As the cacophony of arguments spread out, depictions have often attributed opposing roles to them and have treated their differences as catalysts for rivalry.

This trend has also been true with regards to their trade policies. A great deal of the accounts on the subject matter – at least coming from those tainted with a Western perspective and before the Trump administration – emphasises the US commitment to the bedrock principles and values of the multilateral trade regime, while bashing China for its allegedly disruptive performance within the same rules-based system.

Emblematic of the whole gamut of accusations that would fall upon China, it is often mentioned the unrestrained use of state subsidies, curbs on foreign investment, forced technology transfers, violation of intellectual property rights and manipulation of exchange rates (Jin, 2023). Simply for not following the same course of actions, a more benign label is bestowed upon the US, frequently seen as a 'fairer' trade practitioner and a legitimate proponent of renewed rules needed for the adaptation of the World Trade Organization (WTO) normative framework to the ongoing imperatives of the twenty-first century cross-border trade (Baldwin, 2016a, 2016b).

In retrospect, the beginning of the twenty-first century is a landmark to the engagement of both the US and China with international commerce. In the case of the former, the Republican foreign trade programme labelled as 'competitive liberalization' set forth a tactical revisionism approach towards global trade, whereby bilateral free trade agreements became the preferred means through which the country would translate its assertiveness into practical results (Schott, 2004). By the time President Bush came to power, there were only three Free Trade Area Agreements (FTAs) in force, a number that would surge to 17 FTAs in less than a decade (Bhandaria and Klaphake, 2011). After a period

of almost immobilism during the first term of Obama's presidency with regards to trade negotiations, the Democratic administration would soon put the country back to the path towards writing the rules of international trade by opting for a different tool at this time. This sought to put in place the so-called mega-regional agreements (Lameiras and Menezes, 2018).

The year of 2001 marked China mainland's official accession to the WTO, ushering in a new phase of opening-up reforms that would bring about structural transformations to the country (Lanteigne, 2019; Shambaugh, 2013). Not long after, China would find itself completely enmeshed in the normative trend rooted in the 'atomization' process of the sources of international trade law – a dynamic that kicked off in the early 1990s, whereby *ad hoc* means, such as bilateral and regional trade arrangements, have assumed a central role in the creation of rules and norms in the realm of global trade governance (Bhagwati, 1995; Baldwin, 2006).

As with other states, bilateral and regional trade agreements have become strategic means for the US and China in the pursuit of foreign trade goals over the past two decades. In this sense, any assessment of the overall trade picture is incomplete if it focuses exclusively on the multilateral regime and does not include these trade tools. The purpose of this thesis is to contribute to academic debates revolving around the US and China foreign trade policies that go beyond the thorny issues that have shaped their contemporary disputes by performing a comparative analysis of their engagement with bilateral preferential trade agreements (PTAs).

Two central questions defined the scope of this research: 1) What are the differences and/or similarities in the normative content of the US and Chinese PTAs notified to the WTO between 2001 and 2021? 2) What do these differences and/or similarities reveal about the stance of both countries in the multilateral trade regime during that timeframe, at least within certain regulatory areas?

Through the forthcoming empirical evidence, the objective is not only to enhance understanding of the normative content of PTAs from both countries, but also to offer an alternative interpretation of how these trade policy instruments intersect with the ongoing transformations in the multilateral trade regime, considering the agency of these two global trade powers.

The research object contributes to the broader academic debate seeking to characterize the identities of the US and China through their foreign trade policies over the first two decades of the 21st century. Chapter 1 revisits relevant studies within this specific literature, aiming to propose novel contributions by identifying gaps and unexplored areas, thereby informing the formulation of the research questions posed above.

To navigate the diverse and abundant interpretations, a classification system was proposed based on binary categories: *status quo* power and system-challenging power. This classification draws from the classic debate in International Relations (IR) regarding the relationships between hegemonic and ascendant powers (Kindleberger, 1973; Krasner, 1976; Gilpin, 1987; Mearsheimer, 2001; Allison, 2017). Conceptualized as Weberian ideal types, these categories enabled the decisions, actions, and policies of each country, as highlighted by the authors of the selected studies, to be linked with one of these labels, albeit as imperfect approximations. The key criterion for classification into one of the two identity categories was whether the course of action aligned with the principles and rules of the multilateral trading system.

The attempt to systematize numerous analyses and diverse viewpoints underscored a lack of consensus regarding the assessment of the US and Chinese practices and decisions in global trade matters. This effort revealed that dissent is not confined to official discourses of these countries but also permeates the academic realm. As outlined in Chapter 1, the ideal type that most accurately captures the behavioural patterns of each country is contingent not only on the practices and contexts being analysed but also on how each author interprets the implications of these policies for the global trade governance system.

Additionally, it is crucial to note that most studies aimed at critically evaluating the primary foreign trade policy instruments of the US and/or China did not incorporate regional or bilateral trade agreements into their analyses. As argued throughout this thesis, any interpretation of the role played by either country in the multilateral trade regime, solely relying on the arguments advanced by the authors of these studies, remains incomplete at best.

Regarding studies exclusively focused on PTAs, two distinct lines of research were observed. On the one hand, there are academic works aimed at understanding the normative content of these agreements and/or the selection of trade partners based on factors such as the decision-making process, the influence of domestic groups in formulating

foreign trade policies, and the political economy of the country under analysis. On the other hand, the second line of research is associated with studies examining the relationship between regionalism and multilateralism. These studies classify PTAs as either building blocks or stumbling blocks in relation to the multilateral trading system.

As part of the minority of studies focused on analysing the US and Chinese PTAs, this thesis advances and enhances existing knowledge by making two significant contributions to the field. The first contribution pertains to the utilization of a quantitative method, enabling the attainment of robust empirical results in comparative studies of legal texts. This method unveils the degree of similarity between normative provisions. The second contribution arises from the adoption of a qualitative approach, aiming to highlight nuances in the interpretations of specific rules found in both countries' PTAs. These nuances have significant implications for the stance of the US and China in the multilateral trade regime.

Chapter 2 is divided into two main sections. The first part introduces the methodological approaches applied in the comparative analyses of the US and China PTAs. However, particular emphasis is placed on the quantitative approach due to its relatively underutilized and less familiar nature in comparative studies of this kind. This methodology, often referred to as text-as-data analysis in specialized literature, is thoroughly elucidated to offer a clearer understanding of its application (Alschner, Seirmann and Skougarevskiy, 2017a).

For the comparative analyses, *Jaccard* metrics are used to assess the degree of similarity between textual segments of selected trade agreements, such as chapters and specific normative provisions. As one of its intrinsic qualities, text-as-data analysis allows specific treatments to be carried out on a significant amount of information through the transformation of texts into metadata (Alschner, Seirmann and Skougarevskiy, 2017a). This generates empirical results with high precision through computational tools (Alschner, Seirmann and Skougarevskiy, 2017a). A more detailed description of the main features of this method, its applicability in other research and areas of study as well as its strengths and limitations are found in Chapter 2.

In the first part of Chapter 2, I also introduce the qualitative methodological approach. Recognizing inherent limitations in employing *Jaccard* metrics for similarity analyses of trade agreements, the primary aim of integrating a qualitative method is to complement and deepen the empirical findings obtained from the text-as-data analyses.

This potential to make new discoveries arises from the very nature of qualitative studies, which allow for more meticulous analyses of the semantic nuances of the normative provisions found in legal texts. Furthermore, a qualitative approach allows us to reveal more accurately what the quantitative results regarding the levels of incongruence between trade agreements actually mean in terms of the degree of normative density around these differences.

The logic behind is simple: a greater number of discrepant words and linguistic terms does not necessarily translate into a greater concentration of rules. Nor does a greater concentration of rules convert into more forceful impacts on a given legal and social reality. Yet, after all, it is worth asking: what reality are we dealing with? The answer to this question led to the effort to find a solid conceptual foundation that would make qualitative analyses feasible by functioning as a reference for comparisons.

Against this backdrop, the second part of Chapter 2 outlined the concept of embedded liberalism, as conceived by John G. Ruggie (1982), as well as its association with the research object and its usefulness for the qualitative studies carried out in separate chapters. In addition to other reasons laid out in that chapter, its choice drew, above all, from its epistemological qualities that are bound to enrich our understanding regarding the intrinsic and complex relationships between PTAs and the multilateral trade regime.

The link between the concept and the constructivist theoretical framework of IR draws attention to the intertwined relationship between agents and structure, as well as between material capabilities and ideational forces, in the processes of creation and transformation of social realities. These elements are crucial for the definition of international regimes. In line with Ruggie's interpretation, it is argued that it is only possible to understand the identity, legitimacy and functioning of a regime through its intersubjective framework of meaning, also defined by the author as the legitimate social purpose (Ruggie, 1982). Not only the conditions for the existence of the regime are extracted from it, but also its possibilities for transformation (Ruggie, 1982).

Ruggie views the commitment embraced by the agents with regards to embedded liberalism as the legitimate social purpose of the multilateral trade regime (Ruggie, 1982). Some academics criticize this idea, stating that the concept has lost relevance due to the supremacy of neoliberal ideas, which advocates a *modus operandis* of international trade nowadays that is refractory to the notion of that commitment (Dunoff, 1999; Howse, 2002;

Lang, 2006). The very ineffectiveness of the WTO today and the interests of countries participating in the so-called global value chains would validate this argument.

Aligned with other contemporary authors, the argument posits that the concept maintains its descriptive and explanatory power in elucidating the identity and functioning of the trade regime (Rodrik, 1997; Cho, 2003; Knox, 2004; Winickoff *et al.*, 2005). This assertion is supported by the continued presence of binding principles and rules in the multilateral trade agreements, which subscribe to what was agreed in the context that led to the foundation of the regime (Bossche, 2007; Matsushita, Schoenbaum, Mavroidis and Hahn, 2015).

Embedded liberalism's legitimacy persists unless new multilateral agreements within the WTO replace the current ones, reflecting a consensus among all members rather than a select group seeking modification. Despite warranted criticisms of the WTO's functionality, it remains the foremost institution driving the standardization of global trade rules and norms, solidifying international trade law jurisprudence, and furnishing mechanisms for the resolution of trade disputes (Bossche, 2007; Matsushita, Schoenbaum, Mavroidis and Hahn, 2015).

In essence, the embedded liberalism compromise means striking a balance between multilateral liberalism, marked by incentives to boost free trade, and members' autonomy to mitigate the costs of domestic adjustment – when potentially socially disruptive – and address economic and political vulnerabilities stemming from functional differentiation (Ruggie, 1982). Beyond simply easing trade restrictions, the legitimacy and efficacy of the trade regime also hinge on its social purpose that permits members to employ exceptional intervention measures when necessary to uphold domestic stability amidst challenging circumstances (Ruggie, 1982).

Objectively, the comparative analyses comprising the qualitative studies on the US and Chinese PTAs employed the concept of embedded liberalism as a semantic benchmark for contrasting normative provisions within selected trade agreements. This facilitated the identification of agreements with legal content converging or diverging from the meaning of that conceptual framework. The objective was to discern which country's rules most closely adhere to the principles of embedded liberalism.

Based on these empirical findings, it became possible to delineate the roles the US and China play in certain regulatory aspects of the multilateral trade regime, when this

agency is exerted exclusively through the PTAs to which they are party. Importantly, this thesis refrains from making value judgments regarding the embedded liberalism compromise, avoiding any assessment of its representation as the optimal legitimate social purpose of the multilateral trade regime. Therefore, as far as possible, in interpreting the empirical findings of the qualitative studies, any positive or negative connotations are consciously omitted when assigning the ideal types of *status quo* power and/or system-challenging power to these countries.

In contrast to the quantitative approach, where numerous regulatory themes could be incorporated into comparative analyses of the agreements, the qualitative studies required some adjustments to ensure feasibility. Alongside utilizing the conceptual framework as an analytical guide, it was essential to limit both the number of PTAs and the range of regulatory themes under scrutiny.

The selection criteria for the agreements focused on identifying PTAs that shared common trading partners with both the US and China. This approach aimed to mitigate the influence that different trading partners would exert on shaping the content of the legal text. Regarding regulatory issues, the focus was on two key trade areas known for housing multilateral rules reflective of embedded liberalism and significant in Sino-US relations, often leading to disputes within the WTO dispute settlement system: trade remedies and intellectual property rights (Hufbauer, Wong and Sheth, 2006; Moosa, 2012; Simmons, 2016; Jin, 2023). Consequently, each regulatory topic was addressed in a specific chapter of this thesis.

Chapter 3 delved into textual similarity analyses, enabling comparisons across a broader spectrum of PTAs. To conduct this quantitative study effectively, I utilized the Texts of Trade Agreements (ToTA) project database. This resource aggregates nearly all PTAs notified to the WTO and provides full legal texts in XML format, facilitating data processing through computational tools. The selection of ToTA was motivated by its comprehensive coverage and data accessibility. This approach allowed for the inclusion of up to 24 PTAs in the comparative analyses, evenly split between the two countries, with 12 PTAs attributed to each.

In employing *Jaccard* metrics, two primary approaches to textual similarity analysis emerged. The first involved applying heat maps to gauge the level of uniformity, not only between the US and Chinese PTAs, but also within the agreements pertaining to each

country. Beyond simply delineating similarities and disparities among these sets of legal texts, the aim was to uncover patterns and templates indicative of consistent strategies in the engagement of both countries with PTAs.

Regarding the second approach, the analyses centred on comparing specific chapters of the PTAs with the corresponding multilateral agreements addressing the same regulatory topics. The objective was to calculate *Jaccard* indexes, which range from 0 to 1, where the extreme values represent texts with perfectly identical and entirely distinct content, respectively. In selecting chapters from the PTAs for comparison, priority was given to regulatory themes encompassing a higher number of WTO-plus rules and to the ones most found across the 24 selected agreements. Based on the indexes, it was then possible to subsequently pinpoint agreements within the US and Chinese PTAs featuring regulatory themes most aligned with the WTO normative framework.

The empirical findings extracted from the heat maps unveiled significant uniformity in the normative content of the US PTAs. In contrast, Chinese PTAs exhibited a comparatively lower degree of similarity among them. These results go in tandem with conclusions drawn from qualitative studies analysing the negotiation processes of these trade policy instruments and their normative content (Jiang, 2010; Song and Yuan, 2012; Li and Hu, 2013).

The new empirical evidence yielded by the first approach to textual similarity analysis reinforces the assertions that US negotiators adhere to a 'made in US' template during trade agreement negotiations, steadfastly resisting significant alterations to normative content that deviate from their interests (Wise and Gallagher, 2011). Conversely, the findings suggest that China lacks a distinct treaty design or embraces a more flexible stance during the bargaining process that unfolds throughout negotiations.

Concerning the outcomes obtained from the second type of textual similarity analysis, noteworthy empirical evidence is reflected in the *Jaccard* indexes derived from the comparative analyses involving agreements signed by both the US and China with identical trading partners. Significant disparities between the two countries stand out. The US exhibited merely nine more convergent chapters with the corresponding WTO multilateral agreements, whereas China presented a total of 22 convergent chapters. However, a greater equilibrium was observed when the comparisons encompassed PTAs signed with diverse trading partners.

In the realm of comparisons limited to identical partners, another significant finding was the identification of regulatory domains where both countries emerge as proponents of rules more aligned with the WTO normative framework. For the US, these regulatory areas encompass investments and intellectual property rights. Meanwhile, China's set of most analogous regulations includes rules of origin, trade in services, safeguards, technical barriers to trade, and sanitary and phytosanitary measures.

Supporting the quantitative approach of these comparative analyses are a set of descriptive statistics that enhanced the interpretation of the revealed data. In particular, dispersion measures corroborate the conclusions regarding the notable level of uniformity observed among US PTAs in comparison to Chinese agreements.

Chapter 4 was dedicated to the qualitative study on the legal provisions pertaining to trade remedies. In doing so, it was first necessary to elucidate the relationship between this regulatory theme and the concept of embedded liberalism. Primarily, this connection hinges on the authority of public bodies to afford domestic industries – or economic sectors – certain protections, typically in the form of temporary relief. Such measures aim to provide them with an adjustment period to cope with the sudden increase of competition resulting from legal and/or illicit trade practices.

To conduct comparative analyses on the trade remedies chapters of the US and Chinese PTAs, templates were employed to streamline the identification of normative provisions directly relevant to the embedded liberalism compromise. Four templates were used, each corresponding to a category of trade remedies commonly found in PTAs: anti-dumping duties, countervailing measures, bilateral safeguard measures, and global safeguard measures. In all instances, the primary objective was to ascertain whether the PTA rules prohibit, authorize, hinder, or facilitate the application of these trade remedies by the parties to the agreements, or more specifically, by domestic stakeholders seeking recourse to these rights guaranteed by multilateral rules.

Looking ahead to a more detailed examination, minimal disparities were found between the normative provisions of the selected US and Chinese agreements. Broadly speaking, the absence of explicit prohibitions on the adoption of these measures in any of these agreements underscores their utility for bilateral trade between the parties. Moreover, upon closer scrutiny of specific rules, it became apparent that their legal content

deviates little from what is envisaged in the normative framework of the multilateral trading system.

In the cases of anti-dumping and countervailing measures, specific rules were infrequent, and the minor differences observed also resulted in negligible effects on embedded liberalism. Although there were more normative provisions concerning bilateral safeguard measures, their contents generally do not suggest significant implications for the embedded liberalism compromise either. This is largely due to the majority of regulations governing these topics being administrative in nature, making it challenging to assess their practical implications.

The empirical evidence from the comparative analyses on global safeguard measures diverges significantly from the pattern previously outlined. In this instance, the presence of just one legal provision was capable of yielding more pronounced practical outcomes. Specifically, this concerns the rule authorizing the exclusion of PTA members whenever a global safeguard measure is implemented. Predominant in US PTAs, this stands as a notable example of limiting the authority of public bodies to intervene in extraordinary circumstances requiring temporary protection.

In Chapter 5, the comparative study shifted its focus to trade-related aspects of intellectual property rights (IPRs). The analysis primarily centred on categories of IPRs that encompass a significant portion of the normative provisions found in PTAs, typically subject to further elaboration with a view to deepen the multilateral rules.

When selecting the constituent elements of the templates used as guidelines for identifying the rules within bilateral agreements, emphasis was placed on elements directly linked to the concept of embedded liberalism. This meant endorsing or opposing the flexibilities ensured by multilateral rules that consider the vulnerable situations of certain members, often adversely affected when IPR holders receive excessive protections in the guise of promoting global free trade.

With regards to the normative provisions on IPRs, the findings from the comparative analyses unveiled notable distinctions between the US and China PTAs. These disparities are evident in how the trade instruments of these states engage with the concept of embedded liberalism. While US agreements tend to prioritize the advancement of an overprotective system for IPRs at the expense of flexibility mechanisms outlined in multilateral rules, the

content of Chinese PTAs seems to align more closely with the legitimate social purpose of the multilateral trade regime.

When taken together, the five chapters comprising this thesis offer compelling empirical evidence that elucidates the differences and similarities among the PTAs of the primary players in today's global trade. Specifically, qualitative analyses enabled to delve deeper into comparisons concerning two pivotal themes within the Sino-US relations and between these two states and the global community. Indeed, these studies laid robust foundations for qualifying the identity of each trade power based on their involvement with PTAs concerning regulatory issues in trade remedies and IPRs. In assigning the ideal types of system-challenging power and *status quo* power, the US aligns more closely with the former label, whereas China leans towards the latter. In addition to summarizing the primary findings of this research, the conclusion of the thesis also aims to propose a future and complementary research agenda.

Chapter 1 – A *Status Quo* or a System-Challenging Trade Power?

1. Introduction

This chapter provides an overview of a particular cluster of academic works on the US and China contemporary foreign trade policies. It focuses mainly on the literature whose primary goal was to investigate the course of actions and the major decisions, spanning from 2001 to 2021, which have been paramount to define the roles of both countries in global trade governance. The studies selected derive mainly from outlets of IR, International Political Economy and International Law fields of study but restricted to authorships that have contributed to set the tone for academic debates. The vastness of scholarly works on the subject surely rendered the selection incomplete. Also true, many voices have been unduly silenced just because they were unable to make their entry into the ‘right’ field of knowledge due to social and epistemic power constraints, the kinds of which Pierre Bourdieu (2004) have rightly long condemned.

The challenge of making sense of several accounts on different aspects of the US and China trade policies urged the adoption of a system of classification based on two broad categories with the purpose of depicting their behaviour patterns. As each may fit into a spectrum ranging from a ‘*status quo*’ to a ‘system challenging’ power to the trade regime, these two labels are employed hereinafter as overarching groupings for better elucidating the trade practices underscored in the academic works of this literature review. In this sense, they would function much like the Weberian concept of ideal types, which are basically mentally constructions of reality that do not exhaust other possibilities of interpretations of the empirical world (Weber, 1904/1949).

These binary categories are not novel. Within the scope of the Sino-US relations, the association between China and ‘threats’ dates back to a distant past and it has been to a large extent a result of discursive practices that helped to shape the American imagery of the Chinese (Turner, 2011). More recently, they have often been employed by IR scholars in their attempt to determine what the implications of a ‘rising’ China are for the international order in the years following the sweeping reforms that took place in the country in the early 1980s. This theme has long been of particular concern for the neorealist and neoliberal

cadres. In short, they claim that a more powerful China would inevitably abandon its 'rule-taker' status to embrace a 'rule-maker' stance in the international system, meaning that a more assertive role in the promotion of new norms and rules to advance its national interests should be expected from thereafter (Kennedy, 2012).

Drawing on this background of traditional academic debates, usually centred on geopolitical and hard power concerns, the scope of this chapter's endeavour is much more narrow and modest. As hinted before, it simply purports to frame the US and China trade initiatives as either preserving the *status quo* or driving the change. Imperative for making such evaluations is the induction from the scholars' account what the repercussions of these conducts might be for the multilateral edifice of international trade at any particular moment of, or throughout, the period from 2001 to 2021. Working as common denominators for the large sets of scholarly accounts, the two broad groupings - '*status quo* power' and 'system challenging power' – shall not lead one to the false conclusion that the authors comprising this literature review have chosen to apply them.

Neither that they encompass homogeneous bodies of epistemological approaches. Differences exist not only in terms of methodologies and theoretical perspectives adopted, but also with regards to the very object of the analyses, as they work with different timeframes and stress distinct trade policies and tools. Also, there are among them works that either focused on the trade relations between the US and China or devoted attention solely to one of the actor's undertakings.

This chapter is organised in the following straightforward manner. It begins by briefly outlining the concepts of 'system challenging' and '*status quo*' powers in the context of an international order ever more susceptible to the US and China volitions and national interests. Then it sorts out the selected studies in accordance with each terminology and each trade powerhouses insofar as the highlighted features concerning their trade policies allow to make the correct association.

As will be further revealed in deeper details, of all the trade practices singled out for drawing conclusions on whether or not the US or China assume the role of a guarantor or a *pariah* for the multilateral trade regime, PTAs have usually been put aside or treated as of having marginal importance. Furthermore, when they do become the spotlight of the analyses, no account has gone as far as advancing a compelling explanation that would allow one to understand better their intrinsic relationship with both countries' stance in the

global trading system. Thus, identifying these loopholes as some of the deficiencies of the current academic literature is a necessary first step towards achieving the ultimate goal of broadening and deepening the knowledge on the subject.

2. System-Challenging Power

A system-challenging power is not a new concept in academic *parlance*. Historians have long been using it to refer to rising political entities that share a timeless common fate. According to this macro-history of the rise and fall of great powers, the newcomers would embark on a quest to replace the declining power in its hegemonic position, unleashing disruptive forces to the *status quo* of the international system (Kennedy, 1987). Long before China had begun adopting capitalist and free-market policies, from Deng Xiaoping's Four Modernizations onwards, the Chinese nation was already a target of discursive practices that socially constructed its identity of a 'threatening and uncivilized other' with regards to the 'self-virtuous American nation' (Turner, 2014).

Attention to what has become a 'China Threat Theory' heightened in Western academia with John Mearsheimer's account that China's emergency is highly likely to set the country on collision course with the United States, with the possibility of interstate war always looming (Mearsheimer, 2010). The pessimistic scenario that he claims to anticipate does not come as a surprise coming from someone who espouses an offensive Realist worldview, in which states are not only 'security seekers' but also 'power maximisers' in the international anarchic system (Mearsheimer, 2001).

Such state of constant insecurity in the international stage goes much in tandem with the reasoning laid out by the realism's Hegemonic Stability Theory (Callahan, 2005; Turner, 2009). Within this conceptual framework, the stability and peace of the international order is assured by a hegemon willing to fulfil its responsibility as a provider of public goods to the international society (Kindleberger, 1973; Gilpin, 1987; Krasner, 1976). The lack of an undisputable hegemon, where no state has predominant power, would otherwise be most conducive to instability and closure in economic relations, a state of affairs likely to trigger disorder and conflicts (Webb and Krasner, 1989).

More recently, China's ascension to global power, being one of the most striking features of the contemporary international system, explains the prolific usage of the label by scholars and policymakers (Zakaria, 2009). Indeed, the fact that the Chinese state's power has footing on all spheres of manifestation – political, cultural, technological, economic and military – has spurred renewed debates about the threats that it might represent to today's international liberal order. A grim end appeared to have become an ever more credible fate as the phenomenon known as Thucydides' Trap¹ gained momentum when Donald Trump and Xi Jinping ascended to the highest rank of political hierarchy in their countries, spreading out fears that their bilateral quarrels over trade and technological supremacy would soon translate into an all-out war between the ruling and the rising power (Allison, 2017).

As those scholarly accounts that depict China as a menace to the international order, there have been studies on the Chinese foreign trade policies that also cast on the country similar judgements about its behaviour. By the same token, there are pundits who seem to disqualify US official discourses brimmed with allegations of a government fully aware of its duty to play by the WTO rules (Bergsten, 2002; Destler, 2005; Chorev, 2009; Ashbee and Waddan, 2010; Chukwumerije, 2010; Bhandari and Klaphake, 2011; Cooper, 2011). According to these accounts, the US have at times contributed to undermine the global trading system by taking measures that jeopardise some of the quintessential principles of trade law, as happens when it breaches rules on non-discrimination, for instance (Bergsten, 2002; Destler, 2005; Chorev, 2009; Ashbee and Waddan, 2010; Chukwumerije, 2010; Bhandari and Klaphake, 2011; Cooper, 2011).

Pundits also share the view that the US might have swerved away from its traditional role as the main guarantor of the multilateral trading system from the day Donald Trump sworn in as the 45th US President and laid down a series of unilateral blows against open trade and China in particular (Elms and Sriganesh, 2017; Nolan, 2017; Irwin, 2017b). Hence, instead of acting out as a *status quo* power, the US would have eventually turned out being a system-challenging one with respect to the trade regime, treating international trade as a

¹ Graham Allison coined the term in reference to Thucydides' classical book the History of Peloponnesian War, in which the Athenian historian asserted that the war between Athens and Sparta had an unavoidable destiny since the rise of the former would be perceived as a direct threat to the survival of the latter (Allison, 2017).

zero-sum game, that is, for one country to win, the other has to lose (Elms and Sriganesh, 2017; Nolan, 2017; Irwin, 2017b).

2.1. China as a System-Challenging Power to the Multilateral Trade Regime

China has a poor record when it comes to complying with WTO rules and observing the fundamental principles on which the WTO agreements are based – non-discrimination, openness, reciprocity, fairness and transparency. Too often, China flouts the rules to achieve industrial policy objectives (USTR Report to Congress on China's WTO Compliance, 2022, p. 8).

Blustein (2019) explains the current schism in the US and China's trade relations as well as its deleterious effects on the trade community by identifying the main features of the Chinese political economy model that have not been rightly addressed by the WTO normative framework. He argues that China is a disruptive force for the trade regime not because its trade practices often breach the multilateral rules and norms. The reasons are to be found in the way its economic system has evolved over the years without being closely followed by a legal reform that could ward off China's idiosyncracies (Blustein, 2019).

Among the Chinese particularities, Blustein (2019) singles out the following as the chief drivers for today's schism with the US: i) the blurred line between private and governmental institutions in dealing with trade issues; ii) the lack of transparency of its domestic rules; iii) the biased and ineffective competition policy rules; iv) the flawed judicial system which, on commercial matters, is not trustworthy due to its embroilment with politics; v) the complexity of the legal system, with many overlapping administrative laws, making it impossible to conform to WTO's principle of transparency; vi) the state responsibility in dealing with commerce, rendering key commercial decisions to be driven by government *diktat* instead of market forces; vii) the recurrent manipulation of the renminbi value against other currencies for achieving competitive edge *vis-à-vis* trade partners.

Mavroidis and Sapir (2021) also call attention to the enduring expectation of the WTO incumbent members that the Chinese state capitalist economy would undergo a structural transformation with the reforms required by the WTO core multilateral treaties and by China's Protocol of Accession to the trade body. The fact that these reforms have never fully materialized, as many have predicted they would, stirred up general disappointment as far as the state's grip on the economy is concerned. Tensions in the

trading system would thus be a direct consequence of the size and nature of China's economy, but they basically narrow down to two specific complaints: the unfair trade advantage enjoyed by Chinese state-owned enterprise (SOEs) and the forced technology transfer deals that the Chinese companies – both private and SOEs – impose on foreign business as a prerequisite to grant access to the Chinese market (Mavroidis and Sapir, 2021).

Hopewell (2021) contends that the menace posed by China to the US-led liberal economic order has not been forged by a counterhegemonic policy or movement against the core principles and norms pertaining to the multilateral trading system. It rests on the economic leverage and expertise the country has amassed over the years since its accession to the WTO in 2001. Power and knowledge have enabled China to negotiate in a more even ground with the US, a combination that has brought about a new *modus operandi* for the multilateral trade negotiations by levelling the playing field between the actors involved (Hopewell, 2021).

Framing the clash in a more technical vein, it would reflect a dispute between two WTO core principles: reciprocity, and special and differential treatment (Hopewell, 2021). While the US wants to make the rules universal and reciprocal as the basis for every new agreement, China advocates its right as a developing nation to be exempt from some of the obligations when they fail to meet the country's interests. Notwithstanding the slightly different attitudes, the two countries behave in both liberal and mercantilist fashions according to the specific context. They become more willing in making trade concessions and push forward new agreements when there is a comparative advantage for their goods and services, but resort to a mercantilist approach when there is a threat to vulnerable sectors of their economy (Hopewell, 2021).

Roberts, Moraes and Ferguson (2019) also turn to balance of power as having a causality implication for actors' behaviour, without further specifying China's trade policy instruments that accompanied this phenomenon. Hence, the systemic level is at the centre of their analysis, as it seeks to explain how the international economic order has undergone a transition from a post-Neoliberal to a Geoeconomic order. The key driver for the establishment of the latter is the ascendancy of China as an economic and political power capable of counterbalancing American interests (Roberts, Moraes and Ferguson, 2019).

This reconfiguration of the actors' material capabilities explains the reordering of the systemic forces affecting international trade and investment. The relative departure from economic to security concerns would be the outstanding feature of the new 'mindset' underpinning the most recent systemic change (Roberts, Moraes and Ferguson, 2019). As a consequence, a new logic of dealing with international trade and investment have come to the fore as protection and protectionism become intermingled (Roberts, Moraes and Ferguson, 2019). Consistent with this *modus operandi*, national security reasons have turned out to be justifiable means for states adopting exceptional measures in the current trade and investment regimes (Roberts, Moraes and Ferguson, 2019). Epitomizing such trend are the trade restrictions that the US and China imposed to each other during the Trump and Xi Jinping era.

Rather than tackling a multifaceted Chinese reality, other scholars have focused on a single issue. Autor, Dorn and Hanson (2013) contended that China's export-led growth model is doomed to cause harm to job markets elsewhere, having its worse impacts on the US unemployment rate, due to surges in imports made in China. Stiglitz and Charlton (2007) as well as Mattoo and Subramanian (2011) advocated for actions against China at the WTO as a means to cope with currency manipulation intended to boost competitiveness in global markets, despite warnings from other specialists claiming that this particular subject is out of the legal scope of WTO rules (Staiger and Sykes, 2010). Lardy (2019) undercores the low level of openness of Chinese services markets, when compared to its trading partners and its own goods markets, which have undergone substantial tariff reductions since 2001. Mavroidis and Sapir (2021) add to the list of complaints China's refusal to adhere to the WTO Agreement on Government Procurement, which led to a shared disappointment among the business community expecting to take part in what has been estimated as a very profitable market (Whalley and Chen, 2011).

Usually overlooked by grand analyses seeking to assess the links between China's trade policies and the multilateral trade regime, PTAs have featured in the relevant study conducted by Synder (2009). In it, the author underscores that the legal content of the Chinese PTAs is not a plain copy of the WTO core agreements, in spite of being largely fashioned in conformity with WTO law. In his view, these trade agreements have become a recurrent means by which the Chinese governments realize their foreign trade policies since the Doha's multilateral talks came to a halt, compounding a trend that might lead up to a

cascade of overlapping and possibly contradictory rules, as other leading trade countries carry out the same strategy (Synder, 2009). It is worth noting that Horn, Mavroidis and Sapir (2009) also highlight similar resulting effects caused by US and European Community (EC) PTAs. Furthermore, these instruments seek a multitude of objectives that go beyond trade liberalization, notably safeguarding the Great China project, security, the provision of energy and natural resources, technology transfer, investment protection, and international and regional geopolitical endeavours (Synder, 2009).

As for other works that also address China PTAs, the most common subjects are the motivations behind the country's decision to sign, propose or join the agreements, the dynamics of the domestic politics in shaping their content, and the similarities and disparities with agreements sponsored by other trade players (Jiang, 2010; Ratliff, 2006; Santiso, 2007; Zhao, 2004; Chantasawat, 2006; Killion, 2005; Zhang, 2005; Lampton, 2001; Lu, 2000; Greenwald, 2006; Kuik, 2005; Sheng, 2003; Zha, 2002; Cheng, 2004; Song and Yuan, 2012; Li and Hu, 2013).

2.2. The US as a System-Challenging Power to the Multilateral Trade Regime

The U.S. puts domestic laws over and above international rules, disregards the multilateral trading rules and the concerns of other members, defies and challenges the basic principles of the WTO, and cripples the normal functioning of the WTO. These actions seriously threaten the existence and development of the multilateral trading system (China' Report on WTO Compliance of the United States, 2023, p. 5-6).

Academic discourses based on empirical evidence have also conveyed negative criticism of the US trade practices. During the Bush and Obama's years in office, these critical assessments were mostly directed at domestic regulations on trade-related issues (Bergsten, 2002; Destler, 2005; Chorev, 2009; Ashbee and Waddan, 2010; Chukwumerije, 2010; Bhandari and Klaphake 2011; Cooper, 2011). Usually taking the form of unilateral retaliatory measures against other countries and state aid rolled out to specific economic sectors or interest groups through governmental programmes, these domestic policies would be clear examples of the mismatch between official discourses and practices in light of the US appraisal for economic liberalism, in general, and for the open-trade system, in

particular (Bergsten, 2002; Destler, 2005; Chorev,, 2009; Ashbee and Waddan 2010; Chukwumerije, 2010; Bhandari and Klaphake, 2011; Cooper, 2011).

Moreover, hard evidence from these studies have laid bare the arrest of trade policy decisions by partisanship and lobbyist disputes over the approval of national legislations or policy guidelines, which often do not go in tandem with the WTO legal system (Bergsten, 2002; Destler, 2005; Chorev, 2009; Ashbee and Waddan, 2010; Chukwumerije, 2010; Bhandari and Klaphake, 2011; Cooper, 2011).

Hopewell (2021) claims that previous US administrations have already had a stake in jeopardizing the functioning of the global trade regime, and this trend is likely to continue in the years following Trump's administration. In looking back at the stalemate that prevented Doha's mandate from coming into fruition, for instance, the author blames part of the failure on the American negotiators' lack of flexibility, for not being sufficiently skilled at making the right concessions to the emerging economies (Hopewell, 2016). Nevertheless, it is worth noting that the principal cause for the Doha's paralysis, just as for the crisis affecting the neoliberal project of boosting open trade worldwide and promoting a harmonic multilateral normative framework, is to be found in the overall shift in the balance of power toward the Global South, notably Brazil, India and China, *vis-à-vis* the US and the European Union (Hopewell, 2016).

According to Nolan (2017), Irwin (2017b) and Blustein (2019), the depiction of the US as a trade player undermining the global system is mostly associated to Trump administration. A blunt criticism is directed on the 'America first' governmental strategy for having contributed to the erosion of the multilateral trading system on basically three fronts: by eschewing the institutional means available to WTO members to negotiate new multilateral agreements, by shunning the Dispute Settlement Mechanism to solve trade disputes, and by adopting an unilateral and mercantilist approach that not only fed protectionism, but also thwarted the plans of American industries to outsource manufacturing (Blustein, 2019).

For Roberts, Moraes and Ferguson (2019), this mercantilist turn that the US has taken since the beginning of Trump's presidential term is a clear-cut expression of the Geopolitical order, as security and economic issues converge and become intertwined, aggravating the aforementioned hardships that the multilateral trading system faces.

The decoupling of the Sino-American economic interdependence is a concern that Bown and Irwin (2019) acknowledge as being part of the grand strategy underpinning Trump's foreign trade policy. In their view, it would be a mistake to simply evaluate Trump's economic nationalism through the adoption of protectionist measures, such as lavishing tariffs on Chinese imports (Bown and Irwin, 2019). In fact, it would entail a much more comprehensive project of nationalizing the US supply-chain to bring back jobs from overseas, notably from China and Mexico (Bown and Irwin, 2019).

These scholars pinpointed the following unilateral decisions that would have already severely harmed international commerce and, specifically, the workings of the WTO: 1) the waging of a trade war with China; 2) the withdrawal from the Transpacific Partnership Agreement; 3) the forcible renegotiation of the North American Free Trade Agreement (NAFTA) and of the US-South Korea PTA, which ended up straining the American relations with traditional partners; 4) the imposition of higher tariffs on steel and aluminium; and 5) the bypassing of WTO customary rules when blocking the appointments of judges to the WTO Appellate Body, raising fears that a dysfunctional adjudicatory system would propel complaints between states turning into full trade wars (Bown and Irwin, 2019).

Horn, Mavroidis and Sapir (2009) carried out a comprehensive study on the US PTAs by comparing the legal content of fourteen of these agreements to the equivalent number of PTAs underwritten by the EC. Their findings make the case that the proliferation of PTAs is a phenomenon of high concern for the survival of the current multilateral trade regime, given that some of them, particularly the ones sponsored by both actors, present provisions that deal with regulatory issues that often are at odds with the interests of developing countries (Horn, Mavroidis and Sapir, 2009). Containing more legally binding provisions with a regulatory scope than the EC PTAs, the US agreements are doomed to cause more unfairness in trade relations and are likely to strain the relationship between multilateralism and these alternative means to it (Horn, Mavroidis and Sapir, 2009).

Abbott (2004) underwrites this criticism by arguing that the US PTAs negotiated during the Bush administration contained investment clauses that granted greater access for the American service sector, an outcome that had been initially pursued at the multilateral level, but soon abandoned due to the developing countries' fierce opposition at the WTO Doha Round. In the same vein, Chorev (2009) stressed that stronger IPRs made their way into the same bilateral agreements as the US had the vantage position of exerting

more leverage in one-on-one negotiations. According to Trommer (2017), these institutional changes in the global trade governance architecture would correspond to a 'thin' institutionalism on the rise, whereby a rules-based system is being overtaken by a power-based one, much like the old GATT *à la carte*, with the US PTAs assuming a critical role along such process.

Among the US's alternative means to the multilateral trading system to which pundits have paid significant attention is Obama's major trade policy bid: the Transpacific Partnership (TPP) (Herrerros, 2011; Lewis, 2011; Barfield and Levy, 2009). Commonly, there is the claim that the megaregional-agreement represented an attempt to forestall China's plan to establish its leadership in Asian-Pacific regionalism. This counterbalancing manoeuvre, which was broadly manifested in Obama's pivot to Asia, was set to reassure the American economic ties with countries in the region, eschewing Chinese influence over the rules governing not only trade, but also domestic issues (Herrerros 2011; Lewis 2011; Barfield and Levy, 2009). These accounts also express the concern over the TPP becoming a new benchmark for rules and norms at the expense of the WTO normative framework.

Kennedy (2013) makes other considerations when evaluating the positive and negative aspects of the TPP. On the one hand, he acknowledges that the initiative could serve as an alternative mechanism for spearheading the process of creating new norms and rules for trade-related disciplines that have not yet been the subject of consensus in several multilateral rounds of negotiation. On the other hand, he asserts that the content of the treaty is far from being unanimously uncontroversial, which is a point also highlighted by Horn, Mavroidis and Sapir (2009).

Manifestly problematic in the TPP legal text was the existence of normative provisions set to override the public interest, as the deeper rules on IPRs would imply (Kennedy, 2013). These TRIPS-plus provisions in the TPP had also been the concern of Gleeson, Lexchin, Lopert and Kilic (2018), whose study discredits the beneficial implications of these IPRs for the developing countries members.

Furthermore, Kennedy (2013) claims that the decision to leave China out of the TPP would have unintended consequences. It would not only strain the Sino-American relations, but also compel the Asian power to chart its own course of fashioning bilateral and regional trade agreements as a counterbalancing movement (Kennedy, 2013). Should this happen, there would be a boost to the ongoing proliferation of PTAs worldwide, which already defies

one of the WTO's core pillars – the most-favoured-nation principle – and undermines the multilateral trading system mainly due to trade deviations (Kennedy, 2013).

Despite Trump's later decision to withdraw the US from the TPP, it is interesting to take note of the scholar's warnings on the likely negative causal effects between PTAs and the fate of global trade governance, a concern drew from the pioneering work of Jagdish Bhagwati (1995) on the subject, which led to the conceptualization of the *spaghetti bowl* phenomenon (Kennedy, 2013).

3. Status Quo Power

The 'China Threat Theory' has elicited a critical tide of academic analyses ascribing a much more benign role to China in the international order. This has not just been a Chinese backlash to fend off negative criticism from the West for the purpose of indulging national pride. Indeed, a cohort of Western scholars have shared the common understanding that China actually behaves much like a *status quo* power, whose intentions and actions are unlikely to incite harmful consequences to the current international system (Johnston and Ross, 2006; Shambaugh, 2005; Shirk, 2007; Johnston, 2008).

These arguments rest on evidences indicating that the Chinese authorities have learnt how to reap the benefits of a more constructive engagement with international regimes, at least when they have proven useful in propelling economic growth and curbing self-isolation (Johnston and Ross 2006; Shambaugh, 2005; Shirk, 2007; Johnston, 2008). Additionally, even among Realist scholars, one comes across points of view casting doubt on Mearsheimer's prediction of the inevitable bellicose clash between China and the United States, since hard proof has yet to support the claim that deep-seated hostilities are doomed to escalate towards that end (Glaser, 2011).

As for other accounts advocating China's benign stance, Callahan (2005) contends that the 'China Threat Theory' has served well to unify discursively a whole array of texts imbued with an anti-China rhetoric, with the purpose of forging a Chinese identity through a process of plain refutation. These rebuttals would not only be a counterattack on the US, Japan, India and Southeast Asia's critics – known for being the authors of the most harsh opinions – but also a performative action of creating a sense of national attachment and

belonging, rather than local, class, ethnic, or gendered (Callahan, 2005). Instead of just praising the Chinese tradition, material capabilities and economic achievements, there have been efforts to disqualify foreign criticism in a way of bringing about the image of China as a peaceful and responsible rising power (Callahan, 2005).

If this deliberate strategy has also been in use to assert China's stance in the global governance of trade remains an open question. What one can definitely be assured of is the existence of works that assign a much more amicable and less controversial profile to China as a trade player in the multilateral arena, as will further be shown.

In the case of the US, several scholarly accounts have underscored its role as being overt supportive of the international organizations that give shape to the Western system of global governance (Ikenberry, 2006; Nye, 2019). As the chief creator and founding member of both the United Nations and Bretton Woods institutions, the US has largely been keen on safeguarding the international system that came into existence in the wake of the post-Second World War (Ikenberry, 2006).

Fast forward to the present, the same resolution to preserve the stability of an open and rules-based international order has not faded away (Nye, 2019). The updates and overhauls that took place over time notwithstanding, the bulk of the international rules and institutions crafted under the US leadership continued being regarded as the linchpin for a possible *Pax Americana*, in spite of the skepticism that reigned in during the 1970s (Ikenberry, 2006; Nye, 2019). Positive appraisals concerning the US role in the international order, as one that is indispensable for both economic prosperity and world peace, returned in full-swing with the end of the Cold War and the subsequent dissolution of the Soviet regime (Ikenberry, 1989; Krauthammer, 1991). The confidence on the unipolar world under the aegis of the US was such that encouraged some to praise the *status quo* to the point of even declaring the end of history and the US-style democracy the only political system for others to adopt (Fukuyama, 1989; Mahbubani, 2018).

When it comes specifically to the multilateral trade regime, some experts share the view that the US foreign trade policies have been mostly designed and implemented in accordance with the WTO multilateral framework. Even when failures in complying with the rules are pinpointed, the misdoings were largely seen as exceptional and tailored to achieve a specific goal at a time, falling short of severely harming the whole trade community and

putting at risk the foundational principles underpinning the regime (Irwin, 2017a; Schott, 2004).

Yet favourable opinions seemed to almost vanish when the object of the analyses turn to the trade policies enacted during the Trump administration. In fact, if the US has ever assumed the role of a *status quo* power in previous governments, as some arguments would suggest, the same brand no longer seemed to correspond to the *ethos* guiding most decisions – not only on matters related to trade, but also to broader issues – in the Trump’s era (Irwin, 2017b; Nye, 2019). A deeper look into these and other historical facts is provided below through a variety of scholarly vantage points.

3.1. China as a *Status Quo* Power to the Multilateral Trade Regime

China has fully participated in the various work of the WTO, actively participated in reform of the WTO, and committed itself to supporting the WTO’s greater role in further opening up and enhancing development, and strengthening the authority and efficacy of the multilateral trading system (China’ Report on the 2021 WTO Trade Policy Review, 2021, p. 14).

Scott and Wilkinson (2013) revisit the literature on ‘China Threat Theory’, that is, the assumption that China’s rise will inevitably harm the stability of the economic and geopolitical international order. As outlined before, within the trade realm, this rationale means that the country will tend to behave as a ‘system challenger’ to the multilateral trade regime. Taking part in the debate, however, Scott and Wilkinson (2013) present a different account for the first decade of the Chinese membership at the WTO: rather than purely disruptive and aggressive, China’s participation in the trade body has been mostly constructive. The more assertive role the country has taken at the WTO from 2008 onwards goes in tandem with China’s process of institutional learning and socialization throughout this period, they contend. As the empirical evidence shown in their work suggest, China’s assertiveness has actually been akin to the one pursued by other members as they become more confident and acquainted with the formal and informal rules of the WTO (Scott and Wilkinson, 2013).

It is worth noting how Scott and Wilkinson’s (2013) argument differs from the one espoused by Hopewell (2021) with respect to the outcomes stemming from the accumulation of expertise by China over the years as a WTO member. Indeed, for the first

two scholars, the learning process had led to a stiffer defence of national interests without necessarily translating into a stance of challenging the *status quo*, whereas, for the latter, it has triggered animosities among powerful players, notably between China and the US, which has become a major threat to the liberal trade order. These differences rest a great deal on Hopewell's account of the relational dynamics of the actors' power at play.

Another benign account on China's involvement with the trade regime is set forth by Zeng and Liang (2015). As much in light with other works, the authors stress China's deep ties with the world economy as an assurance against grave legal violations, the kinds of which capable of provoking normative upheaval in the multilateral trading system (Johnston, 2003; Kennedy, 2012; Zeng and Liang, 2015). China's entry into the WTO is an eloquent signal of its willful intention to embrace the trade rules-based system (Johnston, 2003). The benefits globalization has brought about by boosting Chinese exports and by placing the country at the centre stage of global production networks, despite the government's tight control over domestic market, are objective facts that increase China's opportunity costs if it decides not to behave as a *status quo* actor (Zeng and Liang, 2015).

Kennedy (2012) also argues that the Chinese global engagement reveals a default *modus operandi* of a 'status quo' power. Like Blustein (2019), but contrary to what his findings reveal, Kennedy (2012) refers to key features of China's domestic political economy and the particular way they intersect with global governance institutions to justify the Chinese pattern of behaviour. By and large, China's dependency on industrial policies to promote rapid economic growth makes it reluctant to pursue or support deep reforms for most of the global regimes, being the financial regulation a clear exception. The benefits the country and its elites have already reaped from the Chinese WTO membership are reminders that it could be too risky to deviate from a pathway that has proven to be successful, a point also stressed by Zeng and Liang (2015).

Alongside Scott and Wilkinson (2013), Kennedy (2012) also contends that China's increasing enmeshment with global trade governance would make the country to embrace more fully the norms and operational procedures through the unavoidable socialization and learning process that would occur along the way.

Lanteigne (2019) and Shambaugh (2013) share the view that China became an active participant of the multilateral trading system over the course of its first decade as a WTO member, mostly by acting on behalf of developing countries in favour of special and

differential treatment as well as by standing out as one of the main litigators in the WTO Dispute Settlement Body. For the country's more active engagement with the system of global trade governance to occur, China had to soften its criticism on international institutions, which no longer were seen as mere safeguards of Western and capitalist interests, but as platforms which could advance the country's strategic objectives in the long term (Lanteigne, 2019; Shambaugh, 2013).

Other scholars resort to China's record as a respondent in WTO trade disputes to showcase the country's profile as a responsible member. Mavroidis and Sapir (2021) point out that China still lags behind other major trade players, such as the US and the European Union (EU), in terms of the total number of complaints brought to the WTO Dispute Settlement Mechanism for allegedly not complying with the multilateral agreements or with its Protocol of Accession. Within the same comparative perspective, the record as a defendant in WTO litigation would still be in favour of China even if it were hypothetically an original member (Mavroidis and Sapir, 2021). Compounding the Chinese profile, the authors recall that China has never refused to implement final decisions whenever it was found guilty, just as there was never a case in which an original complainant had to request authorization to adopt countermeasures (Mavroidis and Sapir, 2021).

As already mentioned before, few studies sought to correlate China's stance in the trade regime with its PTAs. Song and Yuan (2012), Li and Hu (2013), and Jiang (2010) accounts are among these exceptional cases. In common, these studies shed light on the Chinese strategy towards trade agreements. Song and Yuan (2012), for example, underscore China's quest for opposing American interests in their attempt to lead Asian regionalism. By examining some of the US and China PTAs' legal content, they argue that there is a struggle over which state will define the rules on commerce and economic integration in the region (Song and Yuan, 2012).

What is more relevant for defining China's role: their findings reveal that the Chinese PTAs contain fewer advanced provisions that would either deepen or expand the normative content already enshrined in the WTO core multilateral agreements, hence exhibiting more convergence with the multilateral legal framework than the American treaties (Song and Yuan, 2012). Additionally, China would subscribe to a flexible approach when negotiating PTAs with a view of enticing other partners to join in, as certain autonomy for defining and

implementing domestic policies would be assured to the signatory parties (Song and Yuan, 2012).

After following the negotiation process of some of these agreements, Li and Hu (2013) have come to the conclusion that China's strategy prioritizes its 'neighbourhood', crafting legal provisions that would meet the economic needs of developing countries. Jiang (2010), on the other hand, asserts that Beijing's overall political and economic goals do not differ much from other trade players when engaging with PTAs, being the only few exceptions the pursuit of stable supply of natural resources, along with market economy status, and the commitment to *daguo fengfan* (big country morality).

Against opinions emphasizing the existence of a Chinese template for bilateral and regional trade agreements, or its seemingly coherent strategy in this regard, Jiang (2010) contends that domestic interests – usually expressed through fierce bargaining between protectionist forces and liberalizing groups – are often at play in curbing China's autonomy in the PTAs policy making. Thus, unless Chinese leaders deliberately opt for suppressing the interest of a particular economic sector in the name of national interest, rent-seeking behaviour and power distribution among elites are drivers for defining PTAs contents (Jiang, 2010).

3.2. The US as a *Status Quo* Power to the Multilateral Trade Regime

We remain committed to upholding a fair and open global trading system – one that follows through on our partners' longstanding commitment to conduct economic relations with a view to raising standards of living, ensuring full employment, and promoting sustainable development (US Report on the 2022 WTO Trade Policy Review, 2022, p. 4).

Positive critiques of Bush and Obama's trade policies seldom refer to the full gamut of the decisions taken in this domain. Rather, scholars usually highlight specific aspects of these policies when assessing objectives, actions and outcomes. Evaluations underscoring even partially successful results became notoriously rare among credible academic circles as the studies shifted the focus from those two administrations to address Trump's engagement with global trade.

Eichengreen and Irwin (2008) argue that, like any other US president since Frankling Roosevelt, the Bush's administration – which spans through the period of 2001 to 2009 –

stood up as an outspoken defender of an open trading system and trade liberalization as efficient means for achieving economic and foreign policy goals. Chorev (2009) sustained that this was utterly pursued until the WTO multilateral talks came to an irreversible deadlock, forcing the US to reassess its strategy by basically embracing bilateral and regional trade arrangements as second-best options to implement the American trade agenda.

Much in tandem with the Machiavellian adagio 'the end justifies the means', Bergsten (2002) conceived of the protectionist measures undertaken at the outset of Bush's first presidential term as the distasteful medicine needed to galvanize bipartisan support around the congressional approval of the Trade Promotion Authority². Such achievement combined with the USTR's heralded objectives of striking new trade agreements in the bilateral, regional and multilateral levels represented the rebirth of the US trade policy, bringing back a formula that proved highly successful throughout the American history in the post-World War II era (Bergsten, 2002).

A tempering of support for the Republican trade programme known as 'competitive liberalization' are most commonly found among US-based authors (Feinberg, 2003, Schott, 2005, 2006). Bergsten (1995, 2002) has also interpreted this sequential form of liberalization, for which the bilateral, regional and multilateral venues work in a complementary fashion, as a way of securing trade agreements without necessarily being detrimental to the WTO rules. The expectation was that the bilateral and regional venues would push for a successful conclusion of the Doha Round by generating a 'competitive liberalization' that would compel PTAs non-members to either join the trade arrangements or to adhere to a broader agreement later on (Bergsten, 2002).

For Steinberg (1998), Cooper (2004), Destler (2005) and Schott (2004, 2006), regional and global liberalization initiatives are mutually reinforcing strategies that deliver optimal outcomes for the global trade community. The reason for this hinges on the very same argument that generally resonated in the American official discourses at that time, in which these arrangements are often framed as stepping-stone for a further universal liberalization, thereby functioning as mechanisms for the trade body to avoid a future decay (Steinberg, 1998, Cooper, 2004, Destler, 2005 and Schott, 2004, 2006).

² A US trade legislation that grants power to the Executive branch to negotiate trade agreements without being subject to congressional amendments along the process of negotiations with its foreign counterparts (Irwin, 2017a).

Against the background of the current Sino-US trade clashes, Chorev (2009) states that Bush's trade policy merits positive criticism for its handling of an alleged Chinese protectionist stance against the US semiconductor industry. At least in this particular matter, the US avoided deploying unilateral measures by recurring to the multilateral stage instead, filing a case at the WTO over China's abusive tariffs on imported semi-conductors (Chorev, 2009).

Resembling the arguments endorsing the virtuous prospects of Bush's PTAs, favorable opinions with regards to Obama's years were mainly cast on the administration's active sponsorship of the TPP and the Transatlantic Trade and Investment Partnership (TTIP) agreements (Hufbauer and Isaacs, 2015; Griffith, Steinberg and Zysman, 2017). Accordingly, both mega-regional trade agreements are portrayed as an ultimate salvation for the paralysis facing the multilateral trading system, which has been allegedly undermining one of the WTO's core functions: the creation of new rules for contemporary pressing issues related to international trade (Hufbauer and Isaacs, 2015; Griffith, Steinberg and Zysman 2017). Without being able to advance American interests in the multilateral setting, these normative instruments would be a telling alternative for the purpose of buttressing the global trade system and promoting a liberal agenda in two prominent economic and geopolitical regions for the US.

4. Concluding Remarks

Acknowledgments must be made on the limitations of working with dichotomous categories that resemble Weberian ideal types. This analytical approach inevitably misses out nuances and, therefore, always runs the risk of lending itself to simplification and/or reductionism. Nonetheless, its weaknesses are abated by its inherent attributes for coping with the conundrums of complex social phenomena. For the goal of this chapter, it has proved useful as a means of making sense of a variety of scholarly accounts and organising the selected literature according to an analytical standpoint.

This literature review drew on the classic debate about the role of China and the US in the contemporary international order to frame the analytical focus solely on their stances in the multilateral trade regime. It has been shown that no consensus prevails in academia

over how one should interpret the Chinese and American trade practices and decisions on trade-related matters from 2001 until 2021. Consequently, the ideal type – *status quo* power and system-challenger power – that best captures the behavioural patterns of each trade power is contingent not only on the actions underscored by these studies, but also on how one should evaluate the implications of these policies for the global trade regime. In this vein, clashes of different narratives exist not only within official discourses, as it is already expected, but they are also identified among experts, pundits and scholars.

Regardless of which label scholars assign to China, how the specificities of the Chinese political economy play out in the country's decisions on matters concerning foreign trade policy has been abundantly discussed. The majority of these works drew conclusions on China's stance in the global trade governance based on the sheer level of compliance with WTO rules, its WTO Accession Protocol and the rulings enacted by the WTO Dispute Settlement Mechanism.

In the case of the US, some level of cacophony is also identified. Trump's American First policy has almost automatically converted the two previous administrations into outright supporters of the WTO rules-based system. Although his exceptionalisms carry almost all the burden for claims that the US has been a disruptive force in the system of global trade governance, there are pundits who have also stressed other instances at which the country has acted as a villain towards the trade regime during both Bush and Obama presidencies. For instance, while some authors mention the lack of flexibility in welcoming the demands of the developing world throughout the Doha's set of meetings, which ultimately led to a gridlock of the multilateral negotiations, others have underscored the protectionist barriers disguised as trade remedies or national security measures in defiance of the WTO legal framework.

A great deal of the academic studies on the critical elements of China and the US trade policies leaves aside the engagement of both states with PTAs. Thus, their conclusions only go as far as providing an incomplete assessment of how one should understand the role that each state assumes in the realm of global trade governance. Despite their incompleteness, the complementary and distinct evidence derived from these diverse accounts supports the claim that neither China nor the US neatly fits into either of the two categories.

While laying bare the Chinese PTAs' most common features, the selected studies dealing with these accords essentially sought to understand the motivations driving China's decision to take part in these restricted trade arrangements and unveil the interconnectedness between their legal content and the workings of Chinese domestic politics. Positive or negative accounts varies according to whether China's contribution to the 'noodle bowl' phenomenon helps to undermine or strength the multilateral trade regime.

In essence, similar arguments surface the academic works on the US PTAs. Their main concern has been to shed light on the relationship between regionalism and multilateralism, which basically goes back to the 1990s debate revolving around the conceptions of 'building blocks' or 'stumbling blocks' for referring to the bilateral and regional trade agreements and how they relate to the trade regime.

In other words, those in favour of them argue that PTAs work as steppingstones for a broader trade liberalization that, at a later phase, takes place at the multilateral level. Conversely, those who emphasize the negative aspects argue that the proliferation of these agreements would only further distance the WTO from its pivotal role, hence contributing to the 'noodle bowl' phenomenon. This phenomenon, characterized by normative confusion and trade diversion, poses challenges to strengthening global trade governance. Apart from this, empirical evidence have indicated some level of voluntarism from the part of the US in its attempt of becoming the regulator of global commerce by eschewing multilateralism as a means to meet its own national interests.

It is the goal of this thesis to provide new analytical lenses and incremental empirical evidence for interpreting the stance of China and the US in the trade regime exclusively through their engagement with PTAs. Fullfiling such objectives would mean to fill in the gaps left untackled by these studies. More precisely, these loopholes manifest themselves in two ways. Firstly, by the lack of a robust methodology other than qualitative approaches that usually assess the extent to which PTAs differ one from another in terms of their legal content by simply identifying two types of rules – WTO-plus and WTO-extra rules – and the effects derived from them – the deepening or expansion of the WTO normative framework. Secondly, by the absence of a theoretical or conceptual framework that hinder further knowledge regarding how the bilateral accords affect and define the behavioural patterns of

the two states in the multilateral trade regime, ultimately paving the way for new insights about the prospects of regime change.

As the next chapter will explain in fuller details, the envisaged contribution to that vast array of scholarly accounts will hinge on substantive improvements deriving from the adoption of two complementary methodological approaches. The first consists of applying *Jaccard* distances and/or indexes to measure the level of similarity among the selected Chinese and American PTAs as well as between the bulk of their normative provisions and the WTO rules. The second refers to the adoption of a qualitative approach premised on a conceptual framework – the embedded liberalism compromise – with the purpose of enlightening what do these differences and similarities actually mean for the role that each of both states play in the multilateral trade regime, at least with regards to certain trade areas.

Chapter 2 – Methodological and Conceptual Frameworks

1. Methodologies

In a broader sense, there are two methodological approaches to empirically study the design of PTAs. The first corresponds to the more traditional qualitative text-analyses, whereby treaties are compared to each other either by taking the entire scope of the texts or subsets of their normative contents. It varies how one showcases the findings and results of the comparative analysis, but a common way of doing so is by building up a table of contents, where commonalities and innovations are identified and pinpointed. The second way of carrying out empirical studies on treaty design is by employing a quantitative methodology, which is usually more efficient for comparing a larger set of legal texts. But differences do not rest solely on quantity and the toolkits that each approach present, as both of them might also serve different purposes and aim to achieve different goals, often related to how one poses the research question.

1.2. Text-as-Data as The New Frontier

With regards to quantitative approaches, there have been major developments in the empirical analysis of PTAs design over the last decade. Improvements have been made since the early works that relied on binary classifications by assigning either 0 or 1 to a PTA according to whether it was found or not in an interstate dyad. Traditional hand-coding made their way afterwards, bringing about new insights and paving the way to the semi or fully automated methods that have been able to treat PTA texts as data. This new breakthrough has allowed the possibility of scaling up the amount of information for empirical investigation on treaty design, and boosting the accuracy, efficiency and robustness of comparative analyses on the contents of PTAs (Alschner, Seirmann and Skougarevskiy, 2017a).

Alschner, Seirmann and Skougarevskiy (2017a) have chronicled this lineage of the quantitative analyses on PTAs texts. Overall, they point out a trend towards a more

comprehensive and fine-grained examination of these agreements' design. Seminal works applying hand-coding date back to Horn, Mavroidis and Sapir's (2009) comparative study between the U.S. and the European Union's PTAs that cuts across 52 subject areas according to their normative content, whether they comprise WTO-plus or WTO-extra norms, and their legal status, whether they are enforceable or not upon the parties. Other works followed suit and went further in expanding the empirical basis as more trade agreements fell into scrutiny, being the study done by Ruta, Hofmann and Osnago (2017) a case in point, as they managed to increase the mapping by bringing into their analysis all the PTAs notified to the WTO until 2015. More recently, it is worth mentioning the Design of Trade Agreements (DESTA) project, in which researchers and contributors compared more than 600 PTAs across over 100 content variables. As Alschner, Seirmann and Skougarevskiy (2017a) rightly contend, theoretical and analytical differences notwithstanding, these works have been valuable for academic and policy purposes not only for being able to provide new insights, but also for opening up new avenues for research on the causes and consequences of different treaty designs (e.g. Dür, Baccini, and Haftel, 2015; Pauwelyn and Alschner, 2015; Felbermayr, Aichele, and Heiland, 2016; Baccini, Pinto and Weymouth, 2017).

Hand-coding has proven to be an extraordinary tool for capturing nuances in treaty design, mainly because experts on the subject could best computers in distinguishing meaningful content from what is mere variation on form. However, researchers have also come across with limitations and shortcomings along the way, as hand-coding has revealed itself as being very laborious, expensive and time consuming. Also, its empirical investigation has a less analytically overarching scale due to resources barriers that curb the number of variables that can be coded and later applied to new treaties and other variables. Moreover, hand-coding is mostly a deductive enterprise whereby researchers need to identify the content variation that they want to investigate before coding (Alschner, Seirmann and Skougarevskiy, 2017a).

New possibilities then came about when empirical researchers in the social sciences, aware of the hand-coding limitations, began to explore the semi or fully automated means of content analysis. This collective effort ultimately culminated in the birth of a new field often dubbed as 'text-as-data' research (Grimmer and Stewart, 2013; Gentzkow, Kelly and Taddy, 2019; Alschner, Pauwelyn and Puig, 2017) 'computation social science' (Lazer *et al.*, 2009) or 'digital humanities' (Berry, 2012) (Alschner, Seirmann and Skougarevskiy, 2017a).

In common, they have all benefited from the advances in computer sciences to process larger amount of textual and social data. As Alschner, Seirmann and Skougarevskiy (2017a) stress, these innovations, coupled with the standardised language of legal texts, brought about promising application of text-as-data analysis for the empirical study of PTAs, as works that applied rule-based key word searches (Manger and Peinhardt, 2017), similarity measures (Alschner and Skougarevskiy, 2015), and machine learning deployments (Alschner and Skougarevskiy, 2016b) have already proven capable of presenting distinctive empirical findings in this regard.

Alschner, Seirmann and Skougarevskiy (2017a) advocate that text-as-data approaches have three advantages over hand-coding. The first is the speed at which texts are analysed, provided that they are in a machine-readable format, making them highly efficient for drawing conclusion on treaty design variation. The second advantage concerns the versatility with which scholars can work with them, as the approaches and data could be replicated across different projects as well as analysed through different disciplinary lenses. The last advantage, which is closely bound to the second one, is the possibility of inductively finding out patterns and other interesting features on legal texts that have not been previously predicted, as *ex post facto* discoveries.

1.3. Textual Similarity Analysis

There is a handful of methodological toolkits among text-as-data approaches. Which one is more appropriate in providing empirical findings will depend on the research question that scholars pose. Alschner, Seirmann and Skougarevskiy (2017a) give a few examples of how these approaches can target different goals. According to them, dictionary methods are of great use for distinguishing semantic nuances that grasp the essence of text contents by referring to words with negative or positive connotations. Supervised machine learning is more appropriate when dealing with data to be hand-coded first as a sample and later run automatically to code other treaty features (Alschner, Seirmann and Skougarevskiy, 2017). On the other hand, unsupervised machine learning is perfectly suitable for identifying cluster of legal texts that present higher or lower level of similarity. It is to this text-as-data method and approach to which I now turn.

Textual similarity is a simple and very intuitive text-as-data method. It rests on the straightforward notion that overlapping language is an accurate proxy to similar PTA contents. Accordingly, incongruence in the language level implies heterogeneity and variation in treaty design. The specificity of legal texts only makes the use of textual similarity more suitable for empirical endeavours, since there is an appeal for them to be overly uniform and standardized (Alschner, Seirmann and Skougarevskiy, 2017a). Indeed, treaties hinge on a common technical language that avoids stylistic cacophonies that might leave room for unintended interpretation, thus, putting the appraised juridical notion of predictability and legal certainty among contracting parties into jeopardy (Alschner, Seirmann and Skougarevskiy, 2017a). This is no less true in the case of PTAs, where governments regularly use templates (or 'boilerplates') for new treaties they propose and sign. Even when one verifies certain level of innovation, it usually only diverges slightly from the previous agreed formula (Puig, 2013). Furthermore, the WTO core multilateral agreements serve as a legal benchmark for bilateral and regional trade agreements, whose language and structure bear much resemblance with the content found in the former's legal texts, and with which WTO members are expected to comply (Allee, Elsig and Lugg, 2017).

The merits and convenience notwithstanding, textual similarity is not a methodological approach completely saved from limitations and flawlessness. As Alschner, Seirmann and Skougarevskiy (2017a) assert, similarity is a concept that has to be understood in a relational sense, in which the comparative perspective and context cannot be overlooked. Thus, it is simply difficult to fully grasp what dissimilarity really means in the legal and political sense when its assessment is not backed up by any theoretically based concept that sheds light on treaty design. Moreover, text incongruence not always goes in tandem with meaning variation, as some choices of language usage might have relevant legal implications, while others have neutral consequences (Alschner, Seirmann and Skougarevskiy, 2017a).

All these reasons suffice for making the argument that textual similarity as a text-as-data method should also be combined with other methodological approaches if better empirical findings from the analysis of textual similarities and differences were to be assured. In short, as textual similarity is not a perfect proxy for legal similarity, a more in-depth and thorough analysis ought to take into account a chapter, an article or even a word level of language comparison, so that from the differences and similarities in the use of

language one could extract the real legal implication of their respective meanings (Alschner and Skougarevskiy, 2016b).

1.4. Mapping US and Chinese PTAs Landscape

Before explaining how textual similarity will be applied to the comparative study between the U.S. and China's PTAs, first it is necessary to present the dataset that comprise the agreements of this study as well as their main features.

1.4.1. The Dataset

Part of the empirical analysis for this study will immensely benefit from the works of the creators and contributors of the so-called Texts of Trade Agreements (ToTA) project³. As its name suggests, ToTA is a full text corpus of preferential trade agreements that have been annotated and transformed into a machine-readable XML format. This corpus has been built upon other major dataset: The World Trade Organization Regional Trade Agreements Information System data (WTO RTA database), which is known for being the primary repository of preferential trade agreements, with an open access on the WTO's website⁴. Despite carrying the name 'regional', it should be noted that the WTO defines RTAs as 'reciprocal trade agreements between two or more parties' (WTO Website, 2022).

By the time the ToTA project came out, the WTO dataset contained close to 450 preferential trade agreements that the WTO members had notified to the organization, having all of them been signed between 1948 and 2015. It involved 202 signatory parties in total, with nearly 60% of these agreements having already been in force back then, and the remaining either awaiting ratification or having been replaced or suspended. Of that list, 414 were in English full texts, 33 in Spanish and one in French (Alschner, Seiermann and Skougarev, 2017).

³ This project is a collaboration between the following institutions: United Nations Conference on Trade and Development, the Graduate Institute Geneva, the European University at Saint Petersburg, the University of Ottawa, the RTA Exchange, and the Inter-American Development Bank.

⁴ <http://rtais.wto.org>

The WTO RTA database encompasses four types of PTAs: 1) ‘customs union’⁵; 2) ‘goods free trade agreements’⁶; 3) ‘services FTAs’⁷ (designated in the RTA database as ‘economic integration agreement’); and ‘partial scope arrangements’⁸. To arrive at the machine-readable texts, the developers of the ToTA project extracted metadata and full texts from the WTO RTA database, then corrected the deficiencies (missing full texts or incorrect metadata), applied optical character recognition or other tools, removed schedules and annexes, established a two-level hierarchy of treaty elements, and, lastly, created XMLs that were stored in xml/folder that can be found on the ToTA project website⁹. This digitalized textual corpus helps to scrutinize the structure of the agreements for content analysis purposes, and allows for the use of text-as-data methods.

1.5. Making Inferences of Treaty Design and the Jaccard Distance Method

As previously discussed, there are several ways of working with texts in a quantitative fashion. The most common example is to treat a text as a bag-of-words, making possible to calculate the frequency by which different and selected words occur. As much as it might be useful as an analytical tool, there is a clear limitation for comparative studies of treaty design, given that it leaves out fine-grained word order information, which is key for making inferences about the patterns of legal documents (Spirling, 2012).

To illustrate what has been said, the following sentences ‘He is convicted and must not be freed’ and ‘He is not convicted and must be freed’ present the exact word frequency, but they clearly differ from one another meaning wise. Hence, drawing from Alschner and Skougarevskiy (2016a) work, the trade agreements chosen for this study will be divided into its consecutive five-character components. The first phrase ‘He is convicted (...)’ would thus be break down into ‘He_is’, ‘e_is_’, ‘_is_c’, ‘is_co’, ‘s_con’, ‘_conv’, ‘convi’, ‘onvic’, ‘nvict’, ‘vict’, ‘icted’, whereas the second sentence would be formed by the following components ‘He_is’, ‘e_is_’, ‘_is_n’, ‘is_no’, ‘s_not’, ‘_not_’, ‘not_c’, ‘ot_co’, ‘t_con’, ‘_conv’, ‘convi’, ‘onvic’, ‘nvict’, ‘vict’, ‘icted’. The next step is to calculate the difference between both sets

⁵ Pursuant to Article XXIV: 8(a) of the GATT or Article 2(c) of the Enabling Clause.

⁶ Pursuant to Article XXIV: 8(b) of the GATT or Article 2(c) of the Enabling Clause.

⁷ Pursuant to Article V of the GATS.

⁸ Pursuant to Article 2(c).

⁹See <http://mappinginvestmenttreaties.com/rta/>

of the five-character components that pertain to a given pair of treaty texts. For this, the total number of unique five-character components that appear in both treaties must be divided by the total number of unique five-character components in the two treaties and then subtracted from 1. The result is what is known by a Jaccard distance, which is a common measure of dissimilarity. In this regard, a Jaccard distance of 0 means a textual overlap of 100%, that is, a case where there would be identical treaties. Conversely, two completely different agreements would yield a Jaccard distance of 1, corresponding to a textual overlap of 0%.

1.6. In-depth Treaty Comparison with Jaccard Distances

Jaccard distances might cast doubt about its utility and effectiveness as a method for carrying out comparative analyses. Nonetheless, if guided by the right questions and used for dealing with appropriate cases, it can serve well in providing in-depth analysis of treaty design.

Alschner and Skougarevskiy (2016a) argue that Jaccard distances are of little value when manifested in its pure form. The authors use the example of gene pools to make their point. Although human beings and fruit flies share 60% of the genetic code, it is unlikely that one would assert that there is a high level of similarity between the two species. Also, just as humans' genes overlap more with some species than with others, the same reasoning applies to legal texts. Hence, Jaccard measures of similarities across treaties grouped by certain parameters, and/or on different levels, might reveal surprising patterns and trends.

Moreover, one can attain in-depth analyses by going beyond the comparison on the treaty level. One way of doing this is by narrowing down the scope of the analysis to parts and excerpts selected from the legal texts that ought to be subjected to the same treatment. Thus, instead of comparing entire treaties, a textual analysis can also target specific chapters or articles pertaining to these agreements. Certain types of legal texts, as it is the case with free trade agreements, usually present provisions on the same subject matter under the same headers, which make the comparison much more appealing for the purpose of measuring the level of similarity in a given treaty pair.

1.7. The Application of Jaccard Distances within Broad Areas of Academic Research

The investigation of treaty designs, revealed by similarities, patterns and clusters, has broadened the prospects of new discoveries across different areas of academic research. Alschner, Seiermann and Skougarevskiy (2017a) have shown how this has been achieved and could go deeper into the realms of trade economics, trade politics and trade law. For the case of applied trade economics, researchers are usually concerned about the effects that trade agreements have upon trade flows and, ultimately, on the welfare of producers and consumers that compose societies. Crucial for them are answers to inquiries about which specific PTA design is most likely to boost commerce, or which template is best suited for creating or diverting trade flows among participants. The use of simple measures to detect the presence or absence of PTAs has then given way to questions revolving around treaty designs and the multiple impacts they might have on quantified trade.

No less beneficial has textual similarity also been to the field of trade politics with regards to possibilities of offering fresh insights and empirical findings. What are the drivers and how they influence the diffusion, preservation and innovation of treaty design? What are the factors, actors and circumstances that push states towards adopting or shunning a particular treaty design? These broad inquiries have lately caught the attention of scholars whose researches tap into subjects related to trade politics. It is worth noting that, contrary to questions posed by trade economics scholars, the explanatory power is no longer assigned to treaty design. Indeed, from being treated as independent variables for phenomena under investigation, treaty design becomes the very outcome – the dependent variable – that trade politics researchers want to explain and understand.

Text-as-data analysis is also set to provide new empirical insights for studies that fall into the area of trade law. How the trade regime interacts with other international regimes from a legal perspective is one of the key issues for legal scholars (Pauwelyn, 2004; Simma and Pulkowsky, 2006). Hence debates about whether there is a trend of convergence or divergence among different fields of international law are on the rise. Furthermore, in close relation to this subject matter, there are academic works that have been analysing the relationship between PTAs and the normative framework of the international trade law. For this body of literature, the fundamental assumptions revolve around the debate of whether the *ad hoc* mechanisms function as building or stumbling blocks to the multilateral trading

system. Finally, another academic endeavour for which text-as-data analysis has already made relevant empirical breakthroughs, and it is likely to continue doing so, stems from the studies that have traced the degree of similarities and the structural differences among the content of Bilateral Investment Treaties (BITs) and PTAs' investment chapters (Alschner and Skougarevskiy, 2016a; Alschner and Skougarevskiy, 2016b).

Like it happens with the above fields of study, text-as-data analysis through the application of Jaccard metrics has the potential to make important contributions to the discipline of IR, notably by seeking to understand how state policies affect international regime or systems of governance. The relationship between foreign trade policies and the multilateral trading system is a case in point, and one promising scientific incursion into the intersection of trade issues with IR is to analyse how bilateral and regional trade agreements affect the system of global trade governance. As a result, within the area of 'trade and IR', treaty design ought to be regarded as an independent variable, and the changes and transformation that the international trade regime might undergo the object to be explained or understood.

1.8. Measuring Similarities among US and Chinese PTAs

According to the WTO Regional Trade Agreements database, the US has 12 bilateral trade agreements in force up to date, whereas China is a signatory party to 13 of such trade deals, as of 2023. Out of these 25 treaties, 10 of them have been struck with the same trade partner, meaning there is an overlap between the parties that the US has signed with, and those that China has signed with. With regards to the text-as-data analysis through which I expect to deliver the empirical findings concerning the object of this research, two are the main pathways to be taken when applying the Jaccard similarity metrics.

The first corresponds to the plotting of heatmaps that ought to identify treaty design clusters and patterns not only among the US and the Chinese PTAs, when taken separately, but also between these two sets. The ultimate goal is to provide an objective baseline from which it would be possible to identify the existence or not of a clear-cut strategy concerning the engagement of each state with these alternative means to the multilateral trading system. Do the US and China have a common trade policy towards the content of these

bilateral trade agreements? Put it differently, do the US and China have their own template or model to guide the normative framework of all the bilateral treaties they sign or adhere to? These are fundamental questions to which the plots of similarity levels can provide answers or clues.

Alongside the heatmaps, the second route will lead to a deeper level in the comparative analysis by the creation of Jaccard indexes that would measure the degree of similarity between specific PTAs chapters and their correspondent WTO core agreements. The goal is to provide a tangible criterion to inform how similar is a given PTA chapter that covers a WTO-plus discipline to the WTO multilateral agreement on the same issue. A practical example of how the indexes could be used as a benchmark for carrying out comparisons is by selecting two pairs of agreements that both the US and China have signed with the same trade partner, for instance, US-Chile and China-Chile. Following up the first selection, the next step would be to pick a WTO-plus chapter common to both PTAs, which for this hypothetical case would be the one about 'IPRs'. The comparison to be made between these chapters and the WTO Trade Related Intellectual Property Rights Agreement will yield indexes ranging from 0 to 1, from which it will be possible to draw conclusions about which of these chapters is more similar to the multilateral agreement. The aggregation of more data that builds on this comparison on the chapter level will ultimately provide a substantial empirical base for assessing which of the two sets of PTAs – whether the US' or China's – is more in line with the multilateral normative framework by not substantively deviating from the latter's overall legal content.

1.9. The Limits of Jaccard Distances and the Qualitative Approach

As previously underscored, Jaccard metrics have its own limits as a methodological toolkit for comparative analyses. Notwithstanding its high sensitiveness towards the content of texts by not dismissing word order, it is not completely shielded from misleading interpretations. Thus, a much more meticulous analysis of the semantic nuances that any legal texts might reveal becomes only feasible through the deployment of a qualitative methodological approach. It is only by reading and examining carefully the text from nose to tail (preamble to annexes) that details can be noted, assimilated and, subsequently,

compared against other texts, in order for one to have a more precise and comprehensive account of the similarities and dissimilarities that exist among them.

In this regard, the quantitative approach thus far proposed is a necessary, but not a sufficient condition for bringing about robust empirical results that would leave no room for dubious or uncomplete comparisons. As a result, the adoption of a method based on classical law hermeneutics for analysing legal texts will work as a supplementary tool for comparing bilateral and regional trade agreements. Here it is worth emphasizing that both approaches have their own strengths within the scope of this study. On the one hand, the quantitative method that treats text as data is best suited for working with larger number of cases – the total universe of PTAs signed by the US and China –, and from this selected set of treaties to draw conclusions about the existence of clusters and treaty design patterns among these agreements. Also, as previously pointed out, the use of Jaccard indexes allows for an adequate measurement of the level of similarity between specific PTAs chapters and their correspondent WTO agreements. On the other hand, as it is intrinsically to case studies, the qualitative methodological approach has the vantage point of doing a much more substantive analysis of text contents, although usually restricted to a handful of cases. Its edge lies on being able to pinpoint where the actual dissimilarities occur in a given pair of agreements and, most importantly, to unveil their differences in terms of meanings which might render distinct legal consequences for signatory parties.

1.10. The Hermeneutic Textual Analysis on US and Chinese PTAs

Being that there is a fair number of normative instruments in the proposed time frame (2001 – 2021) – 30 in total (WTO, 2022) – that would render the comparison infeasible if all this dataset were to be included into the qualitative study, it is necessary to proceed with three different selection procedures or ways of circumscribing the research object as well as its elements to be compared.

The first refers to the very trade agreements that make up the research object of the comparative analyses. In this case, the criterion used is based on the logical assumption that the least biased way to identify common denominators and objective elements which differentiate the content of the treaties is to select the US and China PTAs that have the

same signatory party. The US-Korea, the China-Korea, the US-Australia, the China-Australia, the US-Chile, the China-Chile, the US-Peru, the China-Peru, the US-Singapore and the China-Singapore PTAs uniquely satisfy this condition.

Given the vast length of each legal text, the second selection refers to the trade issues that ought to be the object of comparison. As the number of trade areas covered by PTA regulation is overwhelming for the scope of this thesis, the selection was limited to two of these areas – trade remedies and IPRs. The criterion is based on the goal of choosing two trade disciplines known for being pivotal in the Sino-US trade relations. Indeed, trade remedies and IPRs are usually regarded as thorny issues in the trade practices that interconnect both states (Hufbauer, Wong and Sheth, 2006; Moosa, 2012; Simmons, 2016; Jin, 2023). Also key for deciding to work with them was the need to address trade disciplines for which there exist corresponding WTO multilateral rules.

The third delimitation of the research object concerns the need to define a conceptual baseline for attaining a twofold objective: to provide the analyses on the content of PTAs rules with a common and legitimate source of reference for comparisons, and to chart a viable pathway to the evaluation of the US and China's stances in the multilateral trade regime with regards specifically to their engagement with PTAs. As will be further argued in the next section of this Chapter, one way of achieving such goals runs through the employment of the analytical framework encapsulated by the concept of 'embedded liberalism'. For empirical purpose what is most relevant is the prospect of finding out whether the US PTAs rules differ from the Chinese PTAs normative provisions in terms of how their legal content stand to the notion of embedded liberalism.

As noted in Chapter 1, the adoption of this conceptual framework is also poised to enrich previous comparative studies that carried out analyses on the extent to which PTAs differ one from another in terms of their legal content by distinguishing two types of rules – WTO-plus and WTO-extra rules. Despite their invaluable contribution for allowing the verification of two phenomena directly linked to the existence of these normative species in PTAs, respectively, the processes of deepening and expanding the WTO normative framework, I argue that tackling the comparisons through the analytical lens of the embedded liberalism enhances critical assessments on how one might interpret the stances of the US and China in the multilateral trade regime.

1.11. Concluding Remarks

It has been pointed out that one way to improve comparative studies on PTAs legal content is through the adoption of a method that allows systematic and large-N comparisons not only among themselves, but also between these bilateral trade instruments and the WTO agreements, with a view of delivering robust empirical findings on their level of similarity. Text-as-data analysis premised on the use of *Jaccard* metrics does exactly this, making it highly appealing for comparing the US and China PTAs.

Just as it is quite common with other methodological approaches in the field of humanities and social science, text-as-data analyses are not entirely endowed with all epistemological attributes that are set to reveal every aspect of the research object. Since distances and indexes resulted from the *Jaccard* metrics are not able to convey what the level of dissimilarity actually means, when one attempts to figure out what these differences in terms of normative content would reveal, it becomes imperative to complement the quantitative analyses with a qualitative approach more aptly bent on unveiling nuances with regards to meanings and intentions. The section below will set out the conceptual framework that will put into effect such objective.

2. Linking the Conceptual Framework to the Purview of Constructivism IR Theory

This section sets out the analytical baseline for enabling the adoption of a qualitative methodological approach to the comparative studies on the US and China PTAs. As pointed out at the end of the previous section of this chapter, the goal is to provide a complementary methodology to the text-as-data similarity analyses to draw forth supplementary empirical evidence with a view of coping with the loopholes left by the *Jaccard* metrics. Spelling out in another way: the hidden meanings of the PTAs legal provisions that make up what have been framed as textually dissimilar.

The analytical framework draws on the concept of the 'embedded liberalism compromise', which is found in John G. Ruggie's academic article entitled *International Regimes, Transactions, and Change: Embedded Liberalism in the Post-war Economic Order*. The concept itself stems from the theoretical approach developed in that same work, later

renowned for being one of the – if not the – seminal intellectual pieces underpinning the tenets of Constructivism¹⁰ in IR theory (Lang, 2006). Therefore, before actually punctuating the constitutive elements of the embedded liberalism compromise, a concept that cannot be disassociated from the whole theoretical framework to be fully understood, it is imperative to outline the main features of Ruggie's constructivist perspective as well as how it relates to the study on PTAs.

Insofar as any theoretical framework necessarily informs a worldview imbued with epistemological and ontological attributes, hopes are that the reasons for choosing to work with a concept rooted fundamentally in a constructivist paradigm will be understood in light with its potential to provide new insights on the subject matter of this study. In this vein, no universal truth is sought in the sense of ruling out or replacing every alternative knowledge so far construed about how one should interpret the object of examination. Rather, the aim is simply to complement other studies, at least to the extent that it turns out to be possible.

It is commonly said that there is no epistemological unity¹¹ to Constructivism. Variants of this theoretical current coexist, some more attuned to more positivist methodologies, and others more in line with post-structuralist approaches (Barnett, 2005; Reus-Smit, 2005; Wendt, 2010; Peltonen, 2017). In spite of this, paladins of this paradigm do share the premise that the social world, international relations for instance, is always constructed via a shared knowledge that in turn has as its foundation the common use of ideas, values, beliefs, creeds, ways of thinking and practices which create identities and inform interests (Barnett, 2005; Reus-Smit, 2005; Wendt, 2010; Peltonen, 2017). Hence the social world is always in flux, being modelled at all times by human interactions that unravel in a specific historical domain.

For the purpose of showing how the object of this study constitute a fertile ground for the constructivist theoretical perspective, I shall first proceed with a basic definition. As legal texts, PTAs are juridical realities by their very nature, being their fundamental components, such as rules, norms and principles, the main object of analysis of legal

¹⁰ Although Nicholas Onuf has been credited for having coined the term 'constructivism' in his *World of Our Making*, published in 1989, there is no such thing as an undisputable founding father of the theoretical paradigm, at least in the sense of being responsible for the birth of Constructivism (Peltonen, 2017).

¹¹ Alexander Wendt (1999) provides a classification of early IR constructivism as having the following three main strands, along with their respective founding theorists: the modernist constructivism of John Ruggie and Friedrich Kratochwil, the postmodernist constructivism of Richard Ashley and R.B.J. Walker, and the feminist constructivism of Spike Peterson and Ann Tickner.

scholars who frequently evoke them when interpreting their normative meanings. However, the ontological properties of these legal documents also inevitably encompass a historical and sociological essence to which we cannot turn a blind eye if we are to fully understand the permissive structural forces that allow for them to come into existence as well as to continue enduring across time (Finnemore and Sikkink, 1998).

Indeed, as rules of behaviour, laws are enacted by state institutions entrusted with the legitimate authority and are always predicated on a particular configuration of power relations within a given society, whose members' actions are subjected to validation or punishment depending on whether they conform or not to what the legal texts dictate (Bobbio, 2016). This also holds true for international treaties, notwithstanding the peculiarities that distinguish them from national laws because of the nature of the legal order to which they belong. For what is important here, it suffices to stress that, as legally binding agreements between sovereign units, treaties are unequivocally historical and sociological phenomena, hence they lend themselves highly appealing to the purview of Constructivism.

In light with the two-way and interactive process that underpins a Constructivist state-centred approach, I argue that the US and China's bilateral and regional trade agreements ought to be interpreted as outcomes which are mutually influenced, constrained, and determined both by the structure of the international system and by the agency that the units exert within this structure, giving shape to it and being shaped by it at the same time. It is worth mentioning that what I mean by the structure of the international system is simply the distribution of capabilities among states, whereas the agency itself corresponds to their actions, which take the form of discursive or concrete practices (Wendt, 1999).

Furthermore, the interplay between material and ideational forces is central to the co-constitutive dynamics that determine social phenomena, thereby fundamental to understand Ruggie's theoretical approach. The former is a direct expression of the distribution of capabilities amongst agents and can be translated into military and economic power (Ruggie, 1982). These differences of material capabilities might curb or push forward states' actions and they constitute a source for assessing the relative power *vis-à-vis* one another. As for the ideational forces, they refer to the ideas, ideologies, values and beliefs which come into being from within the states and become key for the construction of the

intersubjective meanings that are shared with other agents (Ruggie, 1982). In this regard, they are the principal sources with which the states exercise their agency.

At this point, I shall proceed with two clarifications concerning both the structure and the agency for the purpose of this study. Firstly, a precise qualification of the distribution of capabilities between the US and China, the kind that would attempt to take sides in the debate about the drivers that are responsible for narrowing the gap in terms of relative power between both countries, is fruitless. Whether this is happening because the US declines while China ascends in the hierarchy of the international order, or due solely to a sharp Chinese upward trajectory, is less relevant when there is clear evidence that China has already been able to amass a great deal of military and economic capabilities that one hardly would deny its stance as a powerful state on the international stage (Mahbubani, 2020; Roach, 2022; Jin, 2023).

Pointless for the goals of this study would also be any attempt to determine whether China will become the next hegemon or not in the foreseeable future. It suffices to affirm that China has the means to question the US prominence in the present (Mahbubani, 2020; Roach, 2022; Jin, 2023). Consequently, for the sake of the arguments to be further developed, it is safe to assume that the structure of the international system provides a fairly permissive environment for China's agency, at least in the sense that now there is enough leeway for the country to challenge the allegedly hegemonic endeavours of the US both in terms of soft and hard power.

Secondly, it is not of the intention of this study to dismiss the validity of academic works that have rooted analyses and causal explanations solely on the realms of the national political economies and domestic politics in order to reveal the determinants of the policies oriented towards bilateral and regional trade agreements. Indeed, this break away from the image of the states as impermeable billiard balls, which are only bound to the influence and pressure of external factors, should be welcomed if in-depth investigations of how the material conditions and the decision-making process at the state level have played out in charting the course of the policies adopted, hence the content of the trade agreements. Nevertheless, as much as it is tempting to say that any study on trade policies that does not take into account the multitude of domestic forces is doomed to a failed understanding of the subject matter under consideration, therefore, amounting to a history only partially conveyed, this could lead us to a misleading conclusion for two reasons.

First, as the main subject of this research, trade agreements are hostage to states' decisions, since governments will always have the final word on whether or not the state should propose, sign or adhere to a treaty, regardless of which type of governmental institutions is under appreciation within the spectrum that ranges from a full-fledged authoritarian regime to an ideal democracy.

The second caveat is tributary to the role of ideas ascribed by Constructivism. Accordingly, state actions hinge on a set of ideas that guide and give meaning to them (Wendt, 1999). In addition, these ideas are repository of ideologies, beliefs and values that shape interests and become a crucial element in the social construction of identities (Wendt, 1999). Identifying these subjective elements, thus, is imperative for unveiling the principal motives underpinning state policies. For these ideational forces encapsulate the material conditions and the whole range of domestic bargaining disputes that are decisive in bringing about the content of these policies.

2.1. The Conceptual Framework of Embedded Liberalism

As for how the ideas embodying state-society relations play a role in shaping the design of trade agreements and, consequently, influence the fate of the trade regime, I shall turn to *International Regimes, Transactions, and Change*, where Ruggie presents his conception of the post-Second World War economic regimes, which continues to inspire contemporary academic research and debates across a diverse array of fields of study.

From the broad definition of regime as 'social institutions around which actor expectations converge in a given area of international relations' (Young, 1980), Ruggie underscores two characteristics that any social institution presents, hence any international regime: the fact that they curb the units' discretion in making decisions and manoeuvring freely within the regime's domain, and their intersubjective quality, which derives from the existence of the convergent expectation and the delimited discretion (Ruggie, 1982). In Ruggie's view, international regimes then should not be understood as a simple descriptive inventory of their concrete elements¹², but rather as custodians of what he dubs as

¹² Such as the elements presented in Stephen Krasner's own formulation of international regime as 'principles, norms, rules and decision-making procedures around which actor expectations converge in a given issue-area'

generative grammar, that is, 'the underlying principle of order and meaning that shape the manner of their formation and transformation' (Ruggie, 1982, p. 380).

Three theoretical arguments make up the bulk of the author's formulation. The first concerns the aforementioned 'generative grammar' or, as he also calls it, the structure of internationalization of political authority (Ruggie, 1982). Contrary to the prevailing interpretation which conceives of international authority only in terms of power, Ruggie (1982) adds another fundamental dimension to it, which is the legitimate social purpose. This allows for a more complex depiction of the international economic order and the international economic regimes, as power would define its form, whereas the legitimate social purpose would give meaning to its content. In this sense, one must look at how power and social purpose are combined to project political authority into the international system if we are to arrive at a better understanding of what an international regime really is (Lang, 2006).

Moreover, the legitimate social purpose is intimately associated with a fundamental tenet of Constructivist theory, which Ruggie labels as the 'inter-subjective framework of meaning' (Ruggie, 1982). As a scholar rightly reminds us, this framework is composed of 'constitutive rules' – sets of intentions, beliefs and norms that establish the boundaries of the regulative space within which the actors will operate, or as he calls it 'the rules of the game' (Lang, 2006). On the other hand, the wording 'inter-subjective' encompasses the shared aspect of these beliefs, which ultimately express a collective intentionality (Ruggie, 1982).

The second argument consists of the nature of the relationship between states and the marketplace, which the author contends as being one of complementarity (Ruggie, 1982). The domain of the international economic regimes corresponds not only to the behaviour of the states with one another, but also to their relationship with the market (Ruggie, 1982). Rather than conforming to a deterministic impact, the economic regimes are only able to influence the transaction flows (Ruggie, 1982). As he argues 'these regimes, then, are neither determinative nor irrelevant, but provide part of the context that shape the character of transnationalization' (Ruggie, 1982, p. 387).

(Krasner, 1982). It is worth noting that Krasner's definition is found in the same special issue of *International Organization* on international regimes in which John G. Ruggie had his academic piece also published.

The third theoretical argument developed by Ruggie (1982) concerns the much-debated subject of change *in* and *of* regimes. In a succinct way, he distinguishes a norm-governed from a norm-transforming change. While the former would only mean a reconfiguration in the instruments of the regime, as new rules and procedures are put in place, the latter necessarily implies the birth of another sense of social purpose, which is shared by the units of the regime and likely to unleash a new set of norms and principles to govern the normative framework (Ruggie, 1982). In other words, the change *of* regimes happens when new 'constitutive rules' are put in place, bringing about another intersubjective framework of meaning and revealing a new legitimate social purpose, which replaces old sets of intentions, beliefs and norms shared by their agents throughout the lifespan of the past regime. Should it not happen any replacement of constitutive rule or rules, one could only talk about change *in* the regime, in the sense that updates on the legal apparatus would not have gone as far as a forging a new legitimate social purpose that defines new boundaries for regulative developments (Ruggie, 1982).

Among all the innovative elements that Ruggie (1982) presents in his study on the international economic regimes stands the process of internationalization of domestic authority relations as highly crucial for improving the way we could make sense of the trade policies designed for the states' engagement with bilateral trade agreements.

Drawing on Karl Polanyi's (1944/2001) contribution of how *laissez-faire* liberalism had become England's dominant worldview in the 19th century, Ruggie made his own assessment on the conditions that allowed for the creation of the economic regimes towards the end of the Second World War. According to his account, the Bretton Wood's institutions came about as reflexive of the new shift in the relationship between authority and market, as governments had become aware of the danger and contradiction that an untamed automaticity of the market forces stands to the state's active role in domestic affairs as well as of the need to harness collaboration among governments for achieving an efficient management of international economic transactions (Ruggie, 1982). This was the very essence underpinning Ruggie's concept of embedded liberalism: 'unlike the economic nationalism of the thirties, it would be multilateral in character; unlike the liberalism of the gold standard and free trade, its multilateralism would be predicated upon domestic interventionism' (Ruggie, 1982, p. 398). In this regard, Ruggie singles out embedded

liberalism as the underlying constitutive norm of the multilateral trading system since its inception, when the GATT 1947 came into existence (Ruggie, 1982).

This concept served to demystify the widespread notion that the post-Second World War economic regimes were meant to be purely liberal in nature, rendering every instance of state interventionism to be treated as a necessary deviation from the regimes' bedrock principles and *raison d'être*. In the case of the trade regime, Ruggie points out that the idea of striking a balance between multilateral liberalism and some degree of interventionism in order to secure domestic stability had already been widely discussed in the context of preparation for the International Conference on Trade and Employment¹³. Indeed, as the principles of multilateralism and tariff reduction were repeatedly affirmed along the negotiations, so did the mechanisms to defend from their collateral effects once they came in full swing, such as safeguards, exemptions, exceptions, and restrictions. Designed for the purpose of protecting the balance of payment and a whole range of domestic social policies, these legal provisions¹⁴ not only remained, but also expanded and improved over the evolution of the trade regime (Gardner, 1969).

This notion of the need to strike a balance also pervades the theoretical reasoning that underpins the practice of international commerce. As Ruggie contends, the essence of embedded liberalism goes in tandem with the trade theory of comparative advantage insofar as the pursuit of an international division of labour, which takes a multilateral form and aims at enhancing the gains from trade, does also function as a way of reducing '(...) socially disruptive domestic adjustment costs as well as any national economic and political vulnerability that might accrue from international functional differentiation' (Ruggie, 1982, p. 399). Hence collective welfare is not to be deduced only from the gains and losses to which countries are subject when taking part in international trade, but it also hinges on the ability of the countries to exercise their agency by intervening in situations where the 'invisible hand' fails to deliver its promises across national markets. In this sense, the trade regime has to be a guarantor for the fulfilment of both endeavours.

¹³ The International Conference on Trade and Employment was held in Havana, Cuba, from November 17, 1947, to March 24, 1948, and whose negotiations led to the signing of a charter of an International Trade Organization, which the United States ended up not ratifying the document (WTO, 2022).

¹⁴ A couple of examples of this balance that Ruggie mentions are the possibility for countries to sign PTAs as well as to adopt emergency actions whenever an injury from import competition caused by past tariff concessions threatens to severely harm a domestic producer (Ruggie, 1982).

To sum up, the conceptual framework that I hope will enhance our understanding of the trade policies towards the US and China's bilateral trade agreements – therefore the definition of the very content of these legal trade tools – is based on the general premisses of Constructivism that regard any social phenomenon as being determined by the two-way process that binds together structure and agency. In the case of trade agreements, thus, they ought to be understood as policy's outcomes of the co-constitutive social construction dynamics which derive from both the distribution of capabilities among the states and the way their agency interacts with that same structure mainly defined in material terms – in military and economic grounds.

In order to clarify how these states exercise their agency within the realm of trade policies, I resort to Ruggie's argument about the role played by the ideas that embody the state-society relation. As paramount for the definition of the trade regime's legitimate social purpose, I argue that these ideas are also constitutive of the US and China's trade policies and are reflected in the content of their PTAs. By using the concept of 'embedded liberalism' as a baseline for comparing the countries' approach to PTAs, it becomes possible to determine whether the US and/or China have been coherent with or swerved away from this original concept. This would not only provide fresh insights on the ideational forces shaping treaty design, but also solid evidence for assessing the implications of each approach for the multilateral trade regime.

2.2. The Contemporary Debate on the Embedded Liberalism Compromise and the Challenges to its Survival

The concept of 'embedded liberalism' has motivated scholars in their attempt to interpret not only the main features of the trade regime but also the trajectory since its inception as well as the current challenges that it faces.

Cho (2003), for instance, asserts that embedded liberalism meant the first effort to legally bind together trade and non-trade issues in the realm of the multilateral trade regime. Similarly, Knox (2004) points out that the WTO's mission is to balance the goal of promoting free trade along with other interests. Likewise, Winickoff *et al.* (2005) see the Agreement on the Application of Sanitary and Phytosanitary Measures as an unequivocally expression of the original objectives of the multilateral trading system, in which the pursuit

of free trade shall not prevent actors from accomplishing other goals. Gathii (2001), on the other hand, sustains the argument that neoliberalism and embedded liberalism have always been an integral part of global trade's *modus operandi*, with the latter being currently under threat due to attempts to constitutionalize the multilateral trade regime.

In referring to Ruggie's bargain of embedded liberalism, Kalderimis (2004) examines the impact of the WTO on non-trade values. In short, he argues that harmonization agreements that aim at regulating a non-trade value just to prevent that value from meddling with free trade pose a real threat to the 'contractual balance' of the trade regime. Kalderimis (2004) reasons that this happens because they do not properly address the implicit bargain underpinning the expansion of international economic liberalization since World War II: that the new international agreements would not jeopardize the domestic social safety nets deriving from the New Deal/Keynesian/Social Democratic rationale of the 1930s.

Howse (2002) also predicts a gloomy end for embedded liberalism as he chronicles its process of disintegration in the face of the increasing technocratic ethos during the first two decades of the GATT, and, from the 1970s onward, due to both the ascendant economic neo-Right and those coming from the left of the political spectrum, who became concerned with the prospect of losing all kinds of social protection.

By tracing the consequences manifested upon legal trade scholarship, Lang (2006) highlights three different ways in which trade lawyers have resonated Ruggie's argument about the social purpose of the postwar trade regime in contemporary academic debates: the attempts to destabilize the assumption that the trade regime is built upon orthodox liberalism; the normative assessments of how the regime should be, for which it is crucial to leave behind discussion on the degree of openness, and to replace them with debates about the social purpose that the regime entails; the arguments in favour of recovering the spirit of embedded liberalism, which defend new forms of combining social protection with free trade in the age of globalization.

On the latter issue, Lang (2006) attributes a destabilizing role to embedded liberalism by arguing that the concept broadens our understanding of what the liberal trade regime might be like, given that the constructivist perspective opens avenues for imaginative conceptualizations that would be more in tune with today's pressing issues. In his view, the most insightful aspect of *International Regimes, Transactions and Changes* is to

treat the multilateral trade regime as an intersubjective framework of meaning (Lang, 2006).

As another relevant contribution to the literature of legal trade, Dunoff (1999) unveils the challenges that new issues – such as trade and environment and trade and labour – bring to the core premises of the leading theoretic models that underpin the trade regime. Being one of these models, along with the efficient and collective action models, embedded liberalism is described as a means for safeguarding ‘government’s ability to use macroeconomic policy to preserve domestic stability, but at the same time avoid restrictive trade policies like those that sparked trade wars in the 1930s’ (Dunoff, 1999, p. 750).

According to the author, the cumulative incorporation of new issues into the trade regime has deprived nations of their wide leeway over domestic policy, that is, of remaining shielded from external influence when it comes to the definition of their policies’ content (Dunoff, 1999). These restrictions and constraints that fall upon the regulatory domain of national governments undermine the compromise embodied in embedded liberalism.

This turns out to be even more salient when we think of ‘behind the border’ measures, which have come to the centre of the trade regime (Baldwin, 2016a, 2016b). In addition, the ‘trade and issues’ agenda would have helped to blur the line between domestic from international policies, whose distinction was purposely sought at the outset of the regime formation. For Dunoff (1999), thus, embedded liberalism no longer captures the transformation that the trade regime has gone through, being the reason for why he calls for new understandings to replace it.

The fate of embedded liberalism has mainly caught the attention of economists, as concerns heightened over the effects that globalization was bringing to bear on social protection. Rodrik (1997), for instance, underscored the need to sustain and reinvigorate the embedded liberalism compromise, given that the speed of economic liberalization was not going in tandem with the adoption of domestic policies to cushion the negative implications for the collective wellbeing. Ruggie himself has also revisited his work with the purpose of translating it in light of subsequent structural and contextual changes brought about by the apparently untamed forces of globalization that were in full swing in the late 1980s and during the 1990s.

In this more interconnected world, where old-fashioned trade barriers have been substantively reduced and capital flows have crossed borders more freely, Ruggie (1994)

attributes the real danger for the unravelling of the international trade regime to the growing inability of national governments to live up to their task of securing the domestic social compact through the containment and socialization of the adjustment costs derived from the continuing engagement with post-war international liberalization. In his view, commentators have exaggerated in their assessment on the instruments of the new protectionism of the 1990s, such as the voluntary export restraint arrangements, when referring to them as major obstacles for the promotion of free trade (Ruggie, 1994).

On the one hand, instead of seeing these new trade policies as abnormal trends, and oftentimes, breaches of the WTO norms, Ruggie (1994) regards them as natural and expected responses to the economic openness brought about in a series of multilateral trade negotiations and related dynamics of globalization. 'In short, as trade barriers have come down, governments have become more active in managing the domestic consequences' (Ruggie, 1994, p. 5). On the other hand, although acknowledging their existence, these measures have never been able to keep up the pace and magnitude of market liberalization, at least as witnessed in the so-called industrialized countries, where protectionism had become much less evident than it was at the time the GATT 1947 came about (Ruggie, 1994). In Ruggie's opinion, then, embedded liberalism runs the risk of changing into 'the new disembeddedness' due to two main reasons.

The first hinges on the loss of efficacy of some state policies in managing the negative effects of economic liberalization, boosted by two interrelated phenomena: the booming of global production networks, rendering outdated the notion that trade policy should be devised in conformity with a world in which national ownership and location of production overlap, and the expansion in global integration of capital markets. As for the second threat to the embeddedness attribute of the trade regime compromise, Ruggie underscores the erosion of domestic social safety nets across capitalist countries, which he deems to be partially spurred by the intense competition from low-labour-cost-countries, and by the declining productivity observed within the latter group (Ruggie, 1994).

Ruggie reiterates these points in a later work; however, this time, drawing attention to the challenges that these new historic forces – the globalization of financial markets and production chains – present to developing countries, which are usually deprived of all sorts of material resources, institutional capacity, international aid, not to mention the widespread mismanagement of governmental duties, whereby private interests often

highjack common goods (Ruggie, 2003). All this, Ruggie argues, makes even more difficult to administer the adverse side effects of global market integration and the exposure to it (Ruggie, 2003). So, once again, the author stresses the need for 'embedding the global market within shared social values and institutional practices' (Ruggie, 2003, p. 3). In an anarchic international system, he hopes that cooperation between civil society, business and the public sector will become a promising pathway towards rescuing embedded liberalism from its demise, as is the case of corporate social responsibility (Ruggie, 2003).

Apart from the above material transformation already underway in the last decade of the twenty first century, which thwart governments' capacity to cope with the deleterious effects of globalization, Ruggie (1997) identifies another historic element that has also been responsible for the unravelling of the embedded liberalism compromise: the neo-laissez-faire ideology, with the U.S. at the epicentre of its worldwide propagation.

This ideational force is gaining momentum across capitalist nations and bringing about changes not only to everyday government practices, but also to the mindset of influential segments of population (Ruggie, 1997). In short, as Ruggie's thinking would suggest, this set of ideas and beliefs heralds a new compromise between state and society, which is predicated on the retreat of the former in the name of the allegedly virtuous market. If co-sponsored by other powerful states of the international order, these political preferences, in turn, would have profound consequences beyond the U.S. territory, giving away to new principles, norms and rules that would govern the multilateral trade regime.

Thus, on the future of the grand compromise of the post-war international economic order, Ruggie (1997) favours the birth of a new embedded liberalism that could better deal with the pressing issues arising out of the new *modus operandi* of global markets as well as the organization of productions and exchanges. Although the basic principles underpinning the yet-to-be-strike social contract would remain the same – a combination of multilateral liberalism with domestic interventionism to abate the negative effects of increasingly denationalised market forces – the exact policy ingredients making up this new formula are not clearly revealed by Ruggie.

Notwithstanding the material and ideological forces claiming a 'disembedded liberalism' that would reign in various domains of today's cross-border transactions, it is at least disputable to conceive of the multilateral trade regime as having lost its attributes that made it to commit to the embedded liberalism compromise in the first place. This is

because the institutional role as well as the normative framework of the WTO lies at the heart of the trade regime, in the sense that this international organization embodies the very essence of this regime. Moreover, since embedded liberalism continues to underpin the social purpose enshrined in the WTO binding multilateral rules and principles – as attested by the safeguards, exemptions, exceptions and special treatments that grant states some margin of freedom for intervention in its domestic market – it would be unreasonable to argue the contrary. Unless multilateral negotiations pick up steam to the point of successfully delivering new core multilateral agreements that would herald a new intersubjective-framework of meaning consensually acquiesced by the WTO membership, embedded liberalism will continue to function as a guiding principle for a large host of agents.

For all the reasons punctuated throughout this section, the concept of embedded liberalism confers another robust epistemological layer onto the first methodological approach to the comparative analyses on the US and China PTAs carried out in the next chapter. At this point, it suffices to contend that the concept lend itself as a legitimate benchmark for qualitative studies on the PTA's normative provisions, as it provides a baseline from which one is able to determine whether the PTAs' legal content has embraced or rejected the spirit of embedded liberalism. As pointed out before, this conceptual framework will be employed in two concrete cases, each referring to a specific trade area that is often a subject of regulation in PTAs' chapters and stands out as an issue of highly significance for the Sino-US trade relations, namely trade remedies and IPRs.

Chapter 3 – Text-as-Data Analyses

1. Introduction

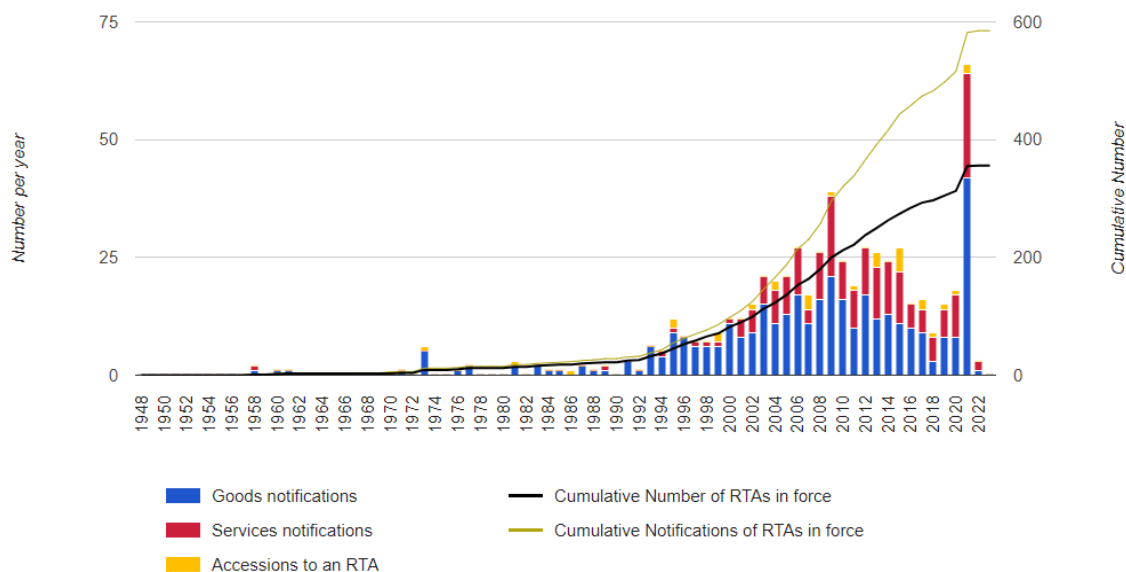
Globalization at large, but particularly the economic interdependence that helped to give shape to this phenomenon, has made trade policy into an even more indispensable tool to foster social welfare (Krugman *et al.*, 2014). Its success as a public policy, however, became ever more an offshoot of the collection of norms and rules that would define the way in which actors should practice trade (Bossche, 2007).

As is widely acknowledged, the enactment of the GATT, in 1947, is the milestone that allowed this regulatory process to occur in a systematic way. This ushered in new opportunities and challenges to public and private actors who wished to maximize their gains and to reduce their losses in global trade (Steinberg, 2002).

From the establishment of GATT 47 to the present day, it is possible to identify two historical phases which generally distinguish themselves by the institutional mechanisms that framed the international trade regulatory dynamic (Bhagwati, 1995). The first phase encompasses the period between the establishment of the multilateral trading system and the 1980s, during which the multilateralism carried out at the GATT 47 negotiation rounds became the *par excellence* method to build the multilateral trade normative framework. While, in the second phase, which begins in the 1990s and continues to the present day, regionalism made great head way as the preferred method for renewing trade rules. The chart below clearly illustrates these two historical trends.

Chart 1: RTAs¹⁵ currently in force (by year of entry into force), from 1948 to 2023

¹⁵ As previously indicated, RTAs stands for regional trade agreements and are defined in the official WTO's website as being reciprocal preferential trade agreements between two or more parties (WTO, 2023).



Note: Notifications of RTAs: goods, services & accessions to an RTA are counted separately. The cumulative lines show the number of RTAs/notifications currently in force.

Source: WTO Secretariat - May 8, 2023

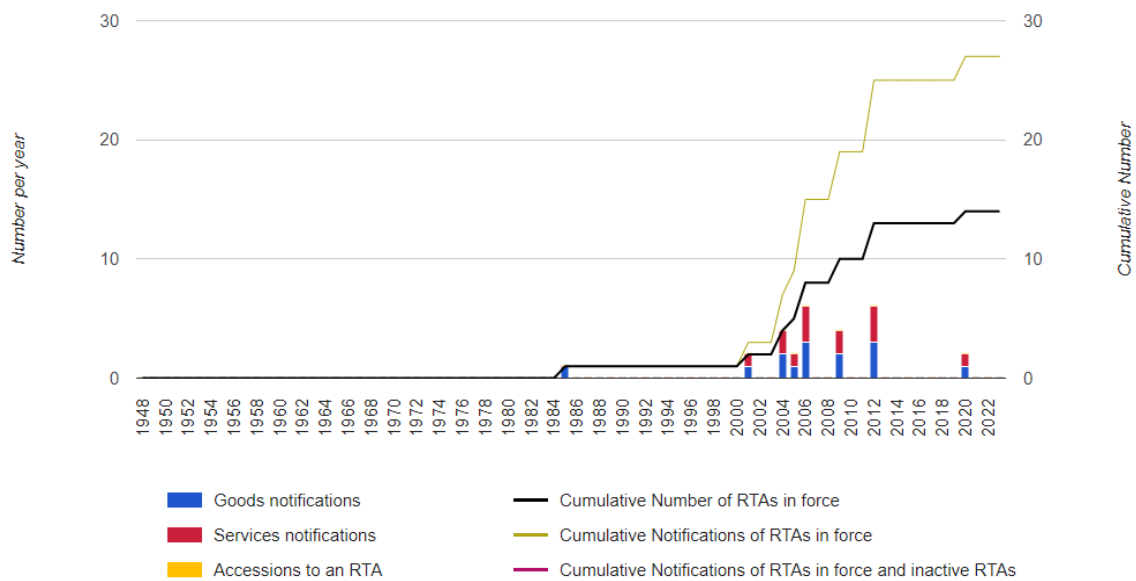
When the negotiations of the Doha Round at the WTO started giving off signals that a consensus would not be reached in the short to mid-term, something which was a source of much frustration for those who believed in the feasibility of approving the multilateral agreements contained in the mandate, the bilateral and regional negotiations were reaffirmed as alternative ways to meet the regulatory needs required by states who were not satisfied with the ineptitude of the so-called Development Round.

This inversion of institutional means, by giving prevalence to *ad hoc* mechanisms, either bilateral or regional negotiations over the WTO, would characterize a rupture of the multilateral trading system. The functional identity given to that organization, understood as a creator and standardization source of the legal framework that regulates international trade, was subjected to serious criticisms, even though there are legal clauses in some of its constitutive agreements which do expressly allow for the establishment of preferential trade groups – for instance, Article 24 of GATT (1994) and Article 5 of GATS (Bossche, 2007; Matsushita, Schoenbaum, Mavroidis and Hahn, 2015).

The result of this fragmentation of the sources of international trade law, a phenomenon which the specialized literature calls *spaghetti bowl* (or *noodle bowl*), has become quite common in various parts of the world (Bhagwati, 1995; Baldwin, 2006). The US and China have not turned a blind eye to this new global trade dynamic. On the contrary,

both actors have been actively engaged with the negotiation of bilateral and regional trade agreements as effective means to realise their trade interests while the multilateral realm continues its progress at a much slower pace.

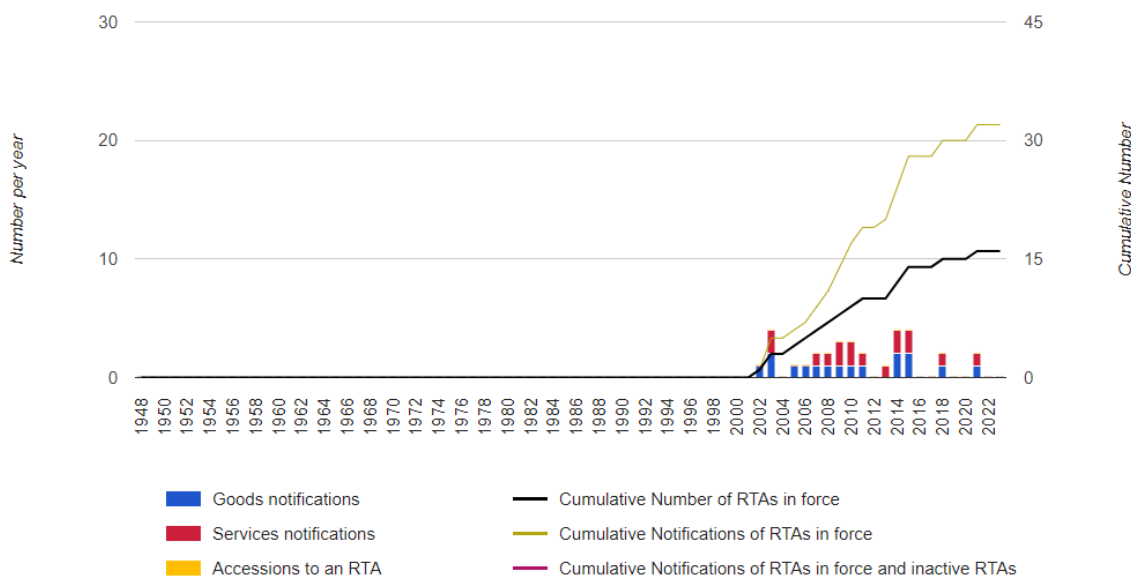
Chart 2: The United States of America (Evolution of RTAs, from 1948 to 2023)



Note: Notifications of RTAs: goods, services & accessions to an RTA are counted separately.

Source: WTO Secretariat - May 8, 2023

Chart 3: China (Evolution of RTAs, from 1948 to 2023)



Note: Notifications of RTAs: goods, services & accessions to an RTA are counted separately.

Source: WTO Secretariat - May 8, 2023

To what extent do their bilateral initiatives differ from one another in terms of their PTAs¹⁶ legal content? Do both the US and China adopt a coherent treaty design or template when negotiating the PTA's normative provisions with their trading partners? Most importantly, perhaps, is to ask which set of PTAs converge more to the WTO normative framework? While the first two inquires are more concerned with the strategies guiding the accomplishments of their trade interests through PTAs, the second question touches on a much more complex area of investigation, which aims to characterize how the US and China stand before the ongoing transformations in the multilateral trade regime.

One way of providing hard empirical evidence that would shed light on the issues raised above is to resort to text-as-data analyses on the legal contents of US and Chinese PTAs. As explained in details before, the *Jaccard* distances correspond to the quantitative method to be employed in the further comparative analyses. In order to do so, this Chapter is basically organised in two major parts. The first will focus on comparisons framing the level of similarity not only within the US and China's own set of PTAs, but also between them. As for the second part, some of the core WTO multilateral agreements will serve as benchmarks for the comparative analyses on the degree of congruence between WTO rules on a given subject area and the PTA's chapters on the same disciplines. Final remarks about

¹⁶ It is worth reminding that PTAs has been treated throughout this thesis as synonym for bilateral trade agreements.

the empirical findings will then follow in the hope to best qualify the engagement of these two major trading powers with bilateral trade agreements.

As will be shown, the first part of the comparative analyses concludes that there is a high level of similarity among the US PTAs. Comparatively, a lower degree of homogeneity prevails among the Chinese set of agreements. These results are indications that the US adopts a template when negotiating PTAs and hardly accepts modification to the legal texts, whereas China follows another strategy that is not fully committed to a specific treaty design. As for the second part, the *Jaccard* indexes concerning 31 PTAs chapters revealed that the Chinese PTAs outstripped the US PTAs in a total of 22 against 9 chapters bearing more similarity to their corresponding WTO multilateral rules.

2. US and Chinese PTAs: A Birds-Eye-View

As this chapter is being written, the US presents a total of 12 bilateral trade agreements in force, two regional trade agreements – the Dominican Republic-Central America-US Free Trade Agreement (CAFTA-DR) as well as the US-Mexico-Canada Agreement (USMCA/CUSMA/T-MEC) – and one megaregional agreement, the Transatlantic Trade and Investment Partnership (TTIP) between the European Union and the US, for which an early announcement had been made, but it ended up being put on ice (WTO RTA Database¹⁷).

Bilateral agreements with the US have been signed with the following states, listed in chronological order according to the year of entry into force: Israel (1985), Jordan (2001), Chile (2004), Singapore (2004), Australia (2005), Morocco (2006), Bahrain (2006), Oman (2009), Peru (2009), South Korea (2012), Colombia (2012) and Panama (2012). With the exception of the US-Israel PTA, all bilateral agreements cover trade in goods and services and receive the double WTO label of free trade and economic integration agreements. The coverage of the US-Israel PTA encompasses only trade in goods and the agreement belongs to the WTO category of free trade agreements (WTO RTA Database).

As of today China has 14 bilateral trade agreements and two regional trade agreements – the Asia Pacific Trade Agreement (APTA) and one with the Association of

¹⁷ As underscored in Chapter 2, the WTO RTA database classifies four types of PTAs: customs union, free trade agreements (restricted to trade in goods), economic integration agreements (which also includes trade in services), and partial scope arrangements (WTO RTA Database).

Southeast Asian Nations (ASEAN) – in effect. Also, an early announcement has been made with the following RTAs: the Cross-Straits Economic Cooperation Framework Agreement (ECFA), a regional mechanism to facilitate trade and investment across the Taiwan Straits, and the China-Norway and China-Republic of Moldova PTAs.

The Chinese bilateral agreements have been established with the following trading partners, ordered in accordance with the year they came into force: Hong Kong (2003), Macao (2003), New Zealand (2008), Singapore (2009), Pakistan (2009), Peru (2010), Chile (2010), Costa Rica (2011), Iceland (2014), Switzerland (2014), Australia (2015), South Korea (2015), Georgia (2018), Mauritius (2021). Each one of these PTAs regulate trade in goods as well as services, and the entire set fits into the WTO categories of free trade and economic integration agreements.

It is worth noting that most of the US and China PTAs became legally binding for their members in the first quarter of the 21st century. This is far from being a simple coincidence. Apart from the failures of multilateralism to deliver concrete outcomes out of the Doha Round of negotiations, some other facts specifically related to both countries' trade policies also weighed in during this time span, as briefly chronicled below.

For the US, the dawn of the new century represented a watershed to understand the country's new course towards a more assertive role in trade negotiations (Lima, 2009). Pressed by the need to find solutions to the roadblocks of the WTO Doha Development Round, the Bush administration redrew the country's trade agenda directives to reflect the principles of the Republican programme named 'competitive liberalization' (Bergsten, 2002; Feinberg, 2003; Schott, 2004). Overall, the new plan gave less emphasis to WTO multilateral trade negotiations and privileged bilateral and regional schemes as the preferred method by which the US had sought to gain more leverage against other negotiating countries (Bergsten, 2002; Feinberg, 2003; Schott, 2004).

After years of an active Republican trade diplomacy, the first term of the Obama administration was marked by a more subdued posture of the US regarding trade negotiations (Lameiras and Menezes, 2018). All signs suggested that the administration's actions were in line with its campaign promises of not following the former administration's trade directives (Bhandari and Klaphake, 2011). However, what seemed like a deliberate rejection of the free trade principles, in general, and of the 'competitive liberalization' doctrine in particular, was subsequently found to be only partly true (Chukwumerije, 2010).

In this sense, at the beginning of Obama's second term, new trade directives suggested that the activism of the former Republican administration would resume, albeit through different legal mechanisms. In lieu of PTAs, the Democratic administration gave preference to negotiating agreements with wider geographic and normative scope, such as the Transpacific Partnership and the TTIP (Lameiras and Menezes, 2018).

According to Shambaugh (2013), the beginning of the 21st century also constituted an important milestone for China's international insertion via trade. Even though trade has been one of the pillars of Chinese growth since Deng Xiaoping established the Special Economic Zones, in the 1980s, and Zhao Zyan revealed the coastal development strategy in 1988, furthered by the 'going global' initiative in the 1990s, the dawn of the 21st century is also a landmark in the history of China's international engagement through commerce (Shambaugh, 2013).

In 2001, China effectively acceded to the WTO, which was symptomatic of the country's more active engagement with the global governance system. For this to occur, China's distrust of international institutions as blunt manifestations of the Western dominance in world affairs had to wane in order to treat them as legitimate means for advancing Chinese interests (Lanteigne, 2019; Shambaugh, 2013). Moreover, opening up to the rest of the world by dismantling trade barriers paved the way for the success of its export-led growth strategy to achieve economic development (Roach, 2022). As the fragmentation of the trade regulatory means intensified over the years, China overcame its distrust of PTAs, making this type of diversification as one of its chief trade directives (Lanteigne, 2019; Shambaugh, 2013).

3. Similarities and Differences among US and Chinese PTAs

As discussed at length in the previous Chapter, textual similarity is a promising text-as-data methodological approach to comparative studies on legal texts. For the present study, it suits the purpose of providing credible estimates on the level of congruence among the US and China PTAs. The empirical results derived from its employment might also reveal relevant information about whether or not these actors adopt certain treaty design to craft their PTAs that come into existence; or, conversely, if they prefer to customize the

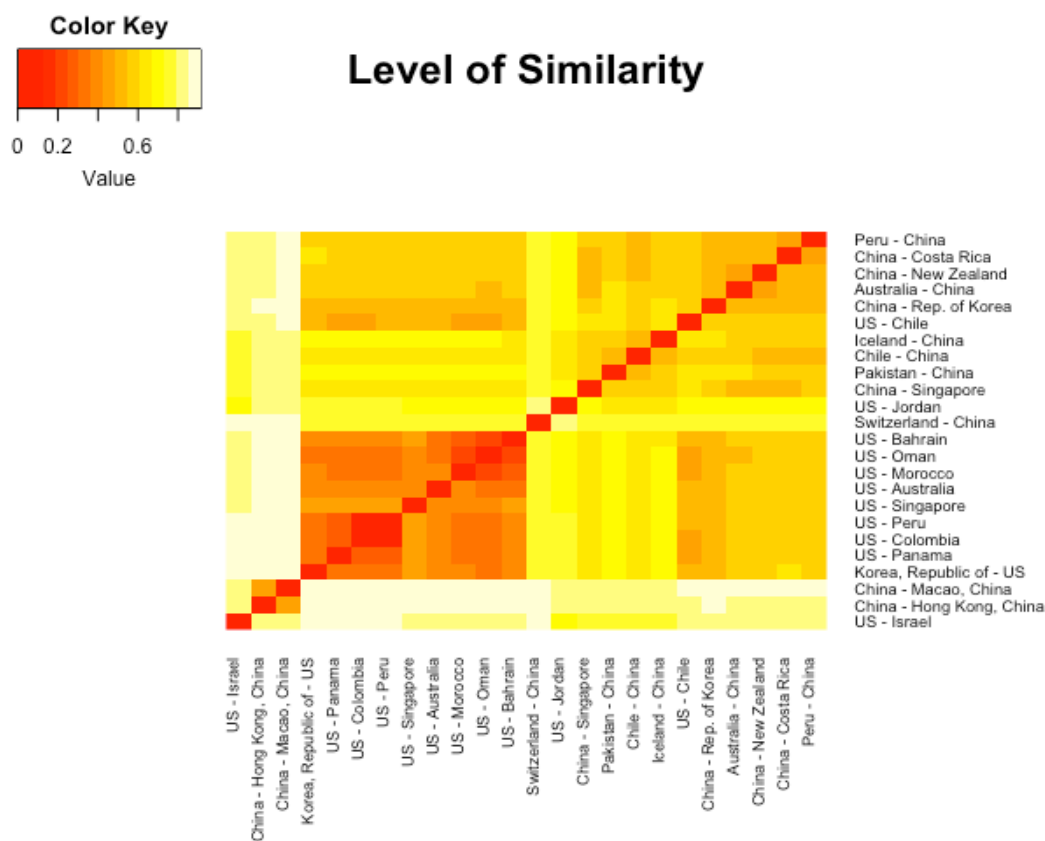
normative content of such agreements depending on the trading partner with which they negotiate.

In order to adequately measure homogeneity or heterogeneity in the language level, the textual similarity approach will hinge on the use of *Jaccard* distances. A total of four heatmaps comprising the PTAs under treatment will then be further provided to showcase the degree of overlapping and disparities among the legal texts. For making such endeavours feasible, this study resorted to computational codings of the *R* software. The scripts containing the *R* codes to generate the graphical representations of the *Jaccard* distances in the form of heatmaps can be found in Annex I.

Once more, the comparative analyses will benefit greatly from the Texts of Trade Agreements (ToTA) project. A key advantage of this dataset on full text corpus of PTAs is the machine-readable XML format of these normative instruments, which streamlines the coding process in *R* programming language. The downside is, nonetheless, the fact that its update went only as far as October 4th, 2017. Hence, any PTA that came into force from this date onwards was not included in the dataset. This has a direct implication for the further comparative analyses as two Chinese bilateral agreements – the China-Georgia and the China-Mauritius PTAs – will need to be excluded from this study for coming into effect later on, in the years of 2018 and 2021 respectively.

Chart 4 presents the first textual similarity comparison. It is based on two sets of PTAs, gathering a total of 24 agreements, evenly divided into 12 PTAs for the US as well as for China. This amounts to almost the sheer number of both actors' bilateral trade agreements. The convenience of having the same number of PTAs on each side is to frame the comparison by plotting a symmetrical heatmap, as can be observed right below.

Chart 4: Heatmap I on the Level of Similarity among US and China PTAs



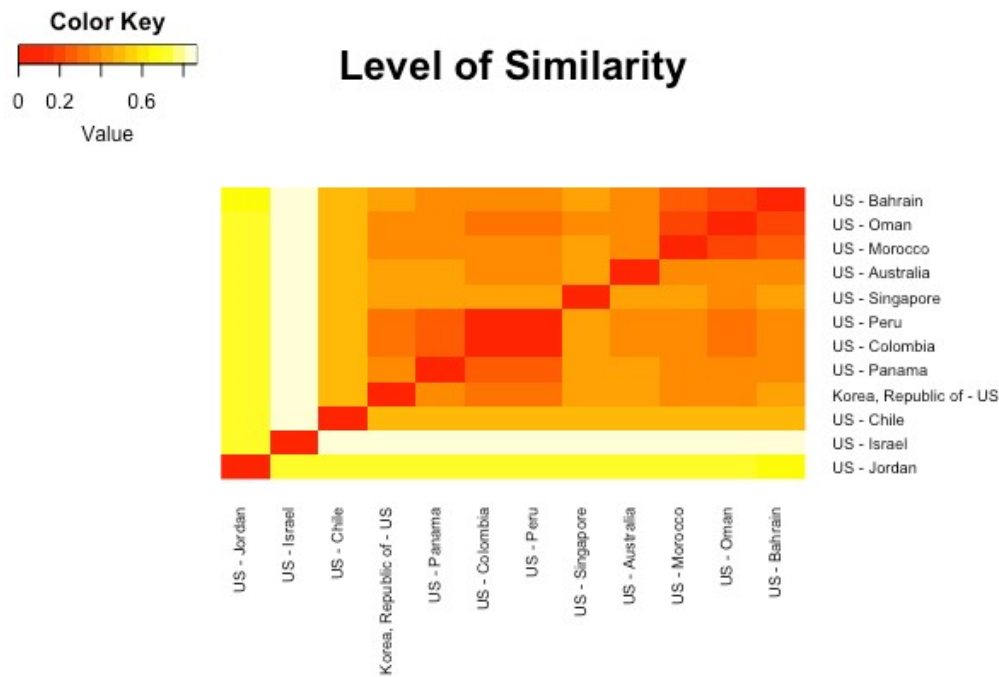
The way to read the above heatmap is as follows. The level of congruence among the PTAs increases as the colour becomes redder, meaning that the *Jaccard index* gets closer to 0. At this point, when the colour is in full red, there is a total overlap between the agreements under comparison. This is the reason for why there are several rectangles in full red alongside the diagonal of the chart as each one of them represents the same agreement when compared to itself, hence attaining the highest possible degree of homogeneity. On the contrary, the level of similarity decreases as the colour becomes whiter, and the *Jaccard index* gets closer to 1, a point at which a complete dissimilarity is verified.

Some conclusions are straightforwardly drawn from that comparison. On the broadest perspective, the low level of similarity between the US and China set of PTAs is compelling. The results thus indicate that their normative provisions diverge to a considerable extent. Another finding worth underscoring is the significant level of homogeneity amongst most of the US PTAs. As the larger rectangular redish spot towards the bottom left shows, the US-Korea, the US-Panama, the US-Colombia, the US-Peru, the US-Singapore, the US-Australia, the US-Morocco, the US-Oman and the US-Bahrain PTAs

bear substantial resemblances among themselves in terms of their legal content. This leaves only three agreements out of this larger cluster, namely the US-Israel, the US-Jordan and the US-Chile PTAs.

The second heatmap (*Chart 5*) was elaborated to avoid any blind spots with regards to the level of similarity only amongst the US PTAs. By narrowing down the comparison to only 12 trade agreements, it thus becomes possible to improve the diagnosis and accuracy of the analyses on them.

Chart 5: Heatmap II on the Level of Similarity among US PTAs



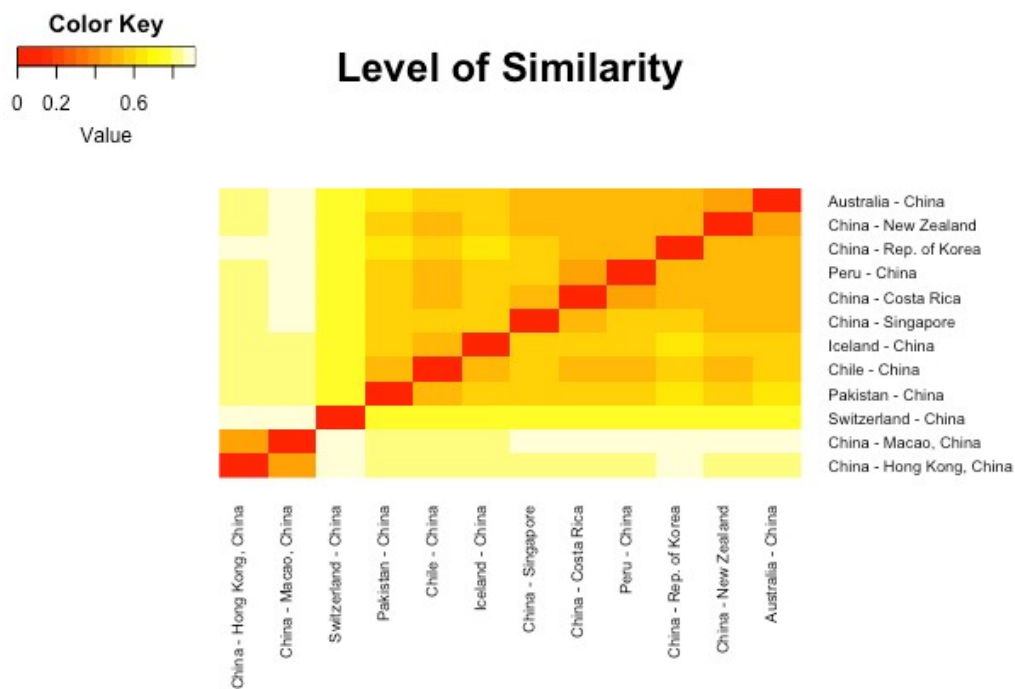
As expected, the above R-plot provides a more nuanced perspective on how each agreement relates to the others in terms of text similarity. Indeed, the redish rectangular area on the top right clearly elucidates that there is a high level of congruence among the US-Bahrain, the US-Oman and the US-Morocco PTAs. At the same token, the degree of homogeneity is even more significant between the US-Colombia and the US-Peru PTAs, which can be spotted at the centre. Conversely, the US-Israel and the US-Jordan PTAs stand out as sharing the lowest level of similarity *vis-à-vis* the 10 remaining US bilateral

agreements. From this second heatmap, it is also possible to assert that the US-Chile PTA cannot be deemed as dissimilar as the US-Israel and the US-Jordan PTAs are with respect to the rest, even though the first agreement does not belong squarely to the PTAs cluster showcasing a higher degree of homogeneity among them.

What elements are at play in the definition of the position of those outliers is an open question that this study does not intend to answer. At this point, it is only safe to assert that the longevity of the US-Israel PTA, which goes in tandem with its restrained scope of economic integration that only entails trade in goods, is surely the reason for the distinctiveness of this particular bilateral agreement.

Unlike the US PTAs, the level of similarity amongst the Chinese PTAs is relatively low. The only exceptions being the China-Macao and the China-Hong Kong PTAs. Again, for the sake of achieving a clearer and expanded viewing of the textual elements shared only among the Chinese PTAs, it was also necessary to plot the following heatmap (*Chart 6*).

Chart 6: Heatmap III on the Level of Similarity among China PTAs

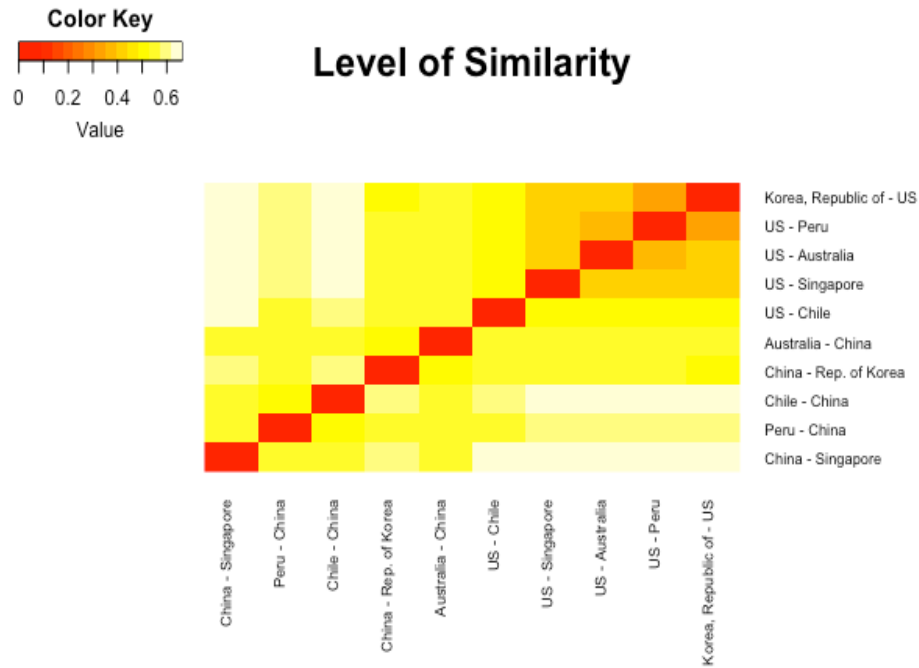


As can be seen, the most outstanding feature revealed by the plot is undoubtedly the low degree of homogeneity among the Chinese agreements, which corroborates the finding already underscored. The greater similarity between the China-Hong Kong and the China-Macao PTAs as well as the high distinctiveness of both agreements with regards to the other Chinese PTAs are also noted. This outcome is no surprise given the special political relationship that both entities have with Mainland China. Thus, the higher convergence between the content of both legal texts might stem from their singular status as Special Administrative Regions of the People's Republic of China, propelling the Chinese negotiators to conceive a similar version of bilateral trade agreement.

Two features are also worth highlighting, since pinpointing them became easier by carefully looking at the third heatmap. The first concerns the standing of the China-Switzerland PTA due to its low degree of overlapping with the other agreements, and the second feature corresponds to the relative higher share of textual similarity between the China-Australia and the China-New Zealand PTAs as well as between the China-Peru and the China-Costa Rica PTAs. The causes driving such convergence could not be unveiled by text-as-data analyses. Finding out would necessarily involve reading the legal texts all the way through. Notwithstanding this certitude, one possible reason lies in the fact that each of those pairs of PTAs entails trade partners located in the same geographic region.

With the purpose of controlling for the direct effects that a diverse set of trading partners could exert upon the final content of the US and China PTAs, the next heatmap restricted the textual similarity comparison to include only the US and China overlapping partners. Even though the corresponding bilateral agreements already featured in the first plot, the possibility of uncovering missed details turns out to be a fair justification for framing the elements of comparison in a different perspective. Accordingly, the heatmap below encompasses the following states with which the US and China have negotiated a PTA: Australia, Chile, Peru, Singapore and South Korea.

Chart 7: Heatmap IV on the Level of Similarity among US and China PTAs with the Same Trading Partner



Once more, the level of congruence among the US agreements is remarkable, whereas amongst the Chinese PTAs the same pattern does not prevail. The rectangular area on the upper-right of the chart, therefore, highlights a considerable level of similarity in terms of language sharing among 4 legal texts – the US-Korea, the US-Peru, the US-Australia and the US-Singapore PTAs. This leaves the US-Chile PTA as the only agreement sharing less similarity within this particular cluster.

The above text-as-data comparative analyses indicate that the US might have fashioned and applied some sort of template when negotiating PTAs. As for China's engagement with bilateral free trade agreements, the same cannot be said due to the lower level of congruence among its PTAs. Indeed, contrary to the US, China does not seem to have adopted any treaty design that would serve as a beacon to the negotiations on the content of the trade agreements.

A plausible explanation is that the Chinese government is more keen on adopting a flexible way in negotiating those kind of agreements, hoping that it might strike a better deal in a case-by-case strategy. This *ad hoc* way of dealing with the negotiations of PTAs could also mean that the country is more inclined to accommodate the demands of its trade partners, privileging political interests over pure economic gains (Song and Yuan, 2012; Li and Hu, 2013).

The engagement of the US with these alternative means to the multilateral trading system seems to be rooted in different assumptions. The empirical findings support the argument of the existence of a clear-cut strategy towards the definition of the normative framework of the bilateral agreements. If this is the case, the US would put forward a stricter position at the negotiating table, yielding much less manoeuvring space to its trade partners to bargain over their interests when these would directly confront the former's understandings on what are unremovable normative provisions. Surely, this only weakens the ability of other countries to strike a better deal with the US because to them the 'take it or leave it' is the only bargain left.

Such assumptions do resonate strongly with some pundits opinions that have long voiced their contempt for the NAFTA model: a template that has locked in other US PTAs, thereby failing to take into account asymmetries among trading partners and curbing the policy space of the least developed and developing countries (Wise and Gallagher, 2011).

The causes that have led the US and China to choose their own course of action are not the objectives of this study. Even if they were, these inquires fall out of the scope of those textual similarity analyses. In fact, a whole different methodological approach would be needed. For a comprehensive explanation of the subject, one would inevitably have to come into grasp with the domestic sources that shape decisions in the realm of political economy.

4. A Second Route for Textual Similarity Comparisons

One way of deepening the comparative analyses that were done thus far is by employing textual similarity with a view to arrive at a discernible parameter on how close the US and China PTAs are to the WTO normative framework. By and large, this undertaking aims to shed light on academic researches devoted to unravel the intricate relationships between bilateral and regional trade agreements and the multilateral trade regime. More specifically, it might pave the way for better understanding of how these *ad hoc* mechanisms affect the system of global trade governance and how exactly the PTAs sponsored by the two world's largest trading powers relate to this process underway.

It is almost a truism that the spaghetti bowl phenomenon has already become a pressing issue for contemporary international commerce due to the overlapping of bilateral and regional arrangements of free trade, of which results a coweb of norms and rules that generate *inter partes* effects instead of benefiting all members of the international trading system (*erga omnes*). Beyond the intent to advance their own trade agendas in a setting where multilateralism loses efficiency, what also might drive states behaviour is what Baldwin (1993) called 'domino effect': the preemptive action by a state actor of signing trade deals, even if they run against their primary interest, with the goal of avoiding economic losses given the possible trade distortions resulting from the establishment of competing trade agreements (Viner, 1950).

In the course of this trajectory, it is worthy to note that the very content of trade agreements has undergone substantial modifications, in order to meet new demands in line with the production fragmentation on a regional and global scale. Taking into account the paralysis of the multilateral trading system with regards to expanding its normative framework, and the urgency caused by increasing competition at a global level, participants in the new *modus operandi* of international trade found in the alternative pathways the solution to forge their own regulatory systems with complex courses of action which satisfy the logic of increasing interdependence between trade, investment and services (Baldwin, 2011).

According to Baldwin (2012), this reordering of trade into global value chains has made *behind-the-borders measures* the main focus of new generation trade agreements. Following this standard, traditional thinking on market access (tariff and non-tariff barriers) have lost their relevance for normative specimens of two types: those ones that deepen WTO's normative framework (WTO-plus rules) and those that expand its regulatory breadth (WTO-extra rules) (Horn, Mavroidis and Sapir, 2009).

Would the US and China be completely subject to the imperative systemic forces of the global value chains when defining the legal provisions of their PTAs, or there would be some room for their agency to play out in the sense that they were able to avoid going down this path? The following text-as-data analyses aim to check how far the US and China have gone in this trend of promoting normative innovation through their bilateral trade agreements with respect to the WTO core multilateral agreements. Being both trading

powers key protagonists in the global value chains, it is relevant to find out to what extent have their own PTAs diverged from the WTO rules.

5. Applying *Jaccard* Distances between the PTAs and the WTO Agreements

Building on the creation of *Jaccard* indexes the next comparative analyses seek to measure the level of similarity between PTAs chapters and their respective WTO multilateral agreements. To proceed with such comparisons, the selected chapters ought to be commonly found in the US and China PTAs. As previously stressed, the final results are conveyed through indexes that might assume any value from 0 to 1, revealing which chapter bears more similarity with the corresponding WTO core agreement. Accordingly, the index whose value gets closer to 0 (zero) indicates the legal text most similar to the multilateral agreement.

The selection of the PTAs' chapters for the similarity comparisons will partially stem from Horn, Mavroidis and Sapir's (2009) definition of the trade areas presenting WTO-plus norms. In light with the authors' description of the normative anatomy of the US and the European Union PTAs, WTO-plus disciplines would correspond to legal obligations regarding technical barriers to trade measures, sanitary and phytosanitary measures, antidumping, state aid, trade in service, investment and IPRs.

To find out whether those trade issues could also apply to the set of PTAs selected for this comparative study, it is critical to first identify which chapters appear most frequently across these 24 agreements and, secondly, to pinpoint which of them can be straightforwardly compared to one of the WTO multilateral agreement, what then might reveal the WTO-plus nature of their rules.

Instead of counting chapter-by-chapter and taking note of each one, an efficient way to uncover such pieces of legal texts is by resorting again to text-as-data analysis¹⁸. This time, however, the analytical approach rested on the simple solution of extracting from the ToTA project dataset all chapters's names that belong to either the US or China PTAs. The resulting data was compiled into a table displaying 75 different titles along with the respective frequency with which they appear across the selected agreements. After

¹⁸ For this specific analysis, the script with the R codes can be found in Annex II.

excluding chapters¹⁹ deemed unfitted for the comparative analyses, such as ‘Preamble’, ‘Conclusion’, ‘Initial Provisions’ and so on, the then 15th most frequent chapters were singled out and displayed on a histogram (Chart 8).

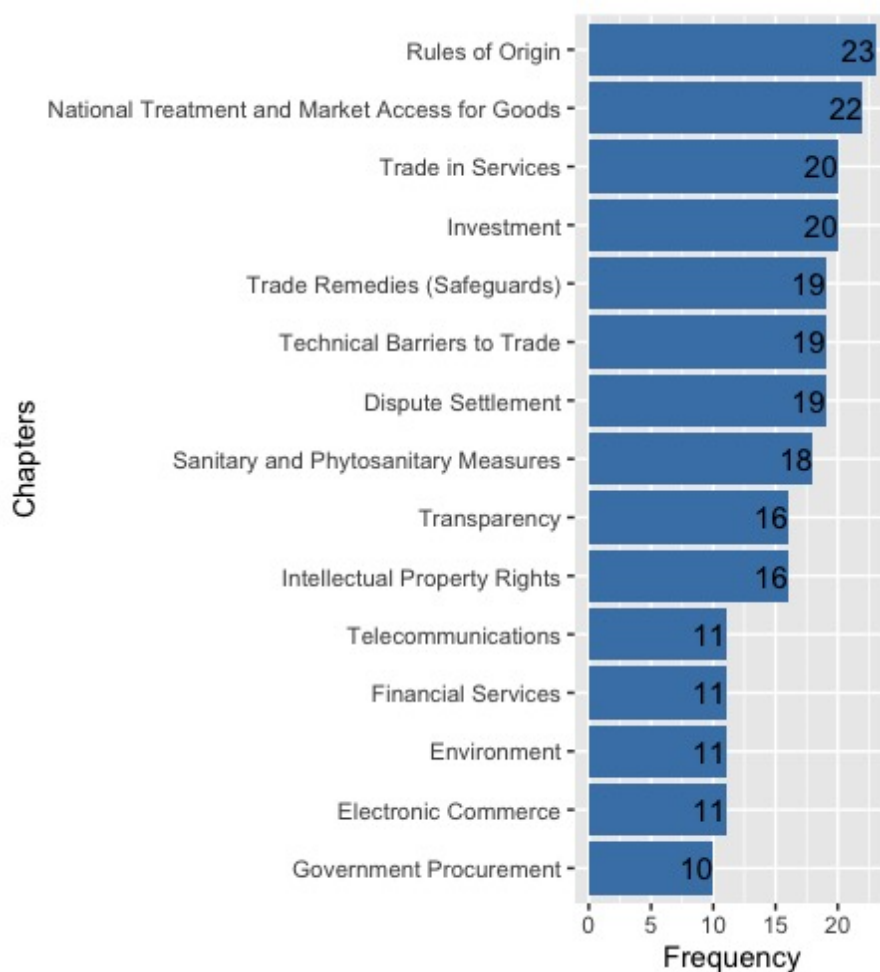
As some of the chapters dealing with the same trade issue did not carry the exact same name, they needed to be coalesced into a single title for the sake of better illustrating them. For instance, the all-encompassing title ‘Rules of Origin’ was adopted to refer to the following chapters’ names identified across the US and China’s PTAs: ‘Rules of Origin’ (9²⁰), ‘Procedures Related to Rules of Origin’ (1), ‘Rules of Origin and Origin Procedures’ (5), ‘Rules of Origin and Implementation Procedures’ (2), ‘Rules of Origin and Operational Procedures’ (2), ‘Rules of Origin and Origin Implementation Procedures’ (1), ‘Rules of Origin and Related Operational Procedures’ (1), and ‘Origin’ (2). Furthermore, there are exceptional cases in which a single chapter comprises more than one trade issue. For these situations, each trade discipline has been attributed to the respective overarching chapter’s name, framing the former as it belonged to a separate chapter.

Another caveat concerning the data on the PTAs’ chapters is the fact that some trade issues are not targeted by chapters. Instead, the normative provisions on these disciplines are circumscribed by only one article or a set of them, which usually do not pertain to any specific chapter on the subject. This finding alone, however, is not sufficient to put into question the data provided below, since the number of chapters outstrips by far the number of articles that actually cover a whole trade area. The reason for this lies in the textual structure followed by most of the PTAs.

Chart 8: The 15th Most Frequent Chapters across US and Chinese PTAs

¹⁹ The other chapters’ names excluded from the text-as-data analysis are: ‘Final Provisions’, ‘General Definitions’, ‘Exceptions’, ‘Initial Provisions and Definitions’, ‘General Provisions and Exceptions’, ‘General and Final Provisions’, ‘Initial Provisions and General Definitions’, ‘Administration of the Agreement’, ‘Definitions of General Application’, ‘General Principles’, ‘Other Provisions’, and ‘General Provisions’.

²⁰ The total number of chapters with the heading ‘rules of origin’.



The results shown at the table above bear strong parallelism with the empirical evidence laid out in Horn, Mavroidis and Sapir's (2009) study when it comes to underscoring the major PTAs' WTO-plus disciplines. In fact, by taking the first ten most frequent chapters of Table 1, one comes to the realization that all trade areas highlighted by the authors are represented by one of the listed chapters, except for 'state aid'.

Also, it is worth stressing that the trade issue 'antidumping' features in the chapters under the name 'Trade Remedies'. Nevertheless, 'safeguards' stands out as the primary target of most regulations *vis-à-vis* the other two trade remedies (antidumping and countervailing measures), hence being more likely to unveil rules that deepen the normative scope of the WTO rules. Even some of the selected PTAs assign a whole chapter only to regulate safeguards. Its higher proeminence with respect to the other trade remedies becomes eloquent as one reads through the normative provisions on antidumping and

countervailing measures in the Chinese agreements and soon finds out that they are much shorter and less detailed than the ones on safeguard measures.

For the selection of the PTA's chapters that will take part in the similarity analyses, it was also necessary to eliminate the chapters dealing with trade issues that still lack a WTO multilateral agreement²¹ on such disciplines. Otherwise no comparison could be carry out. As of the latest update, among the PTAs chapters listed above, 'Transparency', 'Telecommunications', 'Environment', 'Electronic Commerce' and 'Government Procurement' are the ones whose subject matters are not yet object of regulation by WTO multilateral agreements, in spite of normative provisions on these issues be found in some of the legal texts as well as the existence of a plurilateral agreement on government procurement (Matsushita, Schoenbaum, Mavroidis and Hahn, 2015). This leaves us with all the WTO-plus areas singled out by Horn, Mavroidis and Sapir's (2009) – after replacing 'antidumping' with 'safeguards' – with the addition of 'rules of origin', 'national treatment and market access for goods' and 'dispute settlement', and the subtraction of 'state aid'.

Both 'national treatment and market access for goods' and 'dispute settlement' are also not eligible to feature in the comparative study for simple and logical reasons. On the one hand, the former issue encompasses set of rules mostly directed at laying the ground for the establishment of a free trade area, therefore focused mainly on bringing down tariffs on merchandise: a goal that has already been successfully achieved by all parties to the selected PTAs. Thus, the prospect of coming across with WTO-plus rules on these subjects is quite minimal.

'Dispute settlement', on the other hand, is not truly a trade issue, but rather it consists of a set of procedural rules that guide parties through the resolution of their trade disputes and which usually entail one of the three broad mechanisms: political or diplomatic dispute settlement, *ad hoc* arbitral panel or standing tribunal (Matsushita, Schoenbaum, Mavroidis and Hahn, 2015). In either case, it ought to be resorted to as the first attempt at bilaterally solving the litigation before the controversy could be brought into the WTO Dispute Settlement System. Because of the very nature of their normative provisions,

²¹ By 'multilateral agreement', the WTO jurisprudence and experts on International Trade Law (Bossche, 2007) mean the agreements that each WTO member must either sign or adhere to it in order to be granted full membership to the organization.

almost dissociated from the multilateral level, chapters on dispute settlement will also be discarded from the similarity analyses.

By taking the above comments into account, the actual PTAs chapters to be compared to their corresponding WTO multilateral agreement are, therefore, in a descending order based on their frequency: ‘Rules of Origin’, ‘Trade in Services’, ‘Investments’, ‘Safeguards’, ‘Technical Barriers to Trade’, ‘Sanitary and Phytosanitary Measures’ and ‘Intellectual Property Rights’. Matching up these chapters are the following WTO agreements: the Agreement on Rules of Origin (ROO), the GATS, the TRIMS, the Agreement on Safeguards (SG), the Agreement on Technical Barriers to Trade (TBT), the Agreement on the Application of Sanitary and Phytosanitary Measures (SPS) and the TRIPS.

Right below, seven tables display the empirical results of the similarity analyses²² by showing the *Jaccard* indexes derived from the comparisons of the legal contents between the US and Chinas PTAs’ chapters and articles on a specific trade issue and their respective WTO core agreement. Accordingly, each table focuses on one of the seven previously underscored multilateral agreement. Highlighted in red are the *Jaccard* indexes that present a higher level of similarity for each comparisons involving the PTAs with overlapping trading partners.

Table 1: The Jaccard Indexes for the Comparisons between the PTAs and the ROO

US Preferential Trade Agreement	WTO Agreement	Jaccard Index 1	China Preferential Trade Agreement	WTO Agreement	Jaccard Index 2
US - Peru PTA	ROO	0,8077	China - Peru PTA	ROO	0,788
US - Australia PTA	ROO	0,8219	China - Australia PTA	ROO	0,7982
US - Republic of Korea PTA	ROO	0,8117	China - Republic of Korea PTA	ROO	0,7985
US - Singapore PTA	ROO	0,8009	China - Singapore PTA	ROO	0,8282
US - Chile PTA	ROO	0,8184	China - Chile PTA	ROO	0,8362
US - Colombia PTA	ROO	0,8077	China - Iceland PTA	ROO	0,8088
US - Panama PTA	ROO	0,8082	China - Costa Rica PTA	ROO	0,8039
US - Oman PTA	ROO	0,8194	China - Switzerland PTA	ROO	0,8712
US - Bahrain PTA	ROO	0,8225	China - New Zealand PTA	ROO	0,8009
US - Morocco PTA	ROO	0,8238	China - Pakistan PTA	ROO	0,8392
US - Israel PTA	ROO	NA	China - Macao, China PTA	ROO	0,9616
US - Jordan PTA	ROO	0,9355	China - Hong Kong, China PTA	ROO	0,9599

Table 2: The Jaccard Indexes for the Comparisons between the PTAs and the GATS

²² Annex III contains the script of the R codes yielding the indexes for the first seven tables.

US Preferential Trade Agreement	WTO Agreement	Jaccard Index 1	China Preferential Trade Agreement	WTO Agreement	Jaccard Index 2
US - Peru PTA	GATS	0,7849	China - Peru PTA	GATS	0,7399
US - Australia PTA	GATS	0,7814	China - Australia PTA	GATS	0,6586
US - Republic of Korea PTA	GATS	0,7823	China - Republic of Korea PTA	GATS	0,6509
US - Singapore PTA	GATS	0,775	China - Singapore PTA	GATS	0,6884
US - Chile PTA	GATS	0,7988	China - Chile PTA	GATS	NA
US - Colombia PTA	GATS	0,7868	China - Iceland PTA	GATS	0,8223
US - Panama PTA	GATS	0,7755	China - Costa Rica PTA	GATS	0,6973
US - Oman PTA	GATS	0,7747	China - Switzerland PTA	GATS	0,7832
US - Bahrain PTA	GATS	0,7881	China - New Zealand PTA	GATS	0,6765
US - Morocco PTA	GATS	0,7866	China - Pakistan PTA	GATS	NA
US - Israel PTA	GATS	0,9857	China - Macao, China PTA	GATS	0,937
US - Jordan PTA	GATS	0,9193	China - Hong Kong, China PTA	GATS	0,8733

Table 3: The Jaccard Indexes for the Comparisons between the PTAs and the TRIMS

US Preferential Trade Agreement	WTO Agreement	Jaccard Index 1	China Preferential Trade Agreement	WTO Agreement	Jaccard Index 2
US - Peru PTA	TRIMS	0,8574	China - Peru PTA	TRIMS	0,8339
US - Australia PTA	TRIMS	0,8232	China - Australia PTA	TRIMS	0,8527
US - Republic of Korea PTA	TRIMS	0,8572	China - Republic of Korea PTA	TRIMS	0,8289
US - Singapore PTA	TRIMS	0,8545	China - Singapore PTA	TRIMS	0,92
US - Chile PTA	TRIMS	0,8504	China - Chile PTA	TRIMS	0,9533
US - Colombia PTA	TRIMS	0,8572	China - Iceland PTA	TRIMS	0,9339
US - Panama PTA	TRIMS	0,8551	China - Costa Rica PTA	TRIMS	0,8207
US - Oman PTA	TRIMS	0,853	China - Switzerland PTA	TRIMS	0,9331
US - Bahrain PTA	TRIMS	NA	China - New Zealand PTA	TRIMS	0,8261
US - Morocco PTA	TRIMS	0,8545	China - Pakistan PTA	TRIMS	0,8368
US - Israel PTA	TRIMS	NA	China - Macao, China PTA	TRIMS	0,9437
US - Jordan PTA	TRIMS	NA	China - Hong Kong, China PTA	TRIMS	0,9449

Table 4: The Jaccard Indexes for the Comparisons between the PTAs and the SG

US Preferential Trade Agreement	WTO Agreement	Jaccard Index 1	China Preferential Trade Agreement	WTO Agreement	Jaccard Index 2
US - Peru PTA	SG	0,7811	China - Peru PTA	SG	0,7602
US - Australia PTA	SG	0,7694	China - Australia PTA	SG	0,7288
US - Republic of Korea PTA	SG	0,7663	China - Republic of Korea PTA	SG	0,7539
US - Singapore PTA	SG	0,7669	China - Singapore PTA	SG	0,8214
US - Chile PTA	SG	0,8	China - Chile PTA	SG	0,7401
US - Colombia PTA	SG	0,7763	China - Iceland PTA	SG	0,7443
US - Panama PTA	SG	0,7808	China - Costa Rica PTA	SG	0,7451
US - Oman PTA	SG	0,8218	China - Switzerland PTA	SG	0,8553
US - Bahrain PTA	SG	0,8217	China - New Zealand PTA	SG	0,7308
US - Morocco PTA	SG	0,7876	China - Pakistan PTA	SG	0,7439
US - Israel PTA	SG	NA	China - Macao, China PTA	SG	1
US - Jordan PTA	SG	0,7653	China - Hong Kong, China PTA	SG	1

Table 5: The Jaccard Indexes for the Comparisons between the PTAs and the TBT

US Preferential Trade Agreement	WTO Agreement	Jaccard Index 1	China Preferential Trade Agreement	WTO Agreement	Jaccard Index 2
US - Peru PTA	TBT	0,7994	China - Peru PTA	TBT	0,7928
US - Australia PTA	TBT	0,8175	China - Australia PTA	TBT	0,7955
US - Republic of Korea PTA	TBT	0,7755	China - Republic of Korea PTA	TBT	0,7687
US - Singapore PTA	TBT	0,9194	China - Singapore PTA	TBT	0,7904
US - Chile PTA	TBT	0,8348	China - Chile PTA	TBT	0,8
US - Colombia PTA	TBT	0,7993	China - Iceland PTA	TBT	0,8684
US - Panama PTA	TBT	0,8319	China - Costa Rica PTA	TBT	0,8215
US - Oman PTA	TBT	0,8444	China - Switzerland PTA	TBT	0,901
US - Bahrain PTA	TBT	0,8439	China - New Zealand PTA	TBT	0,7612
US - Morocco PTA	TBT	0,8449	China - Pakistan PTA	TBT	0,8616
US - Israel PTA	TBT	NA	China - Macao, China PTA	TBT	NA
US - Jordan PTA	TBT	NA	China - Hong Kong, China PTA	TBT	NA

Table 6: The Jaccard Indexes for the Comparisons between the PTAs and the SPS

US Preferential Trade Agreement	WTO Agreement	Jaccard Index 1	China Preferential Trade Agreement	WTO Agreement	Jaccard Index 2
US - Peru PTA	SPS	0,8994	China - Peru PTA	SPS	0,7829
US - Australia PTA	SPS	0,8886	China - Australia PTA	SPS	0,8071
US - Republic of Korea PTA	SPS	0,8863	China - Republic of Korea PTA	SPS	0,8235
US - Singapore PTA	SPS	NA	China - Singapore PTA	SPS	0,7714
US - Chile PTA	SPS	0,891	China - Chile PTA	SPS	0,8108
US - Colombia PTA	SPS	0,8994	China - Iceland PTA	SPS	0,8738
US - Panama PTA	SPS	0,8935	China - Costa Rica PTA	SPS	0,7901
US - Oman PTA	SPS	0,9568	China - Switzerland PTA	SPS	0,8846
US - Bahrain PTA	SPS	0,9565	China - New Zealand PTA	SPS	0,7483
US - Morocco PTA	SPS	0,8608	China - Pakistan PTA	SPS	0,8243
US - Israel PTA	SPS	NA	China - Macao, China PTA	SPS	NA
US - Jordan PTA	SPS	NA	China - Hong Kong, China PTA	SPS	NA

Table 7: The Jaccard Indexes for the Comparisons between the PTAs and the TRIPS

US Preferential Trade Agreement	WTO Agreement	Jaccard Index 1	China Preferential Trade Agreement	WTO Agreement	Jaccard Index 2
US - Peru PTA	TRIPS	0,6816	China - Peru PTA	TRIPS	0,8858
US - Australia PTA	TRIPS	0,6831	China - Australia PTA	TRIPS	0,798
US - Republic of Korea PTA	TRIPS	0,6815	China - Republic of Korea PTA	TRIPS	0,7167
US - Singapore PTA	TRIPS	0,6871	China - Singapore PTA	TRIPS	NA
US - Chile PTA	TRIPS	NA	China - Chile PTA	TRIPS	0,9402
US - Colombia PTA	TRIPS	0,682	China - Iceland PTA	TRIPS	0,9089
US - Panama PTA	TRIPS	0,6823	China - Costa Rica PTA	TRIPS	0,8506
US - Oman PTA	TRIPS	0,6847	China - Switzerland PTA	TRIPS	0,8283
US - Bahrain PTA	TRIPS	0,6831	China - New Zealand PTA	TRIPS	0,9058
US - Morocco PTA	TRIPS	0,6904	China - Pakistan PTA	TRIPS	NA
US - Israel PTA	TRIPS	0,9822	China - Macao, China PTA	TRIPS	NA
US - Jordan PTA	TRIPS	0,7859	China - Hong Kong, China PTA	TRIPS	NA

The tables highlight two sets of PTAs for each country, which are identified by the pairs in the blue and green colours. The former grouping represents the ten bilateral

agreements that both the US and China signed with the same trading partners, whereas the latter corresponds to the rest of PTAs whose trading partners do not coincide.

As hinted elsewhere, the purposeful overlapping with regards to the first grouping should have an equalizing effect upon the agency of these trading partners when it comes to their role in crafting the normative content of the legal texts that have been negotiated with the US and China. In other words, the US and China's weight over the definition of the PTAs' content is more precisely measured when the other party to the agreement is the same. Conversely, since different countries would mean different interests and goals, the normative content of the agreements would otherwise be more susceptible to variation. This is the reason for why the grouping in blue colour tends to qualify as better proxies for the intentions and objectives that the US and China pursue through their engagement with PTAs.

Turning to the *Jaccard* indexes of only the first grouping across the selected WTO agreements, the resulting data indicate that China has a total of 22 PTAs bearing more similarity to their corresponding WTO agreements, while the US PTAs surpasses the Chinese in nine comparisons. As noted before, all these agreements are marked in red for the purpose of making easier their identification.

Another finding worth stressing concerns the trade areas in which the countries' legal texts hold more convergence towards the multilateral normative framework. For the US, these areas are investment and IPRs, albeit the figures are more balanced in the case of the former issue. China, on the other hand, stands out in all other disciplines, notably rules of origin, trade in services, safeguards, technical barriers to trade and sanitary and phytosanitary measures, notwithstanding a tight score on the first trade issue.

Two orders of clarification are necessary for interpreting the data. The 'NA' values seen in the table refer to the absence in the PTA of any article or chapter on the trade issue under search. They might also simply mean that the given trade area has been dealt with in a separate document that was later on attached to the main corpus of the legal text, hence not featuring in the ToTA dataset built on the agreements in XML format.

By its turn, some of those missing values are explained by the very characteristics of the PTAs at hand. There are notably four PTAs worth mentioning: the US-Israel, the US-Jordan, the China-Macao and the China-Hong Kong PTAs. As already pointed out before, the first two came about as a result of negotiations that took place before the creation of the

WTO, thereby restricting the scope and depth of the normative provisions on the trade issues that had been discussed and ended up featuring in these core multilateral agreements. The other two are tributary of the special status enjoyed by Macao and Hong Kong for being Special Administrative Region of Mainland China. Once more, this condition curbs the political and economic autonomy of both entities, tarnishing their identity as normal trading partners in some degree. Likewise, a circumstance that influenced the content of the agreements at great length, as the official name of these documents imply – Closer Economic and Partnership Arrangement – even though the WTO website still qualify it as a type of free trade and economic integration agreement just like the other Chinese PTAs.

In practical terms, the special circumstances revolving around those four PTAs conditioned some of the results shown in the previous tables. They either correspond to the highest figures among the rest of the indexes – usually standing as outliers, thus indicating the sharpest or even a complete dissimilarity to the WTO agreements – or showcase most of the missing values of the entire data. Specially in the case of the former, there is an inexorable impact on the aggregate figures that shall not be overlooked should one tries to grasp some of the statistical measures.

The most meaningful way to assess the indexes of the other PTAs grouping is by looking at the aggregate figures of the whole set of agreements pertaining to each state, instead of focusing on the pairs, which could render the results somewhat baseless. The following table is filled with descriptive statistics²³ on the *Jaccard* indexes to provide an in-depth and a complementary perspective on the empirical findings.

Table 8: Descriptive Statistics on the Jaccard Indexes

²³ Annex IV contains the R codes for all descriptive statistics shown in *Table 8*.

PTAs vs WTO Agreement	Minimum Value	Maximum Value	1st Quartile	3rd Quartile	Median	Mean	Standard Deviation	Variance
US PTAs (all) vs GATS	0.7747	0.9857	0.7799	0.7908	0.7857	0.8116	0.0676	0.0045
US PTAs (same partners) vs GATS	0.7750	0.7988	0.7814	0.7849	0.7823	0.7845	0.0087	$7.7337 \times 10^{(-5)}$
China PTAs (all) vs GATS	0.6509	0.9370	0.6795	0.8125	0.7186	0.7527	0.0981	0.0096
China PTAs (same partners) vs GATS	0.6509	0.7399	0.6567	0.7013	0.6735	0.6845	0.0403	0.0016
US PTAs (all) vs TRIPS	0.6815	0.9822	0.6822	0.6887	0.6831	0.7204	0.0921	0.0084
US PTAs (same partners) vs TRIPS	0.6815	0.6871	0.6816	0.6841	0.6824	0.6833	0.0026	$6.869167 \times 10^{(-6)}$
China PTAs (all) vs TRIPS	0.7167	0.9402	0.8207	0.9066	0.8682	0.8543	0.0725	0.0052
China PTAs (same partners) vs TRIPS	0.7167	0.9402	0.7777	0.8994	0.8419	0.8352	0.0983	0.0096
US PTAs (all) vs TRIMS	0.8232	0.8574	0.8530	0.8572	0.8545	0.8514	0.0108	0.0001
US PTAs (same partners) vs TRIMS	0.8232	0.8574	0.8504	0.8572	0.8545	0.8485	0.0144	0.0002
China PTAs (all) vs TRIMS	0.8207	0.9533	0.8327	0.9364	0.8863	0.8857	0.0558	0.0031
China PTAs (same partners) vs TRIMS	0.8289	0.9533	0.8339	0.9200	0.8527	0.8778	0.0557	0.0031
US PTAs (all) vs SPS	0.8608	0.9568	0.8886	0.8994	0.8935	0.9036	0.0321	0.0010
US PTAs (same partners) vs SPS	0.8863	0.8994	0.8880	0.8931	0.8898	0.8913	0.0057	$3.26625 \times 10^{(-5)}$
China PTAs (all) vs SPS	0.7483	0.8846	0.7847	0.8241	0.8089	0.8117	0.0427	0.0018
China PTAs (same partners) vs SPS	0.7714	0.8235	0.7829	0.8108	0.8071	0.7991	0.0213	0.0004
US PTAs (all) vs TBT	0.7755	0.9194	0.8039	0.8443	0.8334	0.8311	0.0389	0.0015
US PTAs (same partners) vs TBT	0.7755	0.9194	0.7994	0.8348	0.8175	0.8293	0.0549	0.0030
China PTAs (all) vs TBT	0.7612	0.9010	0.7910	0.8516	0.7977	0.8161	0.0461	0.0021
China PTAs (same partners) vs TBT	0.7687	0.8000	0.7904	0.7955	0.7928	0.7895	0.0121	0.0001
US PTAs (all) vs ROO	0.8009	0.9355	0.8079	0.8222	0.8184	0.8252	0.0373	0.0013
US PTAs (same partners) vs ROO	0.8009	0.8219	0.8077	0.8184	0.8117	0.8121	0.0083	$7.0172 \times 10^{(-5)}$
China PTAs (all) vs ROO	0.7880	0.9616	0.8003	0.8472	0.8185	0.8412	0.0604	0.0036
China PTAs (same partners) vs ROO	0.7880	0.8362	0.7982	0.8282	0.7985	0.8098	0.0210	0.0004
US PTAs (all) vs SG	0.7653	0.8218	0.7675	0.7860	0.7785	0.7815	0.0179	0.0003
US PTAs (same partners) vs SG	0.7663	0.8000	0.7669	0.7811	0.7694	0.7767	0.0143	0.0002
China PTAs (all) vs SG	0.7288	1	0.7429	0.8299	0.7495	0.8020	0.0999	0.0099
China PTAs (same partners) vs SG	0.7288	0.8214	0.7401	0.7602	0.7539	0.7609	0.0359	0.0012

Drawing on the indexes of the previous comparative tables, *Table 8* contains eight aggregate basic statistical figures on each line – the minimal and maximum values, the first and third quartiles, the median, the mean, the standard deviation and the variance. These figures refer to four broad comparisons, which are replicated for each WTO multilateral agreement under scrutiny.

The first of these comparisons entails the indexes built on the similarity levels between all the US PTAs' chapters on a given trade issue and their corresponding WTO agreement. The second treatment narrows down the number of PTAs to include only the US agreements whose trading partners also have a PTA with China. Accordingly, the third and fourth comparisons follow suit the same logic, however, this turn, restricted to the Chinese PTAs. This sequence of comparisons is, therefore, applied to each of the selected WTO core agreement.

Among the descriptive statistics provided, the mean and the measures of dispersion (standard deviation and variance²⁴) are specially significant in terms of what they convey by far. The aggregate means are flagged in red colour with the purpose of signalling the lowest values between the US and China, hence revealing the set of PTAs most similar to the WTO multilateral agreement. Focusing only on the comparisons encompassing the same partners, the US holds the lowest aggregate means with respect to the TRIPS and the TRIMS agreements, whereas China PTAs present aggregate higher levels of congruence most predominantly with regards to the GATS, the SPS, the TBT, the ROO and the SG agreements. These findings do not come as a surprise, since they simply corroborate what the individual *Jaccard* indexes had already indicated.

Nevertheless, as the analyses shift to the aggregate means on all the PTAs of each country, a more balanced outcome arises. On the one hand, the US has lower aggregate means for the TRIPS, the TRIMS, the ROO and the SG agreements. On the other hand, China stands out on this aggregate level of similarity with regards to GATS, SPS and TBT. As noted before, the marked differences in the outcomes derived respectively from the two stripes of comparisons – one focused solely on overlapping trading partners and other on distinctive partners – are highly likely to be rooted not only on the controlled ‘trading partners-effects’, but also on the distortions caused by the indexes pertaining to the previously four underscored PTAs (the US-Israel, the US-Jordan, the China-Macao and the China-Hong Kong PTAs) for the reasons already laid out.

The statistics revealing the degree of the aggregate dispersions also unveil telling empirical findings. They shed light on the level of homogeneity among the aggregate figures of the *Jaccard* indexes. Putting bluntly, the numbers show that the US PTAs bear more congruence among themselves than the Chinese agreements, going in tandem with results seen on the heatmaps of the prior similarity analyses. A series of charts²⁵ is provided to forge a better data²⁶ visualization on some of those descriptive statistics.

²⁴ Particularly in the case of the US, the variances tend to be very small. In the ‘US PTAs (same partners) vs GATS’, for instance, the exponent ‘-5’ suggests a value close to zero. In other words, the values that correspond to the *Jaccard* indexes of the five PTAs have very little variability or dispersion around their mean.

²⁵ In the charts, the names of the PTAs were replaced by the initial letters of the US and China trading partners along the x-axis to fit into the limited spaces. As an example, Australia and Hong Kong are designated respectively by ‘AU’ and ‘HK’.

²⁶ Annex V contains the R codes for all graphic representations that ranges from *Chart 9* to *Chart 15*.

Chart 9: US and Chinese PTAs vis-à-vis GATS

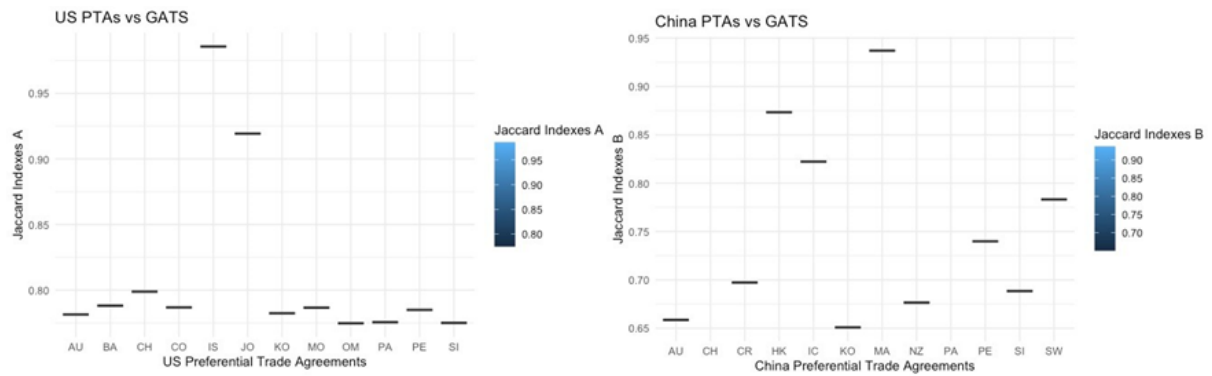


Chart 10: US and Chinese PTAs vis-à-vis TRIPS

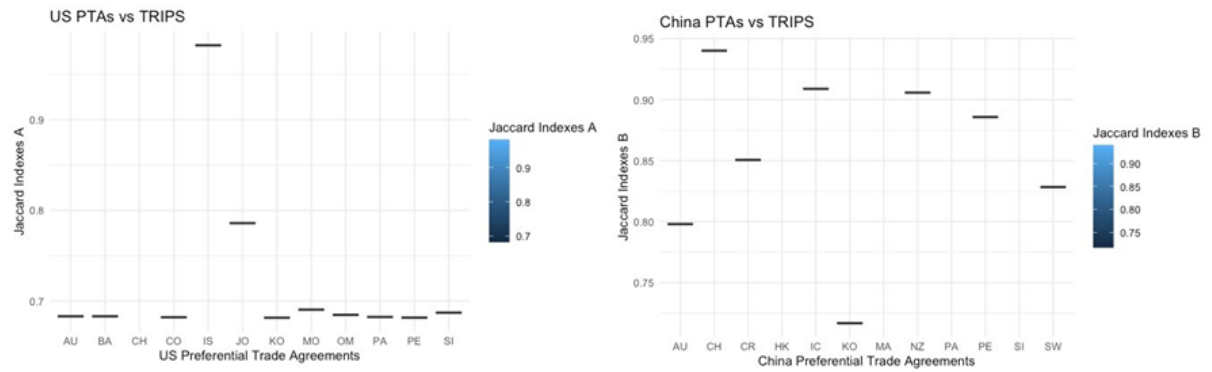


Chart 11: US and Chinese PTAs vis-à-vis TRIMS

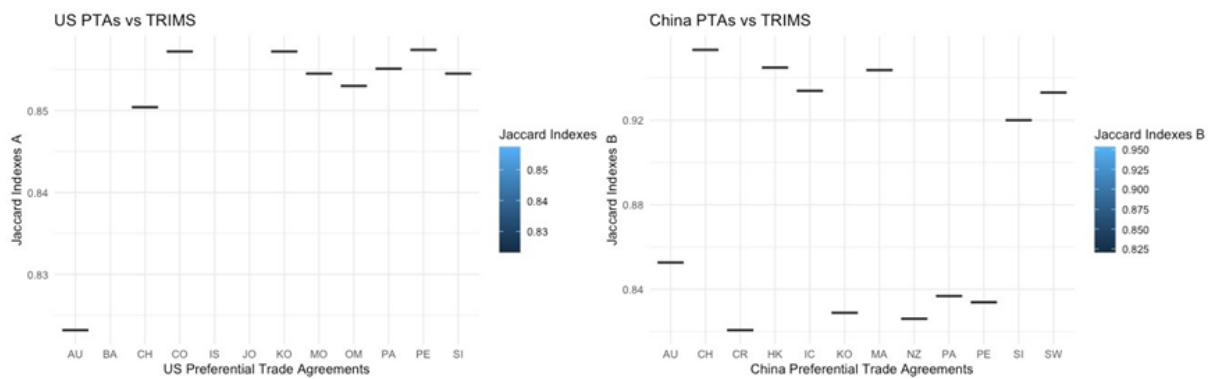


Chart 12: US and Chinese PTAs vis-à-vis SPS

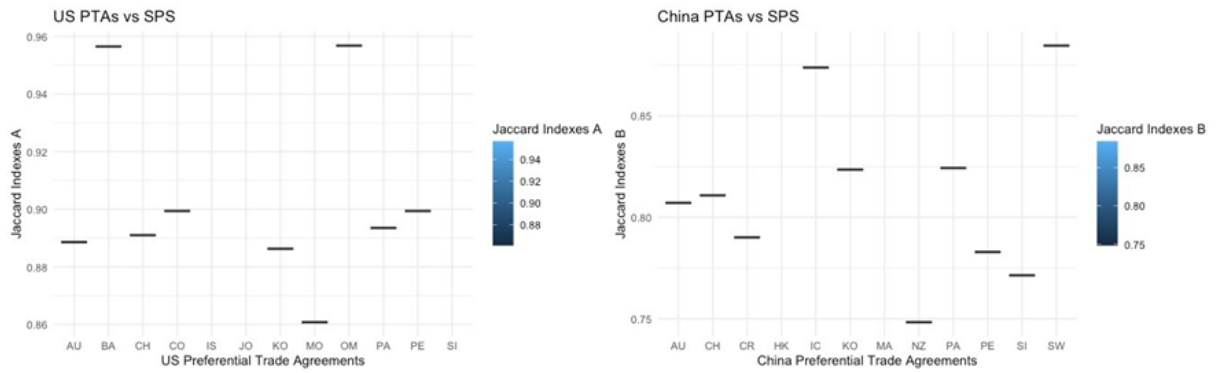


Chart 13: US and Chinese PTAs vis-à-vis TBT

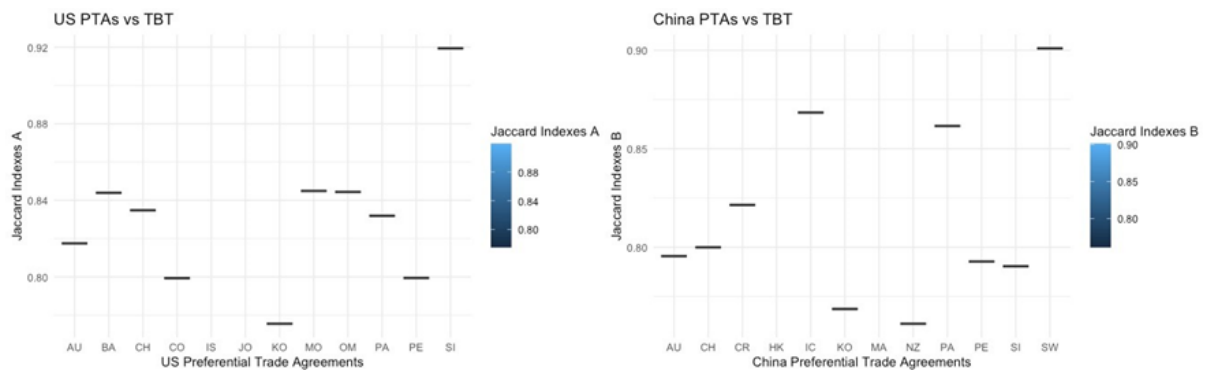


Chart 14: US and Chinese PTAs vis-à-vis ROO

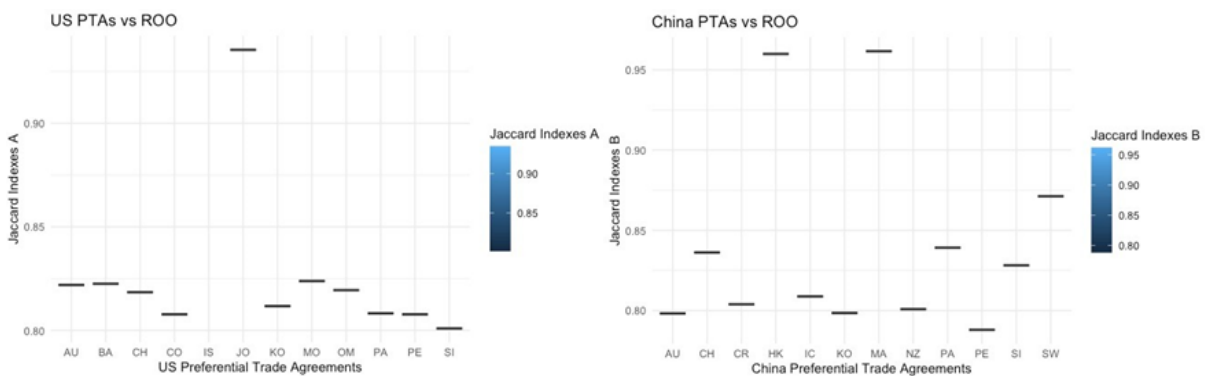
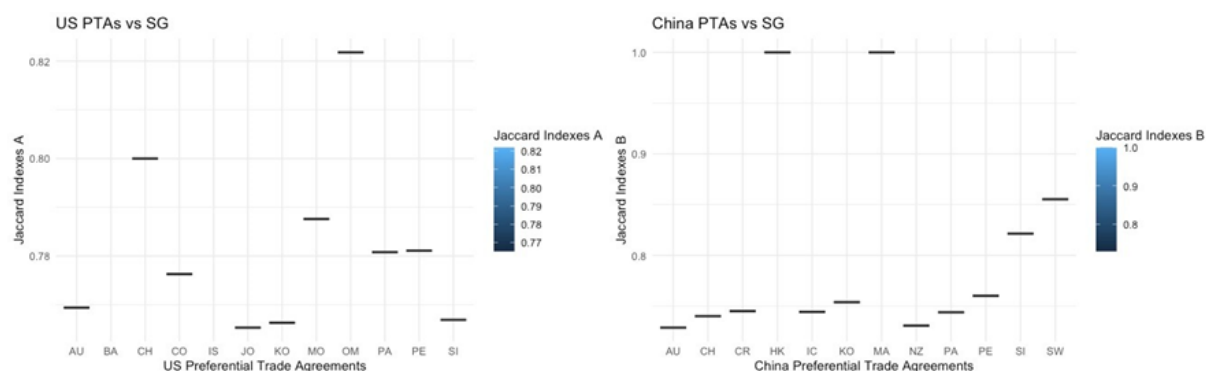


Chart 15: US and Chinese PTAs vis-à-vis SG



6. Concluding Remarks

The US and China have not been aloof from the trend of seeking a proactive engagement with bilateral trade arrangements. How they have been approaching this *spaghetti bowl* – or *noodle bowl* – worldwide-spreading phenomenon mostly guided this study. Several academic works have paid heightened attention to and continue to enquire into the world’s largest trading powers interaction with the WTO normative framework, but few have focused on the issue of what sort of normative embracement they actually pursue.

Within this broad object of investigation, this study sought to shed light on two specific, albeit complementary, subjects: on the treaty design of both countries PTAs as well as on their legal content with respect to the WTO multilateral rules. Ultimately, hopes were that the evidence provided could also help to understand whether and/or how these actors are contributing to the ongoing transformations in the multilateral trading system. Given the overwhelming amount of documents involved in such undertaking, the comparative analyses rested on a quantitative methodological approach. More specifically, it stemmed from the use of *Jaccard* distances to determine the level of similarities between or among legal texts. Text-as-data analyses through computational tools made feasible to realise these endeavours. Two different treatments were then applied to achieve the outlined goals.

The first consisted of plotting heatmaps to unveil the degree of homogeneity not only among the countries own set of PTAs, but also between them. Summing up, the findings that stood out the most across the analyses was the high level of similarity

among the US PTAs and the comparatively lower degree of congruence among the Chinese agreements. These results go in tandem with the compelling inference that the US trade officials might have been adopting a template when negotiating the legal content of these agreements with their trading partners and make little divergence from this template (Wise and Gallagher, 2011). The opposite might be inferred from China's behaviour, whose negotiators seem to be loosely attached to a specific treaty design, or any at all. This claim reinforces what previous qualitative studies on the subject already stressed, as highlighted in the chapter on the literature review (Jiang, 2010; Song and Yuan, 2012; Li and Hu, 2013).

The second treatment turned to comparative analyses that applied *Jaccard* indexes for determining the level of similarity between PTAs chapters on a specific trade area and their corresponding WTO multilateral agreement. The selection of these chapters – related to seven trade issues in total – hinged on the highest concentration of WTO-plus rules as possible, making feasible to discern which legal texts are set to deepen the content covered by the WTO normative framework, hence being less similar to the original features of these multilateral agreements.

These empirical findings were also revealing. In the comparisons encompassing the US and China PTAs that have overlapping trading partners, results showed that 22 chapters consisted of Chinese PTAs bearing more similarity to the WTO core agreements, whereas only nine belonged to the US set of PTAs, out of 31 chapters analysed. Also, China PTAs revealed a greater degree of similarity *vis-à-vis* the US agreements with regards to the GATS, the SPS, the TBT, the ROO and the SG agreements. For the US, higher convergence towards WTO rules were observed in the cases of the TRIPS and TRIMS agreements. In addition, it is worth underscoring that aggregate data on statistics measuring the level of overall dispersion of the *Jaccard* indexes corroborated previous findings on the higher level of homogeneity among the US PTAs when compared to the Chinese.

Drawing solely on their engagement with bilateral trade agreements, at least with respect to their legal content, the empirical findings derived from the comparative analyses pave the way for significant insights on the characterization of the two largest trading nations as either a system challenging or a *status quo* power in the realm of the multilateral trade regime. Based on the level of convergence between the PTAs rules and the WTO normative framework, ascribing the former label to the US and the latter to China finds a firm ground for validation.

Nonetheless, text-as-data analysis has limitations of its own that cannot be overlooked. Indeed, the sheer number of WTO-plus rules found in these agreements might lead to misleading conclusions for the simple reason that more innovative legal provisions not necessarily mean that normative breakthroughs will follow suit. China PTAs may still have less WTO-plus rules – as a result of the higher level of similarity of its PTAs – than the US ones, yet being filled with normative provisions that could bring about way more disruptive transformations to the foundational tenets of the trade regime. Further nuanced analyses stemming from a qualitative approach are, therefore, of much need should one fully grasp how both countries' PTAs might impact the fate of the multilateral trading system. The next two chapters are an attempt in this direction by revisiting the concept of the embedded liberalism compromise.

Chapter 4 – Trade Remedies

1. Embedding the Embedded Liberalism Compromise through Trade Remedies

Unarguably, free trade arrangements are one of the main drivers for the new geography of world production and international commerce. With the paralysis that holds back multilateral negotiations in the WTO, the global value chains are ever-more dependent on these legal instruments not only for the eradication of trade barriers that they intend to achieve, but also because of the behind-the-border measures that they usually present in their content (Baldwin, 2006). This second goal becomes even more relevant when domestic regulations replace tariffs as the new source of protectionism (Baldwin, 2006). Sometimes regarded as fast track venues for economic integration of national markets, trade agreements are instances of the current material forces that threaten to render the embedded liberalism compromise dysfunctional, especially when they uphold norms and rules that only privilege the liberal trends of globalization.

On the other hand, PTAs – as well as similar arrangements – might also feature normative provisions that are more aligned with the social purpose underpinning the notion of embedded liberalism. This is true when one thinks of certain areas of regulations that their content entails, such as trade remedies. Indeed, these are tools for taming the full-blown effects of free trade or responding to practices of unfair trade. On the surface, they serve the member states of a PTA as cushioning mechanisms against steep competition – derived from legal or illegal conducts – that harm domestic industries, producers, workers and/or cause temporary macroeconomic disturbances (Anderson, 2011).

In analysing the causes for the growing popularity that trade remedy law has enjoyed among trade players even before it had been enshrined in the multilateral trade regime, pundits have underscored the exposure to competitiveness as certain countries have become more open to the international economy (Bown, 2011). The promised benefits that openness would bring about with increased market access for development capital and exports from abroad also meant that new constraints on public policies to readily manage the economy came along (Anderson, 2011). In fact, since integration with global markets meant that governments would no longer have the same ability to shield inefficient

domestic industries from competition coming from abroad, countries have become dependent on trade remedies to counterbalance inevitable economic losses and/or to buy more time to adjust to this new reality (Anderson, 2011).

The understanding that boosting free trade would come with a price to pay at the expense of freedom over public policies was the exact *raison d'être* for devising mechanisms that would regain space for state interventionism. This is the reason for why trade remedies could also translate the essence of the embedded liberalism compromise. Regardless of the source – if derived from legal or unfair trade practices – that caused a sharp increase in the flux of trade from one country to another, the latter has a legitimate right to apply appropriate remedies to fend off the negative spillovers falling upon it. Thus, one of the key purposes for crafting trade remedies was to help reduce the costs of adjustment to trade liberalization while providing a soft landing for the 'losers' of globalization (Anderson, 2011). This same idea has also captured the reasoning behind the welfare state programs carried out by several industrial countries throughout the post-war period, given that they also sought to keep the political costs at bay (Rodrik, 1997).

The neoliberal recipe preached by the Washington Consensus, mostly throughout the 1990s, for improving economic outcomes endured mainly by developing nations heralded a new era in which the embedded liberalism compromise was deemed to have become obsolete as an organizing principle of international trade. Indeed, as a direct consequence of the state retreat due to deregulation, privatization and extreme valorisation of market solutions for every socioeconomic puzzle, the role of governments in balancing off the market forces lost ground as the mainstream narrative (Rodrik, 2006). Consequently, it would be reasonable to think of trade remedies as aberrant normative tools in the multilateral and bilateral trade relations at the time of neoliberal hegemonic trends.

With the events that unfolded following the 2008 global economic crisis as well as the recent Covid-19 global pandemic, in which counter-cyclical fiscal policies reclaimed centre stage in offering economic solutions, a more friendly environment for the embedded liberalism compromise seemed to have come to the fore again. In these new circumstances, trade remedies might have become appealing again as a legitimate means through which PTA's parties could provide some level of protection to domestic industries under certain conditions (Zheng, 2012; Voon, 2010).

This chapter aims to find out whether US and China PTAs embrace or eschew the concept of embedded liberalism through the adoption of specific rules on trade remedies. The comparative analysis seeks to confirm the hypothesis that the Chinese agreements are more aligned with the social purpose underpinning the compromise that gave birth to the multilateral trading system than the US PTAs are.

In order to prove that, the chapter is organised as follows. The first section turns to a general description of the multilateral rules on trade remedies with a view of setting out their basic conceptual elements. The next section discusses the relationship between trade remedies and PTAs by focusing on how they relate to the embedded liberalism compromise, the negative effects they might elicit as well as the legal controversies usually associated to them. In the subsequent section, the templates for helping with the identification of PTAs specific provisions on each trade remedy having a direct impact for the embedded liberalism compromise are presented. The final section is devoted to the actual mappings of the specific rules found in the US and China selected PTAs, from which it will be possible to draw conclusions based on the empirical findings of the comparative analyses.

In short, the results attest the existence of a significant level of similarity with respect to the legal provisions on anti-dumping actions, countervailing duties and bilateral safeguard measures across US and China PTAs. This finding dismisses clear-cut qualifications in terms of which set of agreements is more committed to the intersubjective framework of meaning of the multilateral trade regime. As for global safeguard measures, compelling evidence reveals another reality, in which the bulk of the Chinese PTAs stand out as more convergent towards the embedded liberalism compromise than the US agreements, even if the resulting effects are assumed to be mild, or moderate at most, for the state's ability to temporarily enhance the level of protection.

2. Trade Remedies in the WTO Normative Framework

Three categories of measures make up the trade remedies foreseen in the normative framework of the multilateral trade regime: antidumping, countervailing and safeguard measures (Hoekman and Mavroidis, 2007). Their legal fundamentals, functionality and

scope are predicated on the rules established by the GATT 1994 and other core WTO multilateral agreements.

Article VI of the GATT 1994 lays out the preliminary conditions for the application of antidumping and countervailing measures (Carvalho and Zuquete, 2013). These broad parameters were later supplemented by specific treaties on each category of these remedies. Historically, the set of rules pertaining to countervailing measures was the partial result of multilateral negotiations during the Tokyo Round (1973 – 1979), whereas multilateral talks on the antidumping code began before, at the Kennedy Round (1964 – 1967), and continued to be fashioned during the Tokyo Round. At the Uruguay Round (1986 – 1994), the two sets of rules were once again the object of negotiations, which ultimately led to the Agreement on the Implementation of Article VI of the GATT 1994 as well as the Agreement on Subsidies and Countervailing Measures, both of which incorporated into the core WTO multilateral agreements (Carvalho and Zuquete, 2013).

Efforts on the elaboration of elementary rules on safeguard actions also took place at the Tokyo Round negotiations. Yet the goal of delivering a code on this category of trade remedies had only been achieved at the Uruguay Round, when the Agreement on Safeguard Measures came into being (Carvalho and Zuquete, 2013). Likewise, the set of provisions contained in this multilateral agreement establishes specific parameters and conditions for the application of such measures, but Article XIX of the GATT 1994, under the title ‘Emergency Action on Imports of Particular Products’, is the legal cornerstone of this category of trade remedies (Carvalho and Zuquete, 2013).

2.1. An Overview of the Legal Framework of Antidumping in the GATT/WTO Regime

As mentioned before, the GATT 1994 Article VI and the Agreement on Implementation of Article VI of the General Agreement on Tariffs and Trade 1994, hereafter and widely known as the Antidumping Agreement, govern the legal framework of antidumping in the multilateral trade regime. While GATT 1994 Article VI lays out the bedrock principles for dealing with dumping, the Antidumping Agreement establishes not only substantive requirements that Members ought to meet in order to apply anti-dumping actions, but also procedural requirements concerning dumping investigation, imposition and

preservation of anti-dumping measures (Matsushita, Schoenbaum, Mavroidis and Hahn, 2015).

The GATT Article VI sets forth three criteria for the identification of dumping. First, the price of a good exported to a customs territory must be lower than the normal price of such good or similar product sold in the domestic market of the exporting country (WTO GATT, 1994). Second, the exports of such goods must (1) cause or threaten to cause injury to a domestic industry, or (2) impede or hold back the establishment of a domestic industry (WTO GATT 1994). Third, a causal relationship must exist between dumping and the material harm or delay in the birth of the industry (WTO GATT, 1994). Moreover, in light of GATT Article VI: 6(a), antidumping duties could only be imposed by national authorities following the injury determination (WTO GATT, 1994).

The substantive rules are found in the Anti-Dumping Agreement, and they range from Article 1 to Article 4. Article 1 refers to the basic principles – dumped imports, material injury and causal link – that authorize the imposition of antidumping duties once an investigation carried out in accordance with the rules of the same agreement confirms their intertwined existence (WTO Anti-Dumping Agreement, 1994). Article 2 corresponds to the provisions on the determination of dumping, which is based on the calculus of the difference between the normal value and the exported price, as hinted above (WTO Anti-Dumping Agreement, 1994). Article 3 presents provisions on the determination of material injury, which must derive from an objective assessment hinging on solid evidence of price and volume of the dumped goods as well as their intrinsic relationship with the damage caused to the domestic industry (WTO Anti-Dumping Agreement, 1994). Article 4 of the Anti-dumping Agreement is devoted to the definition of domestic industry that ought to be considered when evaluating the material injury and the causality nexus (WTO Anti-Dumping Agreement, 1994).

Without going into much further details, the procedural requirements are mainly devoted to the purpose of securing transparency to the proceedings, ensuring opportunities for parties to defend their interests, and making the investigating authorities to present adequate explanations for final determinations (WTO Anti-Dumping Agreement, 1994).

2.2. An Overview of the Legal Framework of Countervailing Measures in the GATT/WTO Regime

Under the WTO normative framework, there is the recognition that certain forms of public spending are a necessary attribute of the modern state, without which industrial policies could not thrive and indispensable public services could not be put in place. Subsidies only become a matter of concern of the WTO law if they focus on specific industries. However, even in such occasions, multilateral rules do not outlaw their use, but rather restrain themselves to the legal obligations to do not cause harmful impacts for other WTO members (Matsushita, Schoenbaum, Mavroidis and Hahn, 2015).

WTO rules foresee three distinct scenarios in which these adverse effects might arise. The first occurs when steep competition due to price reduction, because of government subsidization, harms the domestic industry of 'like products' of a WTO member that imports the subsidized good, or goods, from the customs territory where the subsidies are adopted (Matsushita, Schoenbaum, Mavroidis and Hahn, 2015). The second scenario unfolds as consumers from a third country decide to import the subsidized product from a contracting party because of its new competitive price, consequently, driving out a significant amount of imports of a 'like product' originating from another WTO member that used to export to that third country market. The third situation happens whenever a WTO member subsidizes a domestic industry with a view of coping with the import competition from goods originating from another member (Matsushita, Schoenbaum, Mavroidis and Hahn, 2015).

Besides antidumping duties, the GATT Article VI also sets out the general guidelines on the imposition of countervailing measures. Nonetheless, the Agreement on Subsidies and Countervailing Measures (the SCM Agreement) stands out as the principal legal framework for dealing with both subsidies and countervailing measures in the GATT/WTO regime. Its legal provisions address not only the circumstances allowing or prohibiting the use of subsidies, but also the measures aiming to cancel out the adverse effects when domestic industries are threatened or injured by subsidized products (WTO Subsidies and Countervailing Measures Agreement, 1994).

The structure of the SCM Agreement comprises eleven parts in total. Part I lays out the scope of the agreement by asserting that only the subsidies targeting a specific enterprise or industry, as well as a group of enterprises and industries, are the actual objects of legal concern (WTO Subsidies and Countervailing Measures Agreement, 1994). Parts II and III classify specific modalities of subsidies into either prohibited (the 'red light'

category) or actionable (the 'yellow light' category), and apply for each category a different set of rules and procedures (WTO Subsidies and Countervailing Measures Agreement, 1994). Part IV deals specifically with a third category of subsidies – the non-actionable subsidies (the 'green light' category) – that cannot be brought before the WTO Dispute Settlement System if certain criteria are met (WTO Subsidies and Countervailing Measures Agreement, 1994). Part V lays out the substantive and procedural criteria that must be fulfilled for allowing a WTO member to impose countervailing measures against subsidised goods (WTO Subsidies and Countervailing Measures Agreement, 1994). Parts V and VI set out the notification and surveillance procedures that guarantee the implementation of the multilateral agreement (WTO Subsidies and Countervailing Measures Agreement, 1994). Part VII contains rules on special and differential treatment that benefit developing and least developing country WTO members (WTO Subsidies and Countervailing Measures Agreement, 1994). In Part IX, there are provisions on transition obligations for developed and centrally-planned economy members (WTO Subsidies and Countervailing Measures Agreement, 1994). Lastly, Parts X and XI focus on dispute settlement mechanism as well as final provisions (WTO Subsidies and Countervailing Measures Agreement, 1994).

As underscored above, both substantive and procedural requirements that authorise the imposition of countervailing measures are found in Part V of the SCM Agreement. Among the former set of requirements, it is worth highlighting the three elements that a WTO contracting party must identify before applying countervailing measures, which are the subsidised imports, the injury to a domestic industry and the causal relation between the subsidised imports and the material injury. Whereas the existence or not of subsidies depends on the specifications detailed in Part I of the SCM Agreement, the requirements for determining what constitutes injury and causation are seen in Part V of the agreement (WTO Subsidies and Countervailing Measures Agreement, 1994).

The procedural rules in Part V of the SCM Agreement set the parameters for the initiation and workings involved in the countervailing investigation, for the adoption of provisional and definitive measures, as well as for their duration and use of undertakings (WTO Subsidies and Countervailing Measures Agreement, 1994). The ultimate goal of these provisions is to ensure transparency, especially regarding the legal and material facts presented by the investigating authorities to support their final determination, and

opportunity for interested parties to defend their point of view (Matsushita, Schoenbaum, Mavroidis and Hahn, 2015).

2.3. An Overview of the Legal Framework of Safeguard Measures in the GATT/WTO Regime

The multilateral trade regime regulates the use of safeguards mainly through Article XIX of GATT 1994 and its complementary Agreement on Safeguards. Notwithstanding these two legal frameworks, specialized agreements regarding the textile, agriculture and service sectors invoke methods of application of safeguards (Matsushita, Schoenbaum, Mavroidis and Hahn, 2015).

Article XIX of GATT 1994 sets forth the baseline rules on the imposition of emergency action, widely known as safeguard measures. The so-called 'escape clause' brings out the general idea driving the use of this category of trade remedy as well as the conditions under which a contracting party may apply it (WTO Agreement on Safeguards, 1994). Accordingly, as a result of unforeseen developments, a WTO member is allowed to withdraw concessions temporarily on certain products, or raise trade barriers on them, if imports of such goods increase rapidly as to cause or threaten to cause serious injury to the importing member's domestic industry. This waiver of obligation might take the form of quantitative import restrictions or of duty increase attaining a higher value than the bound rates (WTO Agreement on Safeguards, 1994).

The Agreement on Safeguards contains specific provisions on the application of this trade remedy, in many ways reinforcing, clarifying and complementing disciplines found in Article XIX of GATT 1994 (Matsushita, Schoenbaum, Mavroidis and Hahn, 2015). Also featuring in the agreement are binding principles that any WTO contracting party must observe while imposing safeguards. Therefore, besides the temporary nature of the measures and the determination of material injury, or threat of injury, there are the most-favoured nation principle on the application of duties, the need to progressively liberalize the measures while in effect, and the commitment to compensate the target member for the trade losses (WTO Agreement on Safeguards, 1994).

It is worth pointing out that Articles XII and XVIII of GATT 1994, Section B, refer to another category of safeguards, which permit members to impose import restrictions with a

view of avoiding any havoc in balance of payment. Matsushita, Schoenbaum, Mavroidis and Hahn (2015) note their little relevance in the current context in which a trend of adopting floating currency exchange rates prevails.

The Agreement on Safeguards is divided into four main parts. The first corresponds to the general provisions (Articles I and II). The second part entails rules on the imposition of new safeguard actions, understood as being the measures only applied after the WTO agreement entered into force (Articles III to IX). The following part focuses on measures that had been adopted before the WTO came into existence (Articles X and XI). And the fourth part contains rules on multilateral surveillance and institutions (Articles XII to XIV) (WTO Agreement on Safeguards, 1994).

With regards to the general provisions, Article I asserts that any measure taken pursuant to Article XIX of GATT 1994 must go in tandem with the legal obligations set forth in the Agreement on Safeguards (WTO Agreement on Safeguards, 1994). In this regard, any invoked emergency action cannot bear legal footing in other WTO multilateral agreement. Article 2, on the other hand, sets out the conditions the contracting parties must observe in applying safeguards, and which Article XIX of GATT 1994 also stresses, as previously underscored (WTO Agreement on Safeguards, 1994). Three elements of these conditions stand out: (1) the increase of imports of the good under consideration; (2) the increase of imports must derive from unpredictable circumstances and from obligations pertaining to WTO rules; and (3) the same increase of imports must also cause, or threatens to cause, serious injury to a domestic industry that produces a 'like' product or a 'directly competitive' product (Matsushita, Schoenbaum, Mavroidis and Hahn, 2015).

3. The Pros and Cons with Trade Remedies in PTAs

Interests on the relationship between PTAs and trade remedies grew large among scholars as its importance became more evident within the realm of regional integration over time. Teh, Prusa and Budetta (2009) underscore two major incentives for PTAs partners to sponsor trade remedies provisions in their intra-trade institutional arrangements.

The first and most intuitive one is to buttress protection for import-competing sectors. This is even more salient in the case of domestic industries that are in their early stage of development and/or subject to government long-term plans of attaining a competitive position in the global market for its 'national champions'. The second reason corresponds to the need to anticipate adjustments costs by functioning as escape valves to liberalism and to cope with the social pressure for protectionism that emerge once overall trade barriers are lifted (Teh, Prusa and Budetta, 2009). A third element concerns the goal of reducing resistance at the domestic level, translating into more leeway for national representatives to negotiate the trade arrangement, hence arriving at a successful outcome (Teh, Prusa and Budetta, 2009). The idea is to amass political support for the agreement from the outset, before the PTA comes into effect and opposition gains ground, especially among the most vulnerable constituents to foreign competition.

The above justifications for the adoption of trade remedies provisions in PTAs go in tandem with the embedded liberalism compromise. Ultimately, they all relate to some extent to the notion of balancing liberalism with some degree of protectionism and state interventionism. Commonly viewed as a means for speeding up the opening of national markets, PTAs are not, in this regard, a departure from the inter-subjective framework of meaning that gave birth to the multilateral trading system, if one considers, for instance, the role ascribed to trade remedies in them.

Critics of PTAs specific rules regarding trade remedies tend to stress two negative consequences that they might inflict upon international trade, which are trade diversion and discrimination between the PTAs partners and non-members (Teh, Prusa and Budetta, 2009; Voon, 2010).

On the first issue, pundits like to point out that PTAs are doomed to cause trade diversion only by tariff elimination among its members (Viner, 1950; Grossman and Helpman, 1995). Allegedly, the likelihood of diversion increases when PTAs rules either do away with trade remedies or dictate a higher threshold for their use among members of the PTA *vis-à-vis* non-members (Teh, Prusa and Budetta, 2009; Voon, 2010). The abolishment of trade remedies among PTA partners while preserving their right to rely on multilateral rules for protection against competitive imports from non-members might aggravate the deviation of trade by making their entry into the customs area more difficult. A similar result is expected when a given PTA sets out strict disciplines on the adoption of trade remedy

actions against its members but leaves all trade with non-members out of their normative scope (Teh, Prusa and Budetta, 2009; Voon, 2010).

Discrimination between PTA partners and non-members has been identified as the major political concern by scholars with regards to the selective nature of trade remedy provisions found in some PTAs (Teh, Prusa and Budetta, 2009; Voon, 2010). Regardless of the specific mechanisms involved in such practices, it suffices to state that PTA rules on trade remedies could pave the way for discriminatory behaviour whenever they reduce the chances of targeting a PTA partner, on one hand, and increases the likelihood of taking action against non-members, on the other hand (Teh, Prusa and Budetta, 2009; Voon, 2010).

4. The Legal Controversies of Trade Remedies Specific-Rules in PTAs

PTAs legal provisions on trade remedies is not a subject of uncontroversial WTO jurisprudence, let alone an undisputable issue in academic debates. At the centre of the quarrels lies the interpretation on Paragraph 8(b) of GATT Article XXIV, which requires WTO members, in establishing free trade areas and customs unions, to 'eliminate duties and other regulations restricting trade' (Emerson, 2008; Teh, Prusa and Budetta, 2009; Voon, 2010). The wording 'other regulations restricting trade' causes dubious understanding, since one might interpret it as meaning any measure with the potential to restrict trade (Emerson 2008; Teh, Prusa and Budetta, 2009; Voon, 2010). Thus, with this all-encompassing linguistic approach, trade remedies would be banned from any normative content of PTAs.

Reinforcing this reasoning, Paragraph 8(b) of GATT Article XXIV also allows members to exclude certain GATT Articles from the general obligation to 'eliminate (...) other restrictions to trade', but it does so by specifying the supposedly GATT Articles that could be exempted, as one reads in the following excerpt: 'except, where necessary, those permitted under Articles XI, XII, XIII, XIV, XV and XX' (Emerson, 2008; Teh, Prusa and Budetta, 2009). Advocates of the incompatibility between the multilateral rules and trade remedy specific rules in PTAs assert that both GATT Articles VI (anti-dumping and countervailing duties) and XIX (emergency action on imports of particular products) would have to be included among the highlighted exemptions, for trade remedies actions to be permitted within the restricted

reality of intra-regional (or bilateral) trade (Emerson, 2008; Teh, Prusa and Budetta, 2009). The simple fact that they are not explicitly mentioned in the referred passage would dictate that PTAs are not allowed to regulate trade remedy measures, otherwise they would not be in conformity with WTO rules.

Despite the above remarks, a different understanding of Paragraph 8(b) of GATT Article XXIV prevails to date, and it basically hinges on two specific claims that have enjoyed considerable acceptance over time, alas, not to the point of being free of criticism, given that it is still regarded as an unsettled issue in international trade law (Matsushita, Schoenbaum, Mavroidis and Hahn, 2015).

First, the provisions that could be exempted from the general obligation to 'eliminate (...) other restrictions to trade' do not necessarily make up an exhaustive list. Indeed, a series of Working Party reports have acknowledged the indicative character of the articles contained in the list (Matsushita, Schoenbaum, Mavroidis and Hahn, 2015). Moreover, the adjudicating bodies of the WTO Dispute Settlement System have already dealt with the subject of whether PTAs partners could impose safeguard measures against one another (Matsushita, Schoenbaum, Mavroidis and Hahn, 2015). Their final rulings converge into permitting this course of action, provided that the principle of parallelism is observed. This means that PTAs imports must be taken into account when assessing injury to domestic industry. In other words, PTAs members cannot restrict the analysis of injury by only counting the imports coming from non-members, hence shunning members imports from the overall calculus for determining the causation links between imports and damage (Matsushita, Schoenbaum, Mavroidis and Hahn, 2015). In this vein, the permission for PTAs members to use safeguards for their intra-regional trade – what undoubtedly characterizes a restriction to trade – only strengthens the argument that the parenthesis is not an end in itself, and thus the inclusion of other GATT articles remains a possibility.

The second argument in favour of the right of PTAs members to apply trade remedy instruments against one another without being obliged to extend the same measures to third parties stems from the same general rule, more specifically to the so-called 'internal requirement' as the literature commonly calls it (Matsushita, Schoenbaum, Mavroidis and Hahn, 2015). This requirement refers to the obligation to eliminate duties and other restrictions to trade with regards to 'substantially all the trade between the constituent territories in products originating in such territories' (Pauwelyn, 2004).

The wording 'substantially all trade' is key here. What does it mean? Are PTAs' partners bound to remove a certain percentage of duties for being legally able to enter a free trade area or a customs union? If they do, what would the threshold be? To date, no consensus has emerged on the precise contours of this provision, regardless of several attempts to quantify the term 'substantially' (Pauwelyn, 2004; Matsushita, Schoenbaum, Mavroidis and Hahn, 2015). In fact, Article XXIV Working Parties have been established with the purpose of setting a common understanding, however divergent opinions lived on (Pauwelyn, 2004; Matsushita, Schoenbaum, Mavroidis and Hahn, 2015). Some of these technical groupings have even worked on a formula that attributed to 'substantially all trade' not only a quantitative, but also a qualitative element (Pauwelyn, 2004; Matsushita, Schoenbaum, Mavroidis and Hahn, 2015). The latter would correspond to the prohibition of leaving out an entire economic sector from the liberalization of trade within a particular PTA, even if the elimination of tariffs results in a high percentage of the total exchanges (Pauwelyn, 2004; Matsushita, Schoenbaum, Mavroidis and Hahn, 2015). Efforts to clarify the meaning of 'substantially all trade' notwithstanding, WTO members have failed to provide a clear definition of the term.

In short, because one is unable to determine exactly what 'substantially all trade' means in terms of amount and value, trade remedies could not be excluded from the legally permitted restrictions on intra-regional trade on the grounds that they would breach WTO law for not complying with GATT Article XXIV. The mere fact that countries continue to sign and adhere to PTAs that have provisions on trade remedies only ratify the notion that this trend has become an accepted and regular practice in light of international trade law.

5. The Templates for Assessing Trade Remedies in PTAs

The comparative analysis between the US and China PTAs must have a point of departure from which one could assess their similarities and differences as well as their missing and innovative features. A benchmark for the trade remedy rules in PTAs is provided by Teh, Prusa and Budetta (2009), who have compared a total of 74 PTAs, all of them having been notified to the WTO and come into effect from the year 2000 onwards. In

their study, there is a template for each category of trade remedy, where the authors have pinpointed subjects of regulation that serve as baselines for mapping the agreements.

Even though the main purpose of these templates is to find out whether the PTAs rules on trade remedies affect the level of discrimination between members and non-members, the bulk of the elements chosen for tracking down specific provisions is also helpful with the identification of rules that relate to the embedded liberalism compromise. For this reason, the general framework of each template crafted by Teh, Prusa and Budetta (2009) will guide the further comparative analyses. Yet these templates will also be subject to modifications. Indeed, although most of the elements from the templates will be preserved, new ones will be added to them, and others simply discarded with a view of tailoring these templates to suit the goal of unveiling the PTAs that best resonate the spirit of the embedded liberalism compromise.

As pointed out in the section that explains the qualitative methodological approach of this empirical study, the further comparative analyses will encompass 10 PTAs, evenly divided between the US and China. Once again, the choice of these PTAs with overlapping signatory parties serves the purpose of controlling their weight in shaping the content of such agreements. They are the US-Korea, the US-Australia, the US-Chile, the US-Peru, the US-Singapore, the China-Korea, the China-Australia, the China-Chile, the China-Peru and the China-Singapore PTAs.

The templates, thus, will streamline the search in the specific chapters on trade remedies for the provisions that affect the full realization of the embedded liberalism compromise, which need to take into account the ability of governments to fend off the excesses of increased trade that harm domestic groups and industries.

5.1. On the Two-Level Anti-Dumping Template

Teh, Prusa and Budetta (2009) have devised a two-level template for comparing anti-dumping rules in PTAs. The first level seeks to address two fundamental questions: 1) whether anti-dumping measures are proscribed among the PTA members; and 2) whether specific anti-dumping rules apply to PTA members' trade. If specific anti-dumping rules that

target the members' trade do exist, the second-level template unveils the specific provisions that differ from the multilateral rules (Teh, Prusa and Budetta, 2009).

The first level of the template encompasses three distinct categories of anti-dumping rules found in PTAs (Teh, Prusa and Budetta, 2009). The first corresponds to the provisions that abolish anti-dumping measures among PTAs members (Teh, Prusa and Budetta, 2009). The second category deals with PTAs that neither prohibit their use nor present specific provisions on anti-dumping (Teh, Prusa and Budetta, 2009). The last category focuses on the PTAs which permit the application of anti-dumping measures, and which feature specific provisions on them (Teh, Prusa and Budetta, 2009).

As for the second-level template, the aim is to address the specific provisions on anti-dumping that go beyond the content of the multilateral rules. Teh, Prusa and Budetta (2009) draw attention to the fact that, even though some PTAs have several provisions on anti-dumping, most of them just emulate the benchmarks set forth by the WTO normative framework. Put it differently, the second-level template seeks to identify WTO-plus and WTO-extra rules on the subject matter.

For the purpose of the further comparative analyses, the first level of that template will remain intact. Nevertheless, the second level will also include the WTO-like rules insofar as they refer to the administrative proceedings that affect the embedded liberalism compromise in some degree, as later will be explained. *Table 1* summarises all the elements compounding both levels of the template.

The areas in which one usually identifies departures from the WTO Anti-Dumping Agreement correspond to PTAs provisions on *de minimis* dumping margins, *de minimis* dumping volumes, the lesser duty rule and the duration of final anti-dumping duties (Teh, Prusa and Budetta, 2009). Conversely, WTO-plus and WTO-extra rules on anti-dumping are scarce when one focuses on PTAs provisions on 'determination of dumping, determination of injury, definition of domestic industry, evidence, provisional measures, price undertakings, retroactivity and notification and consultation' (Teh, Prusa and Budetta 2009, p. 184).

According to multilateral rules, an anti-dumping investigation must terminate whenever dumping margins are less than 2 per cent of the export price or the volume of dumping imports from a given customs territory is found to be less than 3 per cent of imports (Matsushita, Schoenbaum, Mavroidis and Hahn, 2015).

PTAs usually modulate these provisions by setting the bar either higher or lower than these benchmarks. If the goal is to safeguard more protection against PTAs imports, then lower *de minimis* dumping margins or lower *de minimis* volumes are expected to be found (Teh, Prusa and Budetta, 2009). Should this happens, the likelihood of applying anti-dumping actions against imports originating from PTAs members increases, which reflects on the strengthening of the embedded liberalism compromise, given that domestic industries will count on an extra level of protection. Otherwise, if the purpose is to grant a favourite treatment to imports coming from PTA partners, both sorts of *de minimis* ought to be higher than the WTO's threshold (Teh, Prusa and Budetta, 2009). In this situation, it will be less likely for PTAs members to initiate anti-dumping investigations, which, in turn, will reduce the prospect of providing protection to their domestic industries, therefore, weakening the embedded liberalism compromise.

Mutually acceptable solution is another area of regulation with implication for the embedded liberalism compromise. Provisions on this subject matter are expressed either as an obligation that would push the PTAs parties towards arriving at a satisfactory understanding for both of them or just as an encouragement that would drive members to accommodate their differences through a series of notifications and consultations.

The former category of rules, which might take the form of either a WTO-plus or a WTO-extra rule, is the most consequential to the notion of embedded liberalism. The mandatory command of arriving at a mutually acceptable solution implies that the interested parties seeking an anti-dumping action would not have their demands or rights fully met. Accordingly, the bargain over what could be acceptable for both parties often means dismissing part of the domestic groups' complaints for trade protection.

The lesser duty rule has also become a common feature among anti-dumping rules in PTAs. Under multilateral rules, WTO members are encouraged to apply an anti-dumping duty that is less than the dumping margin if the lower duty would be enough to cancel out the injury inflicted upon the domestic industry (Matsushita, Schoenbaum, Mavroidis and Hahn, 2015).

When they exist in PTAs, the lesser duty rule intends to give an upper hand for its members. This happens because a lower anti-dumping duty would be levied on PTAs members, but not necessarily on non-members' imports, against which the duty would remain relatively higher. Thus, if the circumstances are met, anti-dumping measures would

be taken against a group of suppliers, among them members and non-members alike, but with the lesser duty rule restricted only to the PTA members (Teh, Prusa and Budetta, 2009).

Besides the effects upon the level of discrimination between members and non-members, the presence of the lesser duty rule in PTAs also means that a lower level of protection is more welcomed at times than the accrued gains that parties benefit from increased trade. In the absence of such rule, the contrary is also true, even though only minor positive impacts in terms of overall protection to domestic industries are expected. The imprecise quantitative estimation and difficulty of qualifying the positive results for the embedded liberalism compromise that would derive from the possibility of members to resort to the lesser duty rule justify its exclusion from the template on anti-dumping provisions.

The duration of final anti-dumping duties also features in the second-level template. An anti-dumping duty must not exceed five years according to multilateral rules (Matsushita, Schoenbaum, Mavroidis and Hahn, 2015). PTAs that present WTO-plus rules on this subject matter will either extend or shorten the five years period (Teh, Prusa and Budetta, 2009). In this vein, the agreements that guarantee a longer duration for the parties would safeguard a temporary higher level of market protection than the ones that only allow a shorter period or even none.

This reasoning also applies to specific rules on the duration of provisional measures, which are also found in several PTAs (Teh, Prusa and Budetta, 2009). The WTO Anti-Dumping Agreement states that anti-dumping provisional measures – which can take the form of a duty or a security by cash deposit or bond – shall not exceed 4 months, but subject to change for up to 6 months if the affected exporters represent a significant percentage of the trade (Matsushita, Schoenbaum, Mavroidis and Hahn, 2015). At the same token, longer periods would favour exporters from a PTA member by allowing them to gain back a competitive edge over the other party's exporters practicing dumping, just as they benefit domestic industries coping with unfair competition.

The establishment of a regional body vested with the authority to conduct investigations or to review final decisions of national authorities regarding anti-dumping actions is another element added to the two-level template. The existence of such institutions is said to reduce the likelihood of implementing anti-dumping measures by

curbing the influence of domestic producers over national authorities when it comes to defending the interests and needs of the former group (Gagné, 2000; Jones, 2000). Imbued with the spirit of accommodating divergent interests, the intergovernmental body would push PTAs members towards accepting an amicable and more balanced solution, which usually make the injured party to give up on the best result even if the prospect of winning the case is significant.

As the last element included into the template, there are the bounding provisions on a series of steps and procedures that parties must undertake to arrive at final determinations on anti-dumping actions. Like the regional bodies with the power to interfere in final decisions, these bureaucratic and administrative proceedings tend to slowdown the whole process and chain of events leading up to the adoption of anti-dumping actions, increasing the opportunity costs for domestic industries to initiate their complaints, thereby discouraging them from fighting for their causes. When the provisions regulating these duties somewhat innovate the multilateral rules, the process becomes more burdensome for interested parties, which usually translate into less anti-dumping actions taken. For this reason, the template will differentiate between WTO-like and WTO-plus rules whenever they are identified.

Both ways – either by the mediation of an intergovernmental body or through longer and lingering procedures – could tarnish the embedded liberalism notion by making anti-dumping measures a trade remedy to which they are less likely to resort.

Table 1: Antidumping Template

Elements of the first level

1. Anti-dumping actions disallowed
2. Anti-dumping actions allowed but with no specific provisions
3. Anti-dumping actions allowed and with specific provisions

Elements of the second level

- a. Mutually acceptable solutions
- b. Different *de minimis* dumping margin
- c. Different *de minimis* dumped volume

- d. Different duration of anti-dumping duty
 - e. Regional body/committee
 - conducts investigation and decides on anti-dumping duties
 - reviews/remands final determinations
 - facilitates communication
 - f. Other procedures
 - under a WTO-like rule
 - under a WTO-plus rule
-

5.2. On the Two-Level Countervailing Measures Template

Teh, Prusa and Budetta (2009) have also designed a two-level template for comparing PTAs' specific rules on countervailing measures. Like the antidumping template, the template for countervailing measures is useful for singling out normative contents that are in conformity with or diverge from the concept of embedded liberalism. Standing out as singular areas of the template on countervailing measures there is the implementation of a common subsidy policy and/or state aid programme, as well as provisions that discipline the use of subsidies and other sort of government intervention (Teh, Prusa and Budetta, 2009).

Going in tandem with the antidumping template, the first level helps with the classification of PTAs into three distinct groups that are mutually exclusive (Teh, Prusa and Budetta, 2009). The first group concerns the PTAs that ban the use of countervailing duties against partners. The second group corresponds to PTAs that neither prohibit countervailing measures nor do they present specific provisions on this trade remedy. And the third group entails the agreements containing specific provisions on countervailing measures.

Being the case that most PTAs having specific provisions on countervailing measures just replicate the multilateral rules, Teh, Prusa and Budetta (2009) ascribe to the second-level template the normative provisions showing some degree of innovation with regards to the WTO normative framework. Nonetheless, where innovative rules are spotted in PTAs, they invariably concern the abolishment of export subsidies on agricultural goods or the banning of state programmes that would eventually jeopardise competition, according to these authors (Teh, Prusa and Budetta, 2009). Because of the frequency with which these two elements appear in the PTAs provisions on countervailing duties, they ended up comprising the first level of the template.

A few changes are necessary for adapting the template on countervailing measures to the objectives of this qualitative study. While all the elements pertaining to the first level of the template are preserved, the second level will also include the administrative proceedings that arguably influence the way the embedded liberalism compromise manifests itself. Both WTO-like and WTO-plus rules are relevant, although the provisions fitting into the later normative category are the ones that usually promote the greatest impact. As for the rest of the elements of the second level – specific provisions on mutually acceptable solutions and the creation of a regional institution – they are exactly the same as the ones found in the antidumping template, and whose inclusion are justified on the same grounds already laid out in the previous section. As can be seen right below, *Table 2* contains all constituent elements of the template on subsidies and countervailing duties.

Table 2: Countervailing Duties Template

Elements of the first level

I. Subsidies

- prohibit export subsidies on agriculture

II. State aid

- incompatible if it distorts competition

III. Countervailing duties

a. Countervailing duties disallowed

b. Countervailing duties allowed but no specific provisions

c. Countervailing duties allowed and with specific provisions

Elements of the second level

1. Mutually acceptable solution

2. Regional body/committee

- conducts investigation and decides on countervailing duties
- reviews/remands final determinations
- facilitates communication

3. Other procedures

- under a WTO-like rule
 - under a WTO-plus rule
-

5.3. On the Safeguard Measures Templates

With regards to safeguard actions, Teh, Prusa and Budetta (2009) draw attention to the differences between 'bilateral' and 'global' safeguard provisions found in PTAs. Having a much more limited scope, bilateral safeguard measures are meant to target only the trade involving PTAs partners. They work as temporary reliefs for the swift economic integration unleashed by the mandatory dismantlement of trade barriers in accordance with the agreements. Their main purpose, thus, is to offer PTAs members a temporary escape valve for avoiding the full-fledged effects of the inbound flux of imports that pose a threat to the domestic industries not yet ready to cope with the new level of competition. This would allow PTAs members to progressively adapt to the new circumstances derived from the legal commitments, as the provisory measures would help them in buying some extra time for making the right adjustments to the new *status quo*.

However, PTAs do not always explicitly mention bilateral safeguards when they permit the adoption of safeguard actions to deal with emergency situations that emerge from the preferential treatment given to the parties of the agreement (Teh, Prusa and Budetta, 2009). Regardless of the way trade agreements refer to them, the permission for their use recalls the need to balance incentives for advancing free trade with the discretionary power of national authorities to protect their constituencies against the negative consequences of unrestrained liberalism, which is exactly what the embedded liberalism compromise sustains.

When PTAs discipline global safeguard measures, they usually do in such a way as to establish conditions under which PTAs partners are exempted, partially or entirely, from the reach of these actions. This special treatment conferred to PTAs partners discriminates against non-members, given that global safeguards will mostly affect the customs territories falling outside the bilateral trade. The word 'global' would then mean every WTO member whose exports are eligible for the safeguard measures, but the PTA partners.

The extra layer of protection against non-members is expected and, therefore, it should not come as a surprise, if one takes into account the exact goal of PTAs, which is to further the pace of lifting trade barriers among members, while preserving the right of not extending the same treatment to non-partners. Nevertheless, excluding PTAs members

from the overall effects of global safeguards thwarts the governments' ability to intervene when they deem necessary, which goes in tandem with the logic of embedding liberalism.

In this regard, when assessing whether PTAs specific provisions on safeguards favour or harm the embedded liberalism compromise, it becomes imperative to distinguish between bilateral and global safeguards. The awareness that specific provisions on each modality of safeguard actions – bilateral or global – will cause different impacts in light of the embedded liberalism compromise explains the need for adopting two templates, one for each modality.

5.3.1. On the Two-Level Bilateral Safeguard Measures Template

The template conceived by Teh, Prusa and Budetta (2009) for the PTAs provisions on bilateral safeguard actions presents two levels. The first level distinguishes the safeguard provisions into three mutually exclusive categories, like the templates for anti-dumping and countervailing actions. The first category concerns the PTAs that prohibit the use of safeguard actions among its partners. The second group corresponds to PTAs that allow their use but have no specific provisions. The third category entails the trade agreements that allow the adoption of bilateral safeguard measures and present specific rules on them (Teh, Prusa and Budetta, 2009).

The second level focuses on provisions belonging to the third category of PTAs. The constituent elements of this part of the template are the following: a) conditions for the application of safeguards; b) mutually acceptable solution; c) investigation procedures; d) application of safeguard measures; e) provisional measures; f) duration and review of safeguard measures; g) compensation; h) retaliation; i) regional body; j) notification and consultation; and k) special safeguards (Teh, Prusa and Budetta, 2009).

Notwithstanding the relevance of the rules on compensation and retaliation for assessing the degree of similarity to the WTO normative framework, their implication for the embedded liberalism is not straightforward. Thus, the decision to exclude them from the bilateral safeguards template avoids wrong causal inferences. Moreover, the sections about the other trade remedies templates already set out the arguments on how the PTAs provisions on mutually acceptable solution, provisional measures, duration of the trade

remedy, regional bodies, administrative proceedings through notifications and consultations relate to the concept of embedded liberalism.

Rules on the conditions for the application of bilateral safeguards set the first barriers that PTAs parties must overcome to initiate the process of applying the trade remedy. As these conditions also influence the likelihood of putting in place bilateral safeguards, the prospect of having government intervention through this legal means of action is inevitably affected.

The template comprises two of the most common conditions found in PTAs. The first authorizes the application of bilateral safeguards when increasing imports cause serious injury to a domestic industry. The second set of conditions narrows down the opportunities for PTAs parties to apply the trade remedy, as they would only be able to resort to them during the transition period, and only if tariff reductions lead to increased imports and, consequently, to serious injury. Surely, the latter combination of circumstances is more restrictive for parties wanting to adopt bilateral safeguards to advance their domestic interests.

The template is also set to identify specific rules on the investigation procedures that do not match the legal content of the WTO rules. By compelling parties to adopt other duties and obligations that deepen the legal content of the multilateral rules, domestic actors interested in applying bilateral safeguards are expected to endure a more burdensome and bureaucratic process until this phase is successfully completed.

Just as the conditions for application, the legal limits for the awaited effects of the trade remedy as well as the means through which they are adopted also set the boundaries for government intervention when applicants recur to bilateral safeguards. In the template, these modifying factors are captured by the element 'application of safeguards'.

Apart from the above provisions, the template (see *Table 3*) also encompasses special safeguard rules that discipline sectors or products that enjoy considerable political sensitiveness for being the most vulnerable to liberalization (Teh, Prusa and Budetta 2009). These are the economic sectors that face hardships in multilateral negotiations over attempts to open up markets due in large part to a greater resistance from the developed world. The special condition of these specific provisions hinges on two attributes: the different mechanisms that drive their adoption – set off by a price or a quantity threshold –,

and the waiver of the injury requirement as a prerequisite for triggering the trade remedy (Teh, Prusa and Budetta, 2009).

Table 3: Bilateral Safeguards Template

Elements of the first level

1. Safeguard measures disallowed
2. Safeguard measures allowed but with no specific provisions
3. Safeguard measures allowed and with specific provisions

Elements of the second level

- a. Conditions for application of safeguard
 - increasing imports causing serious injury to domestic industry
 - during transition period, reduction in tariffs lead to increased imports and to serious injury
 - other
 - b. Mutually acceptable solution
 - c. Investigation
 - d. Application of safeguard measures
 - only to the extent necessary to remedy serious injury and facilitate adjustment
 - suspend concessions, tariff reduction or revert to MFN
 - other
 - e. Provisional measures
 - f. Duration and review of safeguard measures
 - duration less than 4 years
 - not allowed beyond transition period
 - g. Regional body/committee
 - conducts investigations and decides on safeguard duties
 - review/remand final determinations
 - other
 - h. Notification and consultation
 - i. Special safeguards
-

5.3.2. On the Global Safeguard Measures Template

The template designed for mapping the PTAs with specific provisions on global safeguards is more straightforward, having only one level of analysis, as can be observed in

Table 4. It is concerned with provisions that make explicit reference to global safeguards and to the rights and obligations pertaining to GATT Article XIX as well as the Agreement on Safeguards (Teh, Prusa and Budetta, 2009).

More specifically, the template helps to track down the PTAs that exclude partners from the reach of global safeguards measures and the conditions that allow this to happen. This is key for identifying discrimination between PTAs members and non-members, according to Teh, Prusa and Budetta (2009). For the further comparative analyses, it will help to shed light on how the PTAs provisions on this subject matter affect the embedded liberalism compromise. After exempting PTAs members from global safeguards, domestic actors from one party will no longer be able to reclaim protection against imports originating from the other party, hence taking away from government authorities their prerogative to tame any excess of free trade.

The template also underscores the underlying material conditions identified in the PTAs for excluding members from the global safeguard actions. They are: 1) if imports coming from them do not account for a substantial share of total imports; and 2) if these imports do not contribute to serious injury or the threat thereof (Teh, Prusa and Budetta, 2009). Clear definitions of what constitute ‘substantial share’ and ‘serious injury’ are seen in most of the PTAs that disallow the use of global safeguards between partners (Teh, Prusa and Budetta, 2009).

Table 4: Global Safeguards Template

Elements

1. Retains rights and obligations under GATT Art. XIX/Safeguards Agreement
2. Excludes PTA members from global actions
3. Grounds for exclusion
 - A. Imports from the other Party does not account for a substantial share of total imports
 - B. Imports from the other Party does not contribute to serious injury or threat thereof
4. Definitions
 - a. Substantial share
 - among the top five suppliers during the most recent three-year period
 - exports jointly account for 80 per cent of total imports of importing country

b. Contribute importantly to serious injury

- growth rate of imports from a party is lower than the growth rate of imports from all sources
-

6. Mapping the Anti-Dumping Provisions in US PTAs

None of the five US' PTAs selected for the comparative analysis – the US-Korea, the US-Australia, the US-Chile, the US-Peru, and the US-Singapore PTAs – disallowed the use of anti-dumping actions. This finding alone is proof of the utility that parties attribute to this modality of trade remedy within the scope of their bilateral relations. Accordingly, this means that the US did not rule out the use of this mechanism for protecting their domestic industries against unfair competition. Nonetheless, only the US-Korea PTA contains specific provisions on this subject matter among all the agreements highlighted.

As for the specific rules found in the US-Korea PTA, none of them refers to a different *de minimis* dumping margin and dumped volume, a lesser duty rule, or a different duration of anti-dumping duty. Despite the absence of a mandatory rule for the US and South Korea to arrive at a mutually acceptable solution in final determinations of anti-dumping duties, the agreement establishes a wide range of opportunities for the parties to exchange notifications and consult with each other before an anti-dumping measure is finally adopted.

Moreover, the US-Korea PTA creates a Committee on Trade Remedies, comprising representative of both parties in charge of dealing with trade remedy issues, and expected to meet at least once a year. However, this regional body is stripped of any vested power to conduct investigation or review final decisions. With a limited scope of action, its main role is to serve as a channel of communication for the PTA members with a view of enhancing the level of cooperation between their state agencies as well as to oversee the compliance with specific provisions of the agreement.

Most of the specific provisions in the US-Korea PTA refer to the employment of procedures or administrative duties along the different phases involving the adoption of antidumping measures. The legal obligations by which applicants of an anti-dumping action must abide comprise not only some of the same rules found in the WTO multilateral

agreements, but also rules of a WTO-plus character. It is reasonable to expect that, when provisions differ from the content of the WTO legal texts, the party seeking an anti-dumping action would usually face an extra hurdle to overcome along the way. This is because the domestic laws and institutions that deal with such matters usually need to adapt and tailor their proceedings to attend the new demands.

The WTO-like rules on antidumping actions in the US-Korea PTA include obligation on: a) on the need '(...) to provide written notification to the other Party of the receipt of an antidumping application and afford the other Party a meeting or other similar opportunities regarding the application' (the US-Korea PTA, Article 10.7, § 4a); b) on the need '(...) to afford adequate opportunity for consultations, to exporters of the other Party regarding proposed price undertakings which, if accepted, may result in suspension of the investigation without imposition of antidumping duties' (the US-Korea PTA, Article 10.7, § 5b); c) on the need '(...) from the part of an investigating authority to promptly notify the responding party of its intent to conduct an in-person verification of information provided by a responding party and pertinent to the calculation of an antidumping duty margin' (the US-Korea PTA, Article 10.7, § 6); d) on the need '(...) to provide the responding party advance notice of the dates on which the investigating authority intends to conduct any such in-person verification of information' (the US-Korea PTA, Article 10.7, § 6a); and e) on the need '(...) to make the report available, consistent with the Party's law, to all interested parties in sufficient time for the interested parties to defend their interests in the segment of a proceeding' (the US-Korea PTA, Article 10.7, § 6d).

The WTO-plus rules address a) the need to '(...) prior to any such in-person verification, (...) to provide the responding party a document that sets forth the topics the responding party should be prepared to address during the verification and describes the types of supporting documentation the responding party should make available for review' (the US-Korea PTA, Article 10.7, § 6b); b) the need to '(...) after the verification is completed' to '(...) prepare a written report describing the methods and procedures that it followed in carrying out the verification and the results of the verification' (the US-Korea PTA, Article 10.7, § 6c); and c) the need to '(...) disclose for each interested party the calculations used to determine the rate of dumping' (the US-Korea PTA, Article 10.7, § 7).

7. Mapping the Anti-Dumping Provisions in Chinese PTAs

Like the US PTAs, the Chinese agreements included into this study – the China-Korea, the China-Australia, the China-Chile, the China-Peru, and the China-Singapore PTAs – do not present any provision disallowing the parties to adopt anti-dumping actions. Notwithstanding the absence of specific provisions in the China-Australia and the China-Chile PTAs, one comes across with such rules in the China-Korea, the China-Peru and the China-Singapore PTAs. Among this latter set of agreements, however, none of them has rules on a different *de minimis* dumping margin and dumped volume, a lesser duty rule, or a different duration of anti-dumping duty.

The goal of achieving a mutually acceptable solution is encouraged in the China-Korea PTA by mainly affording the parties opportunities to find a common understanding concerning their interests, which might eventually lead to the suspension of investigations. Nevertheless, one should not assume that the PTAs members are obliged to solve their differences before any final determination on applying anti-dumping duty has been made.

None of the Chinese PTAs determines the creation of a regional body in charge of conducting investigations and reviewing final determinations, but a provision establishing a Committee on Trade Remedies similar to the one set forth by the US-Korea PTA is also found in the China-Korea PTA. Besides the commitment to gather in a yearly basis, the intergovernmental agency also has its role restricted to monitoring the implementation of the agreement as well as to facilitating communication between the parties on issues related to trade remedies. The China-Peru PTA encourages the members to establish a cooperation mechanism between their investigating authorities, suggesting an even less institutional sway over final decisions on anti-dumping actions than the regional body of the China-Korea PTA.

As for the few PTAs with specific provisions on anti-dumping, a great deal of these rules account for administrative proceedings that a party must undertake. For instance, both the China-Peru and the China-Singapore PTAs oblige the members to provide assistance to exporters of the other party should they claim any difficulties in replying with data or information requested. The China-Korea PTA, on the other hand, enact a wide array of rules regarding application, investigation, consultation, notification, and other sorts of

administrative proceedings. Some of these legal provisions only emulate the core WTO rules on anti-dumping and others add up new obligations to common subjects.

Pertaining to the category of WTO-like rules, there are provisions: a) on the need '(...) to disclosure information, (...) before the final determination, of all essential facts and considerations' (the China-Korea PTA, Article 7.7, § 2); b) on '(...) when the margins of dumping are established on the weighted-to-weighted basis or transaction-to-transaction basis, or weighted-to-transaction basis, the parties confirm their current practice of counting toward the average all individual margins' (the China-Korea PTA, Article 7.7, § 5); c) on the need '(...) to provide written notification to the other Party – no later than seven days²⁷ before initiating an investigation – of the receipt of an antidumping application and afford the other Party a meeting or other similar opportunities regarding the application' (the China-Korea PTA, Article 7.8, § 1); and d) on the need '(...) to afford adequate opportunity for consultations, to exporters of the other Party regarding proposed price undertakings which, if accepted, may result in suspension of the investigation without imposition of antidumping duties' (the China-Korea PTA, Article 7.9, § 2).

In the case of WTO-plus rules, one comes across with mandatory provisions: a) on the need '(...) to disclosure information, immediately after any imposition of provisional measures (...), of all essential facts and considerations, which form the basis for the decision to apply measures' (the China-Korea PTA, Article 7.7, § 2); b) on the '(...) prohibition to use a methodology based on surrogate value of a third country, when determining dumping margin during an anti-dumping procedure' (the China-Korea PTA, Article 7.7, § 4); c) on the need '(...) to notify exporters and producers information to be verified and information which needs to be provided, prior to the on-the-spot verification, and to disclosure to the exporters and producers concerned the result of the verification within a reasonable period after the verification' (the China-Korea PTA, Article 7.10, § 1, § 2); d) on the need '(...) to take due consideration in holding a public hearing' (the China-Korea PTA, Article 7.11); and e) on the '(...) the possibility of initiating an anti-dumping investigation on the same product twelve months later an anti-dumping duty has been terminated as a result of a review' (the China-Korea PTA, Article 7.12).

²⁷ Even though the deadline of seven days is not seen in the WTO core rules on the subject.

Table 5 summarises the findings on the specific provisions on anti-dumping measures across the selected US and China PTAs:

Table 5²⁸: Anti-Dumping Mapping

ANTIDUMPING MAPPING												
I. Anti-dumping				II. Specific Provisions								
		Allowed						e. Regional body/committee			f. Other procedures	
PTA	1. Disallowed	2. No specific provision	3. With specific provisions	a. Mutually acceptable solution	b. Different <i>de minimis</i> dumping margin	c. Different <i>de minimis</i> dumped volume	d. Different duration of anti-dumping duty	Conducts investigations	Reviews final determinations	Facilitate communication	Under a WTO-like rule	Under a WTO-plus rule
US - Republic of Korea	0	0	1	1	0	0	0	0	0	1	1	1
China - Republic of Korea	0	0	1	1	0	0	0	0	0	1	1	1
US - Australia	0	1	0	0	0	0	0	0	0	0	0	0
China - Australia	0	1	0	0	0	0	0	0	0	0	0	0
US - Chile	0	1	0	0	0	0	0	0	0	0	0	0
China - Chile	0	1	0	0	0	0	0	0	0	0	0	0
US - Peru	0	1	0	0	0	0	0	0	0	0	0	0
China - Peru	0	0	1	0	0	0	0	0	0	0	1	1
US - Singapore	0	1	0	0	0	0	0	0	0	0	0	0
China - Singapore	0	0	1	0	0	0	0	0	0	0	1	0

8. Mapping the Subsidies and Countervailing Duty Provisions in US PTAs

The prohibition of using export subsidies on agricultural products is stated in the US-Australia, the US-Chile and the US-Peru PTAs, but the same or a similar provision is not found in the US-Korea and the US-Singapore PTAs. Moreover, none of these agreements explicitly forbids state aid, provided it negatively affects all trading partners equally, not just the PTA partner.

Another common feature across all the US' PTAs covered by the empirical analysis is the fact that none of the agreements disallows the adoption of countervailing duties against subsidised goods. Yet one of them, the US-Korea PTA, presents specific provisions on this modality of trade remedy, such as the objective of attaining a mutually acceptable solution before an investigation procedure is authorised. Even though this rule does not impede applicants from moving on to the next phases of the proceedings on countervailing measures until a final decision is made, the wording 'mutually acceptable solution' is explicitly mentioned in the legal text for occasions whereby a countervailing duty application is received, prompting consultations between the parties.

²⁸ A binary logic – where '1' means 'Yes' and '0' means 'No' – is applied for each table (Table 5, Table 6, Table 7 and Table 8) mapping one category of trade remedy.

The US-Korea PTA does not create a regional body to deal only with countervailing actions. However, as noted before, it establishes a committee to address trade remedy issues that fall upon the legal scope of the chapter on this issue area. Once again, its main purposes are to facilitate the exchange of information and monitor the compliance with the PTA's provisions, and it does not carry out any task involving investigation and revision of final determinations.

Most of the specific provisions on subsidies and countervailing measures identified in the US-Korea PTA are administrative and procedural rules that the parties must follow as conditions for the application of a countervailing measure as well as in the course of the investigation and the adoption of this trade remedy. Part of these provisions just replicate some of the normative content of the WTO multilateral agreements, whereas the other cluster of rules on the same subject deepens their content by bringing into them new obligations.

In the US-Korea PTA one comes across with the following WTO-like rules setting forth legal obligations: a) on '(...) the need to afford adequate opportunity for consultations, to exporters of the other Party regarding proposed price undertakings which, if accepted, may result in suspension of the investigation without imposition of countervailing duties' (the US-Korea PTA, Article 10.7, § 5c); b) on '(...) the need to provide the responding party advance notice of the dates on which the investigating authority intends to conduct any such in-person verification of information' (the US-Korea PTA, Article 10.7, § 6a); and c) on '(...) the need to make the report available, consistent with the Party's law, to all interested parties in sufficient time for the interested parties to defend their interests in the segment of a proceeding' (the US-Korea PTA, Article 10.7, § 6d).

The specific provisions under the category of the WTO-plus rules dictate: a) '(...) the need to transmit to the other Party's competent authorities written information regarding the Party's procedures for requesting its authorities to consider an undertaking on price or, as appropriate, on quantity, including the time frames for offering and concluding any such undertaking' (the US-Korea PTA, Article 10.7, § 5a); b) '(...) the need from the part of an investigating authority to promptly notify the responding party of its intent to conduct an in-person verification of information provided by a responding party and pertinent to the calculation of (...) the level of a countervailable subsidy' (the US-Korea PTA, Article 10.7, § 6); c) '(...) prior to any such in-person verification, on the need to provide the responding

party a document that sets forth the topics the responding party should be prepared to address during the verification and describes the types of supporting documentation the responding party should make available for review' (the US-Korea PTA, Article 10.7, § 6b); d) the need '(...) after the verification is completed (...) to (...) prepare a written report describing the methods and procedures that it followed in carrying out the verification and the results of the verification' (the US-Korea PTA, Article 10.7, § 6c); and e) '(...) the need to disclose for each interested party the calculations used to determine rate of the countervailable subsidization' (the US-Korea PTA, Article 10.7, § 7).

9. Mapping the Subsidies and Countervailing Duty Provisions in Chinese PTAs

Apart from the China-Korea PTA, the four Chinese PTAs – the China-Australia, the China-Chile, the China-Peru, and the China-Singapore PTAs – included in this study prohibit export subsidies on agricultural goods. None of the five PTAs deems state aid as an incompatible measure if it distorts competition. Likewise, neither one of these agreements explicitly forbids its members of making use of countervailing duties against subsidised goods, although the China-Chile, the China-Peru and the China-Singapore PTAs do not present any legal provisions on countervailing measures.

Both the China-Korea and the China-Australia PTAs evoke the pursuit of a mutually acceptable solution as a desirable conduit for achieving an optimal outcome, even though the agreements mention this goal at different phases of the process leading up to the final adoption of the countervailing duty. So, while the former asserts this objective as a result of consultations that the parties must hold right after the receipt of a countervailing duty application and before investigation begins, the latter refers to it during the consultations that ought to continue throughout the investigation phase for clarifying factual elements.

A regional committee with a considerable sway in making decisions on countervailing measures, either by conducting investigation or by reviewing or remanding final determinations, has not been found in the Chinese PTAs. Vested with much less institutional robustness and legal prerogatives there is only the aforementioned Committee on Trade Remedy of the China-Korea PTA. Even less significant in terms of a role to play in

the management of countervailing actions it is the cooperation mechanism that the China-Peru PTA encourages the members to establish.

There are several specific provisions on administrative procedures along the application, the investigation and the management of subsidies and countervailing measures in the China-Korea PTA. Their legal content not only encompass some of the core WTO rules, but also additional obligations on notifications, disclosures of information and consultations, which members must undertake throughout all phases.

Among the WTO-like rules, there are provisions: a) on '(...) the need to disclose information, (...) before the final determination, of all essential facts and considerations' (the China-Korea PTA, Article 7.7, § 2); and b) on '(...) the need to afford adequate opportunity for consultations, to exporters of the other Party regarding proposed price undertakings which, if accepted, may result in suspension of the investigation without imposition of countervailing duties' (the China-Korea PTA, Article 7.9, § 3).

As for the normative contents that correspond to WTO-plus rules, there are provisions: a) on '(...) the need to disclose information, immediately after any imposition of provisional measures (...), of all essential facts and considerations' (the China-Korea PTA, Article 7.7, § 2); b) on '(...) the need to provide written notification to the other Party of the receipt of a countervailing duty application and to take part in consultations before proceeding to initiate an investigation with a view to finding a mutually acceptable solution' (the China-Korea PTA, Article 7.8, § 2); c) on the need '(...) to transmit to the other Party's competent authorities written information regarding the Party's procedures for requesting its authorities to consider an undertaking on price including the time frames for offering and concluding any such undertaking' (the China-Korea PTA, Article 7.9, § 1); d) on '(...) the need to notify exporters and producers information to be verified and information which needs to be provided, prior to the on-the-spot verification, and to disclosure to the exporters and producers concerned the result of the verification within a reasonable period after the verification' (the China-Korea PTA, Article 7.10, § 1, § 2); and e) on '(...) the need to take due consideration in holding a public hearing' (the China-Korea PTA, Article 7.11).

The following table illustrates the distribution of the core specific provisions on subsidies and countervailing duties across the US and China PTAs:

Table 6: Countervailing Duties Mapping

COUNTERVAILING DUTIES MAPPING											
PTA	I. Subsidies	II. State Aid	III. Countervailing Duties			IV. Specific Provisions					
	Prohibit export subsidies on agriculture	Incompatible if it distorts competition	Disallowed	Allowed		1. Mutually acceptable solution	2. Regional body/committee			3. Other procedures	
				No specific provisions	With specific provisions		Conducts investigations	Reviews final determinations	Facilitate communication	Under a WTO-like rule	Under a WTO-plus rule
US - Republic of Korea	0	0	0	0	1	1	0	0	1	1	1
China - Republic of Korea	0	0	0	0	1	1	0	0	1	1	1
US - Australia	1	0	0	1	0	0	0	0	0	0	0
China - Australia	1	0	0	0	1	1	0	0	0	1	1
US - Chile	1	0	0	1	0	0	0	0	0	0	0
China - Chile	1	0	0	1	0	0	0	0	0	0	0
US - Peru	1	0	0	1	0	0	0	0	0	0	0
China - Peru	1	0	0	1	0	0	0	0	0	0	0
US - Singapore	0	0	0	1	0	0	0	0	0	0	0
China - Singapore	1	0	0	1	0	0	0	0	0	0	0

10. Mapping the Bilateral Safeguards Actions in US PTAs

None of the US' PTAs explicitly proscribes the use of safeguard actions. Actually, all the agreements selected for this study not only permit their members to adopt this trade remedy, but also go further into addressing this area of regulation with specific provisions.

Another common feature across these agreements relates to the necessary conditions for the application of safeguards. Accordingly, for all five US's PTAs, only the increase of imports that is proven to cause injury to domestic industry does not suffice for triggering a safeguard application process. The increased imports must thus be a direct consequence of the lower tariffs derived specifically from the schedule of commitments agreed by the PTA members. Compounding this criterion there are the causal link between the new flow of imports and the injury inflicted upon a domestic industry, as well as the requirement of allowing the application only during the transitional period.

Moreover, the five US' PTAs also share two other conditions for the application of safeguards. One corresponds to the obligation to '(...) progressively liberalize the safeguard duty at regular intervals during the period of application, if the expected duration of a safeguard measure is over one year', which is a simple emulation of the WTO rule (WTO Agreement on Safeguards, Article 7, § 4). The other forbids members '(...) to apply a safeguard measure more than once on the same good' (e.g. the US-Korea PTA, Article 10.2, § 7) revealing a new legal content *vis-à-vis* the multilateral rules. Besides these two provisions, the US-Peru PTA presents another WTO-like rule, prohibiting its members '(...) to apply a safeguard measure against an originating good of another Party as long as the

exporting Party's share of imports of the originating good in the importing Party does not exceed three percent, provided that Parties with less than three percent import share collectively account for no more than nine percent of total imports of such originating good' (the US-Peru PTA, Article 8.1, § 4).

A mutually acceptable solution as an implicit goal that members are encouraged to pursue through notifications and consultations that ought to precede final decisions on safeguard measures is observed in four US' PTAs, with the exception being the US-Chile PTA, for which this intention cannot be straightforwardly inferred. It is worth mentioning, nevertheless, that none of the PTAs obliges its members to arrive at a mutually acceptable solution as a necessary condition for levying safeguard duties against imports originating from the other PTA partner.

When the analysis turns to the safeguard investigation procedures, none of the US's PTAs was found to have any provision adding new obligations on top of those already addressed by the WTO multilateral rules. Nonetheless, in the five US' bilateral agreements, there exist three fundamental WTO rules governing the steps that members must undertake throughout the safeguard investigation, which are Articles²⁹ 3, 4(a) and 4(c) of the WTO Agreement on Safeguards. Only the US-Singapore PTA presents Article 4(b) besides the other three as an incremental regulation on the causal link between increased imports and injury to the domestic industry.

With regards to the imposition of a safeguard measure, all the US' PTAs recognise that this trade remedy can be imposed only to the extent necessary to remedy serious injury or threat thereof and to facilitate adjustment. Tariff rate quota and quantitative restriction are not amongst the measures allowed. Instead, members can only resort to the suspension of the tariff phase out or the reversion to the most-favoured nation applied rate of duty in order to contain the increased imports from the other member. The US-Korea, the US-Australia and the US-Singapore PTAs also grant their members the possibility of reverting to most-favoured nation in the case of a customs duty applied to a good on a seasonal basis.

As pointed out before, some PTAs foresee the possibility of imposing a safeguard measure on a provisional basis under special circumstances. Among the US' PTAs

²⁹ While Article 3 deals specifically with the investigation procedures, Article 4 refers mainly to the elements that determine 'serious injury' and 'threat thereof'.

scrutinised, this additional source for the protection of domestic industries is found in the US-Korea, the US-Australia, and the US-Singapore PTAs. In none of these agreements is the provisional measure allowed to extend beyond 200 days, which is in accordance with the maximum duration set by the WTO Agreement on Safeguards.

The total duration of a definitive safeguard measure corresponds to less than four years for all five US' PTAs. This period encompasses not only the initial phase of application, but also any extension that might be later on authorised. Particularly, this duration lasts up to three years in the case of the US-Korea and the US-Chile PTAs, and four years with regards to the US-Australia, the US-Peru and the US-Singapore. In addition, the legal validity of the safeguard measures is restricted to the transition period as specified in each agreement.

None of the US PTAs creates a regional body with the power to carry out investigation, decide on the adoption of safeguard duties, review and/or remand final determinations concerning safeguard measures. As mentioned before, however, the US-Korea PTA establishes a Committee on Trade Remedies, whose purpose is essentially to promote cooperation between both parties as well as to monitor the legal provisions abidance by the members.

Notification and consultation are elements seen across all five US' PTAs. Specific provisions on the former element compel members to promptly notify the other Party, in writing, on: a) initiating an investigation (a WTO-like rule found in the US-Chile and the US-Peru PTAs); b) making a finding of serious injury or threat thereof caused by increased imports (a WTO-like rule found in the US-Chile and the US-Peru PTAs); c) taking a decision to impose or extend a safeguard measure (a WTO-like rule found in the US-Chile and the US-Peru PTAs); and d) taking a decision to modify a safeguard measure previously undertaken (a WTO-plus rule found in the US-Chile PTA).

As for the latter element, specific provisions oblige members to consult with the other Party as far in advance of applying a safeguard measure with a view to reviewing the information arising from the investigation and exchanging views on the measure (a WTO-like rule found in the US-Korea, the US-Australia and the US-Singapore PTAs), and to enter into consultations with the requesting Party to review a notification on initiating a safeguard procedure (a WTO-plus rule found in the US-Korea, the US-Australia, US-Peru PTA and the US-Singapore PTAs); and/or any public notice or report that the competent investigating

authority has issued in connection with the proceeding (a WTO-plus rule found in the US-Peru PTA).

The five US' PTAs regulate the use of special safeguards, with their imposition being either a unilateral or a bilateral prerogative. Agriculture, textile, and apparel goods are among the main targets of this modality of safeguards, which usually allows for a period of application extending beyond the transition period.

More specifically, the US-Korea PTA permits the use of special safeguards against agricultural goods originating from Korea in any calendar year, and against textile and apparel goods originating from either country until 10 years after the elimination of customs duties on the good. In the US-Australia PTA, the imposition of these safeguards is restricted to imports of agricultural goods originating from Australia in any calendar year, and to textile or apparel goods during the transition period only for goods originating from both countries. The US-Chile PTA allow both parties to apply special safeguards against agricultural goods only during the 12-year period, but in the case of textile or apparel goods no safeguards may be taken or maintained beyond the period ending eight years after duties on a good have been eliminated. The US-Peru PTA authorizes the members to adopt the trade remedy against agricultural goods in any calendar year and against textile or apparel goods during the transition period only. Lastly, the US-Singapore PTA permits the parties to target textile or apparel goods being imported from either member during the transition period only.

11. Mapping the Bilateral Safeguards Actions in Chinese PTAs

There is no provision on the prohibition of imposing safeguards against imports originating from members in the five selected Chinese PTAs for this qualitative analysis. Conversely, all the agreements spell out specific rules on bilateral safeguards.

With regards to the necessary conditions that permit the application of bilateral safeguards, only the situation where increasing imports lead to serious injury to a domestic industry is not sufficient for claiming the right to use this trade remedy. Thus, other conditions must be met, particularly the verification that tariffs reductions derived from the PTA's commitments have led to increased imports and, consequently, to a serious injury

inflicted upon a domestic industry. Additionally, this causal chain of events needs to occur during the transitional period set by the agreement.

Notwithstanding the common elements highlighted above which are seen across the Chinese PTAs, other conditions for the application of bilateral safeguards are also found, depending on the agreement singled out. Accordingly, the China-Korea, the China-Australia and the China-Peru PTAs set out the need to '(...) progressively liberalize the safeguard duty at regular intervals during the period of application, if the expected duration of a safeguard measure is over one year', which is simply a reproduction of a WTO rule (WTO Agreement on Safeguards, Article 7, § 4). The China-Australia PTA also prohibits members to apply a safeguard measure more than once on the same good, forging a new obligation with respect to the WTO normative content (the China-Australia PTA, Article 7.3, § 3). This possibility of applying the measure for a second time on the same product is manifested in the China-Chile PTA. However, in this case, with strict parameters to be followed: '(...) in the case of a product for which the transition period is over five years, provided that a period equal to that of the previously imposed measure has elapsed' (the China-Chile PTA, Article 45, § 3).

Another circumstance in which members are forbidden to apply a bilateral safeguard measure is seen in the China-Singapore agreement, which sets forth the prohibition '(...) to apply a bilateral safeguard as long as the import share of the total imports of the product concerned in the importing Party does not exceed 3%' (the China-Singapore PTA, Article 43, § 4). This provision is only slightly different from its equivalent found in the WTO Agreement on Safeguards, which aims to grant the goods originating in developing countries an extra layer of protection against safeguards. Lastly, the China-Peru PTA establishes what could be regarded as the most permissive condition for the application of bilateral safeguards in comparison with the ones so far pinpointed. It refers to the possibility of applying this modality of trade remedy '(...) as a result of unforeseen developments in conjunction with the existence of a preferential tariff under this agreement' (the China-Peru PTA, Article 70, § 1). Indeed, the vagueness surrounding the wording 'unforeseen developments' might elicit several justifications for initiating the application of the bilateral safeguards.

None of the China's PTAs investigated in this study presents any specific provision on mutually acceptable solution as the outcome that members must achieve when pursuing the imposition of bilateral safeguards. Nevertheless, there are rules on notifications and

consultations indicating such intention, with an encouragement purpose, and thus without any mandatory impetus, in the China-Korea, the China-Australia, the China-Chile, and the China-Peru PTAs. This goal becomes less evident in the China-Singapore PTA, where the system of notification and consultation is much more loosely defined, given that there is only a general rule on the obligation '(...) to consult with the other Party, through contact points, on any matter related to trade remedies within 45 days of the request' (the China-Singapore PTA, Article 39, § 2).

As for the provisions on investigation procedures, none of the Chinese agreements sets forth obligations that either deepen or go beyond the WTO normative content. The China-Korea, the China-Australia, and the China-Peru PTAs bring into their legal text Articles³⁰ 3, 4.2(a), 4.2(b) and 4.2(c) of the WTO Agreement on Safeguards. Among these provisions, only Article 4.2(c) is missing in the China-Chile PTA, and none of them is mentioned in the agreement between China and Singapore.

When delimitating the scope for the imposition of bilateral safeguards, all Chinese PTAs, apart from the agreement between China and Singapore, determine that these trade remedies can be applied '(...) only to the extent necessary to remedy serious injury and facilitate adjustment' (e.g. the China-Australia, Article 7.2, § 2). Moreover, the suspension of concessions or the reversion to the most-favoured nation applied rate of duty are the means through which one party might impose bilateral safeguards on the other, according to all five Chinese PTAs. Thus, quotas and quantitative restrictions are excluded from the options available to these PTA members. And, with regards to the latter option, the China-Singapore PTA states explicitly this prohibition.

The possibility to resort to provisional measures is also addressed in four Chinese PTAs, namely the China-Korea, the China-Australia, the China-Chile, and the Chile-Peru PTAs. In the China-Singapore agreement, there is no such permission. Moreover, the first three PTAs that do allow the application of provisional bilateral safeguard measures set the period of 200 days for their maximum duration, as in the WTO Agreement on Safeguards. The extension of this timespan is a bit shorter in the case of the China-Peru PTA, for which the duration can only extend to 180 days.

³⁰ As previously explained, Article 3 sets out the investigation procedures that a PTA party must undertake, whereas Article 4 presents the elements for determining 'serious injury' and 'threat thereof'.

The total duration of definitive bilateral safeguards is less than four years across all five Chinese PTAs, when taking into account the period of initial application and any extension thereof. More specifically, the period goes up to four years in the China-Korea and the China-Singapore PTAs, to three years in the China-Australia and China-Peru PTAs, and to two years in the China-Chile PTA. In addition, none of these agreements permits the imposition of this trade remedy beyond the transition period, which begins on the date of entry into force of the agreement and ends when the schedule of tariff elimination elapses. Different tariff phases out for certain goods are foreseen, stretching the transition period a little further.

Absent from all five Chinese PTAs is a regional body with the power of making decisions on safeguards or exerting major influence over this category of trade remedy, such as conducting investigation or reviewing final determinations. As underscored before, the China-Korea PTA establishes a Committee on Trade Remedy, and the China-Singapore PTA encourages the parties to set a cooperation mechanism between them. Nonetheless, both institutional arrangements have a narrow scope of action, especially in the case of the latter.

Another two common denominators to all five Chinese PTAs are legal obligations concerning notification and consultation. With regards to the first element, one comes across with specific provisions setting forth the obligation to immediately notify the other party, in writing, on: a) initiating an investigation (a WTO-like rule found in the China-Korea, China-Australia, the China-Chile and the China-Peru PTAs); b) taking a provisional safeguard measure (a WTO-like rule found in the China-Chile and the China-Peru PTAs); c) making a finding of serious injury or threat thereof caused by increased imports (a WTO-like rule found in the China-Australia and the China-Chile PTAs); d) taking a decision to impose or extend a definitive measure (a WTO-like rule found in the China-Australia, the China-Chile and the China-Peru PTAs); e) taking a decision to modify a measure previously undertaken (a WTO-plus rule found in the China-Chile PTA); and f) taking a decision to liberalise a bilateral safeguard measure previously applied (a WTO-plus rule found in the China-Australia PTA).

On matters related to consultation, China's PTAs present legal provisions: 1) on the need to provide opportunity for exchange of information and views on the measure with the other Party (a WTO-plus rule found in the China-Australia and the China-Chile PTAs),

when applying a provisional or definitive measure or extending a safeguard measure (a WTO-plus rule found in the China-Chile PTAs); 2) on the obligation to enter into consultations with the requesting Party to review any public notice or report that the competent investigating authority has issued in connection with the proceeding (a WTO-plus rule found in the China-Peru PTA), or a notification on: a) initiating a safeguard procedure (a WTO-plus rule found in the China-Peru PTA), b) making a finding of serious injury (a WTO-plus rule found in the China-Australia and the China-Peru PTAs), and c) taking a decision to apply or extend a safeguard measure (a WTO-plus rule found in the China-Australia and the China-Peru PTAs); 3) on the obligation to consult with the other Party as far in advance of applying a safeguard measure with a view to reviewing the information arising from the investigation and exchanging views on the measure (a WTO-like rule found in the China-Korea and the China-Australia PTAs), and reaching an agreement on compensation (a WTO-like rule found in the China-Australia PTA); 4) on the obligation to consult with the other Party, through contact points, on any matter related to trade remedies within 45 days of the request (a WTO-plus rule found in the China-Singapore PTA); and, 5) upon request of the other member, on the need to initiate consultations after a Party applies a provisional safeguard measure (a WTO-plus rule found in the China-Peru PTA).

The only Chinese agreement that permits the use of special safeguards is the China-Australia PTA. The right to resort to them is an exclusive unilateral prerogative, however. China is the only party allowed to adopt this category of safeguards, and these remedies ought to target only the agricultural products originating from Australia. Another feature that makes them ‘special’ is the fact that their use is not restricted to the transition period set forth in the legal text. On the contrary, China could adopt this special safeguard during any given calendar year.

Table 7 outlines the resulting mapping on the legal provisions on bilateral safeguard measures across the selected US and China PTAs:

Table 7: Bilateral Safeguard Measures Mapping

BILATERAL SAFEGUARDS MAPPING										
Elements	US - Republic of Korea	China - Republic of Korea	US - Australia	China - Australia	US - Chile	China - Chile	US - Peru	China - Peru	US - Singapore	China - Singapore
1. Safeguard measures disallowed	0	0	0	0	0	0	0	0	0	0
2. Safeguard measures allowed but with no specific provisions	0	0	0	0	0	0	0	0	0	0
3. Safeguard measures allowed and with specific provisions	1	1	1	1	1	1	1	1	1	1
a. Conditions for application of safeguard										
. increasing imports causing serious injury to domestic industry	0	0	0	0	0	0	0	0	0	0
. during transition period, reduction in tariffs lead to increased imports and to serious injury	1	1	1	1	1	1	1	1	1	1
. other	1	1	1	1	1	1	1	1	1	1
b. Mutually acceptable solution	1	1	1	1	0	1	1	1	1	0
c. Investigation	0	0	0	0	0	0	0	0	0	0
d. Application of safeguard measures										
. only to the extent necessary to remedy serious injury and facilitate adjustment	1	1	1	1	1	1	1	1	1	0
. suspend concessions, tariff reduction or revert to MFN	1	1	1	1	1	1	1	1	1	1
. other	0	0	0	0	0	0	0	0	0	0
e. Provisional measures	1	1 (shall not exceed 200 days)	1 (shall not exceed 200 days)	1 (shall not exceed 200 days)	0	1 (shall not exceed 200 days)	0	1 (shall not exceed 180 days)	1 (shall not exceed 200 days)	0
f. Duration and review of safeguard measures										
. duration less than 4 years	1 (three years)	1 (four years)	1 (four years)	1 (three years)	1 (three years)	1 (two years)	1 (four years)	1 (three years)	1 (four years)	1 (four years)
. not allowed beyond transition period	1	1	1	1	1	1	1	1	1	1
g. Regional body/committee										
c. conducts investigation and decides on safeguard duties	0	0	0	0	0	0	0	0	0	0
e. review/remand final determinations	0	0	0	0	0	0	0	0	0	0
. other	0	0	0	0	0	0	0	0	0	0
h. Notification and consultation	1	1	1	1	1	1	1	1	1	1
i. Special safeguards	1	0	1	1	1	0	1	0	1	0

12. Mapping the Global Safeguards Actions in US PTAs

All five US' PTAs retain the rights and obligations under the WTO rules on the use of global safeguards. Nonetheless, according to their legal text, the US-Korea, the US-Chile, and the US-Peru PTAs prohibit their parties to adopt a bilateral and a global safeguard against the same product at the same time.

Furthermore, the US-Korea, the US-Australia, the US-Peru, and the US-Singapore PTAs authorize the exclusion of members from the application of global safeguards whenever imports from one party does not contribute to serious injury or threat thereof. In all four agreements, serious injury is defined 'as a significant overall impairment in the position of a domestic industry' (e.g. the US-Korea PTA, Article 10.6). Surely, this sort of waiver not only benefits PTA parties, but also promotes discrimination between them and non-members.

13. Mapping the Global Safeguards Actions in Chinese PTAs

The Chinese PTAs also allow their parties to apply safeguards that reach beyond the preferential trade area, hence against goods originating from non-members as well. In this regard, the legal texts retain the rights and obligations under the WTO normative framework. The China-Singapore PTA stands out as the only agreement that excludes

parties from these global actions if conditions are met. More precisely: when imports from one of the parties are deemed ‘non-injurious’. It is worth noting that a definition of what constitutes non-injurious imports is missing from the agreement, leaving out a great margin for interpretation, therefore, for a discretionary behaviour over whether to apply the trade remedy or not. Accordingly, this possibility of shielding PTA parties from global safeguards establishes a clear-cut discrimination between members and non-parties. Lastly, for all five China’s PTAs there is the prohibition of applying a bilateral and a global safeguard measure with respect to the same good at the same time.

Table 8 shows the resulting mapping on the selected PTA’s main provisions on global safeguard measures:

Table 8: Global Safeguard Measures Mapping

GLOBAL SAFEGUARDS MAPPING							
PTA	1. Retains rights and obligations under GATT/Safeguards Agreement	2. Excludes PTA members from global actions	3. Grounds for exclusion		4. Definitions		
			A. Imports from party does not account for a substantial share of total imports	B. Imports from party does not contribute to serious injury or threat thereof	a. Substantial share	b. Contribute importantly to serious injury	
					Among the top five suppliers in most recent three-year period	Exports jointly account for 80 percent of total imports	Growth rate of imports from a party is lower than growth rate of total imports from all sources
US - Republic of Korea	1	1	0	1	0	0	0
China - Republic of Korea	1	0	0	0	0	0	0
US - Australia	1	1	0	1	0	0	0
China - Australia	1	0	0	0	0	0	0
US - Chile	1	0	0	0	0	0	0
China - Chile	1	0	0	0	0	0	0
US - Peru	1	1	0	1	0	0	0
China - Peru	1	0	0	0	0	0	0
US - Singapore	1	1	0	1	0	0	0
China - Singapore	1	1	0	1	0	0	0

14. Concluding Remarks

Trade agreements are, by their own nature, means of boosting cross-border trade among members through the elimination of tariffs and other trade barriers. Free trade is, thus, the very essence of these agreements as well as the ultimate outcome sought by the parties when they decide to sign them. The embedded liberalism compromise calls for some state intervention to balance off the effects of unrestricted trade when they are deemed harmful. By providing temporary relief and protection to domestic industries with a view of helping them to buy time for adapting to the new reality of increased competition stemming from either fair or unfair trade practices, trade remedies are legal tools that evoke the spirit of the embedded liberalism compromise.

Consequently, the empirical analyses carried out thus far focused on whether the trade remedy provisions belonging to the US' and China's PTAs not only guarantee or deny the right of members to apply them, but also if these specific rules facilitate or make it harder for domestic interested actors to resort to those legal instruments whenever they regard them suitable for a particular situation. In addition, a template for each category of trade remedy was adopted for streamlining the selection of the precise provisions that have a direct implication for the realization of the objectives highlighted above.

The comparative study on the trade remedy chapters of the US' and China's selected PTAs identified minor differences in their legal contents. This relatively small degree of dissimilarity between each country's set of specific provisions on antidumping, countervailing, bilateral and global safeguard measures also mirrors the extent to which these differences are manifested in the level of embedded liberalism enshrined in the normative content of these rules.

In the realm of the specific provisions on antidumping and countervailing duties, none of the US' and China's PTAs explicitly forbids their members to apply these measures. In fact, most of the trade agreements neither prohibit the use nor do they feature specific rules on those trade remedies. This finding reveals that some degree of utility is attributed to these categories of remedies within the trade relations that both countries establish with their partners.

Whereas the US has only one agreement (the US-Korea PTA) with specific rules on antidumping, China has a few (the China-Korea, the China-Peru and the China-Singapore PTAs). With regards to countervailing measures, the score is one for the US (the US-Korea PTA), and two for China (the China-Korea and the China-Australia PTAs). However, this

seemingly advantage of China in the number of agreements shall not be taken as too relevant, for the simple reason that the China-Peru, the China-Singapore and the China-Australia PTAs do not present much normative density with respect to those rules. In fact, the China-Korea PTA concentrate most of these specific provisions, bearing a similar legal latitude as the US-Korea PTA.

In both of these agreements, a great deal of the provisions regulate administrative proceedings that the parties must undertake along the different phases of the adoption of anti-dumping and countervailing actions. Even though the existence of WTO-plus rules indicate additional commitments through a series of notification and consultation that the parties must undergo, there is no strong evidence that the parties would necessarily face a greater difficulty in resorting to such trade remedies, at least to the point of weakening the embedded liberalism compromise.

The empirical findings show that the content of most of these WTO-plus rules do not depart much from the legal scope of the WTO normative framework. Indeed, the lack of WTO-extra rules only testifies for the limited level of legal innovation. Furthermore, the absence of some WTO-like provisions in the US-Korea and the China-Korea PTAs, which feature WTO-plus rules, must also weigh in for a more accurate assessment of the normative density of these agreements.

Notwithstanding the remaining imprecision of such imbalance, these specific provisions on both anti-dumping and countervailing measures bear a significant resemblance to the WTO rules. Taken together, they even lend themselves as less protective than the general legal *status quo* provided by the multilateral normative framework. In this sense, instead of being portrayed as deterrent obstacles for the adoption of trade remedies, the specific rules on administrative proceedings should be regarded as means for bringing about certain level of legal security to potential applicants of these trade remedies.

Likewise, not much dissimilarity is noted between the US's and China's specific provisions on bilateral safeguard measures. Accordingly, there are only minor differences in terms of legal rights and obligations across provisions on the standards for the application, imposition, administration, consultation, and notification of bilateral safeguard measures. The lack of any explicit prohibition for their adoption as well as the abundance of specific normative commitments on their use attest the usefulness and relevance given to this

category of trade remedy. Moreover, it is worth stressing that the level of normative density with respect to bilateral safeguard measures, in both sets of agreements, is much higher than the one observed for anti-dumping and countervailing duties.

Inscribed in these PTAs, one comes across with both WTO-like and WTO-plus rules. The congruence with the multilateral trade rules is more salient than the level of normative innovation when differences in content-wise arise. There are not so many of them. So both the US' and China's set of agreements provide a satisfactory level of legal security for interested parties seeking to adopt safeguard actions, at least when the comparison hinges on the bulk of the selected specific provisions. In essence, thus, the realization of the embedded liberalism compromise through the adoption of bilateral safeguards is a course of action not dismissed by the US's and China's PTAs alike.

These elements of commonalities notwithstanding, it is worth noting that four US's PTAs, yet only one Chinese agreement, authorize the application of bilateral special safeguards beyond the transitional period and against certain products, usually agricultural, textile and apparels goods. As these measures tend to take into account the special circumstances under which those domestic industries demand protection, it could be argued that they reinforce the embedded liberalism compromise. Nevertheless, the unilateral character of some of them, which guarantee the right only to the US, also elucidates the discriminatory nature of these measures.

The last concluding remark turns to the role of the specific provisions on global safeguards and their effects upon the embedded liberalism compromise. The relevant element to find out is whether the PTAs permit the exclusion of members from the global safeguard actions. In cases where this possibility is assured to the parties, the expected outcome is less protection conferred to domestic industries in favour of more free trade between the PTAs members, while they preserve a temporary safety from likely injuries derived from imports originating from non-members. Hence this is an exemplary instance where a single legal provision makes all the difference in terms of how the PTAs subscribe to the embedded liberalism compromise, at least to a certain extent, and whose existence or absence in the agreements does not yield discrepant results in quantitative studies, like the similarity analyses that applied *Jaccard* metrics in the previous chapter.

The comparative study revealed that four US's PTAs (the US-Korea, the US-Australia, the US-Peru and the US-Singapore PTAs) embrace this legal permission, whereas only one

Chinese PTA (the China-Singapore PTA) does the same. This finding alone makes most of the Chinese PTAs a bit more convergent to the notion of embedded liberalism, given that these agreements do not discriminate PTAs members from third parties when it comes to the possibility of making use of safeguards in special circumstances. Contrary to the specific provisions on anti-dumping and countervailing duties, for which no substantial differences were noted across the selected agreements, the right to waiver on global safeguards does set the US PTAs apart from most of the Chinese bilateral agreements. Whether this pattern will live on in the next generation of the US and China PTAs is object of future research.

Chapter 5 – Intellectual Property Rights

1. Introduction

IPRs are perhaps the most contentious issue in the realm of economic relations between the US and China (Magnus, 2018). This fact alone suffices to justify academic research on the preferences and stances of each country with respect to regulation of this trade area through PTAs.

US's official discourses often portray China as a trade villain³¹ in the international community due to allegedly reiterating practices that breach WTO legal standards in a large scale (Special 301 Report, 2018; IP Commission Report, 2017; Mahbubani, 2020). By following this course of action, the argument goes, the Chinese would benefit incommensurate payoffs in detrimental of right owners, contributing to an advantageous repositioning in its competitive capacity *vis-à-vis* other trade players without suffering any legal retaliation for its unlawful practices (Special 301 Report, 2018; IP Commission Report, 2017; Mahbubani, 2020).

Divergent interpretations of these facts also coexist, however. Roach (2020), for instance, argues that a great deal of exaggeration pervades the US' official rhetoric that insists on using the 'Chinese threat' jargon as a scapegoat for its overwhelming trade imbalances, instead of facing up the actual structural problem affecting the whole performance of its economy: the critical shortness of domestic savings, which has led to unprecedented trade deficits not only with China, but also with the majority of its trading partners.

The degree of veracity conveyed through the US's narratives about China's compliance of IPRs notwithstanding, PTAs are another venue through which countries carry out trade policies, among which trade related aspects of IPRs (Baldwin, 2006). As it is widely known, these trade tools have gained considerable prominence as a means to regulate all sorts of trade disciplines, including IPRs, since the first signs that a stalemate in the Doha

³¹ Accusations over Beijing's mishandling of IPR has mounted to such a point as to become one of the few bipartisan consensus in the national political debate. The strategy of 'rallying around the flag' as an outgrowth of bashing China for IPR theft is indeed traced not only to Trump's American First, but also to Biden's ongoing foreign policy towards China.

Round of negotiations was looming (Baldwin, 2006). The US and China have not been aloof in this trend. Yet questions remain as to whether both powers are sponsors of PTAs containing IPRs provisions that converge or diverge from the WTO normative framework.

To tackle the inquiry laid out above, a point of departure for comparison is needed. John Ruggie's (1982) concept of the embedded liberalism compromise offers a suitable baseline for comparing both countries' approach towards the legal content of their PTAs provisions on IPRs, just as it served well in the previous qualitative study on trade remedies rules.

The structure of this chapter hinges on the following sequence of steps. First, a brief description of the intrinsic linkages between IPRs and the embedded liberalism compromise will be provided. The focus of the study will then turn to the templates for assessing IPRs in PTAs. Pervading the development of the templates is the choice of their constituent elements that will help with the identification of rules more likely to prompt changes on the original concept of embedded liberalism. The purpose thus is to have normative frameworks that would work as baselines for the comparative analyses that will follow suit.

To carry out this task the PTAs that took part in the previous study on trade remedies will be replicated. At this time, however, the sample will comprise nine agreements, among which five belong to the US and four to China. This mismatch in the number of agreements for each country is due to the lack of rules on IPRs in the China-Singapore PTA. Next, the emphasis of the study will be directed to the empirical findings derived from mapping the PTA provisions. Hopes are that they will shed light on the congruence or differences between the two sets of legal texts. At this point, the figures will pave the way to the concluding remarks, in which final arguments will seek to present a broader comparative perspective.

As the empirical evidence will reveal, there are significant differences between the US and China PTAs with regards to the bulk of their legal provisions on IPRs, with most of them having deep implications for embedded liberalism. While the US rules on IPRs are bound to weaken this compromise, the Chinese norms point to the opposite direction by reclaiming the flexibilities underwritten in the TRIPS agreement so as to safeguard national interests and a certain level of autonomy to devise public policy.

2. Intellectual Property Rights in the WTO Normative Framework: Linkages with the Embedded Liberalism Compromise

It is true that the GATT 1947 did not cover IPRs. The multilateral trading system back then did not establish the link between intellectual property and trade, although the subject was far from being unknown in international affairs (Bossche, 2007). In fact, one of the first attempts of forging a worldwide reach for IPRs protection came about with the Paris Convention, signed in 1883, and which was later subject to revisions and complemented by other plurilateral agreements on IPRs specific categories (Bossche, 2007). With the creation of the World Intellectual Property Organization (WIPO), in 1967, as a specialized agency of the United Nations system in charge of promoting IPRs and which ended up overseeing twenty-four intellectual property treaties nowadays, IPRs protection gained more normative and institutional robustness (Bossche, 2007). However, a key aspect was still missing from this early IPRs protection regime for its effective functioning: the existence of enforcement authority (Matsushita, Schoenbaum, Mavroidis and Hahn, 2015).

Imbued with this objective of giving more teeth to what was until then regarded as a fragile IPRs protection regime, the US carried out resolute and tenacious efforts to include this agenda into the Uruguay Round of negotiations (Sell, 2001; Shadlen, 2004; Matsushita, Schoenbaum, Mavroidis and Hahn, 2015). Facing strong objections from developing countries throughout the multilateral talks, whose negotiators were deeply sceptical about the intention of the hegemonic power to universalise the high normative standards found in its own IPRs domestic legislations, the US ended up achieving its goal by forcing a vote on whether to launch a new round, which circumvented the consensus principle. Not only high standard rules, but also strict enforcement provisions, made their way into the TRIPS legal text (Bossche, 2007). The dispute settlement mechanism was the backbone of such refurbished multilateral trade regime that had gained renew track with the creation of the WTO by the 1994 Marrakesh Agreement (Bossche, 2007).

From the point of view of developing countries, the relationship between IPRs and trade only made sense insofar as this protection would bring about technology transfer and, consequently, spur their economic development (Matsushita, Schoenbaum, Mavroidis and Hahn, 2015). In addition, poor countries would have to trust that TRIPS rules were fashioned to strike the right balance between the self-interests of transnational companies based in

rich countries and the latter's fundamental right to adopt corrective public policies whenever IPRs would thwart the government ability to meet the essential needs of society (Matsushita, Schoenbaum, Mavroidis and Hahn, 2015).

To help achieve these goals, some flexible normative mechanisms were elaborated to compose the TRIPS Agreement. A clear example of such flexibility is testified by the different grace periods granted for developing and least developed countries, meaning that they would be able to enjoy a longer span for fully complying with the multilateral norms (Matsushita, Schoenbaum, Mavroidis and Hahn, 2015). In this vein, the multilateral agreement granted developing countries in the process of conversion to a market economy an extended deadline, up to the year of 2000, to comply with the WTO rules on IPRs, hence exceeding in four years the deadline given to developed countries (Matsushita, Schoenbaum, Mavroidis and Hahn, 2015). At the same token, developing countries were permitted to temporarily waive patent protection for new inventions and technologies that had not been previously covered by their domestic laws, in which case they could afford themselves to fulfil normative requirements and obligations until 1 January 2005 (Matsushita, Schoenbaum, Mavroidis and Hahn, 2015).

With regards to least developed country members, the grace period for compliance with all of the TRIPS Agreement was originally set to last until 2006, although exceptions were made to the general rules on most-favoured nation clause and national treatment (Matsushita, Schoenbaum, Mavroidis and Hahn, 2015). Nevertheless, the Doha Ministerial Conference extended this time span to be valid until 1 January 2016 for pharmaceuticals only, and with respect to other categories of IPRs until mid-2013, yet subject to extension if least developed countries decided to apply to the TRIPS Council for a longer transition period (Matsushita, Schoenbaum, Mavroidis and Hahn, 2015). In 2021, the TRIPS Council reached a new consensus on the transition period for least developed countries by setting the deadline to be valid until July 1st, 2034 (TRIPS Council, 2021).

Aligned with this purpose of providing more favourable latitude for developing and least developed countries members in coping with their resistance to embrace IPRs, the TRIPS Agreement also set forth two other legal obligations falling upon the developed countries members. The first concerns their commitment to facilitate the transfer of technology to least developed nations (Matsushita, Schoenbaum, Mavroidis and Hahn, 2015). The second refers to their duty to provide technical assistance as well as financial aid

to developing countries to assist them in the costly task of devising laws and institutions needed to the protection and enforcement of IPRs (Matsushita, Schoenbaum, Mavroidis and Hahn, 2015).

The above normative undertakings do not constitute an exhaustive list of rules on IPRs crafted to lessen harmful effects derived from overprotection upon the most vulnerable countries. Others exist in the WTO legal framework, most of which came about as an outgrowth of the Doha Development mandate, as it will be further discussed. At this point, it is crucial to underscore the deep connections between the flexibilities laid out in the TRIPS rules on IPRs and the utmost foundational principle underpinning the multilateral trade regime since its inception, best encapsulated by Ruggie's (1982) concept of the embedded liberalism compromise.

Framing both the US' and China's foreign trade policies through their PTAs' legal content, a fundamental question to be posed is whether the IPRs rules found in these bilateral trade agreements bear similarity or incongruence to the spirit of the embedded liberalism compromise that some of the TRIPS normative provisions entail through the flexibilities they uphold. The answers might not only unveil nuances not yet revealed by other comparative studies on both powers' trade policies, but also shed light on some of the driving forces of the transformations underway in the multilateral trade regime. The direction to which these changes are heading also depends on how the US and China engage with PTAs, either as a *status quo* or a system-challenging power.

3. The Template for Assessing Intellectual Property Rights in PTAs

Unlike the literature on trade remedies provisions in PTAs, there is a satisfactory number of academic research that helped to pinpoint the most common PTAs' rules on IPRs. The uncovering of rules that innovate the normative content of the WTO's Agreement on Intellectual Property Rights (TRIPS), known as TRIPS-plus provisions, has been a shared feature of most of these studies, regardless of the fact that their chosen samples reveal differences in terms of time and geographic scope (Ginarte and Park, 1997; Sherwood, 1997; Ostergard, 2000; Fink and Reichenmiller, 2005; El Said, 2007; Lindstrom, 2010; Morin and Gold, 2014; Cottier *et al.*, 2017; Gold *et al.*, 2019; Morin and Surbeck, 2019).

For the purposes of the further comparative analyses, this cumulative empirical evidence will be key in fashioning an appropriate template on the PTAs' IPRs provisions that are set to impact the fate of the embedded liberalism compromise underpinning the multilateral trade regime. Among all the mentioned studies, Morin and Surbeck (2019) stands out as having provided the most comprehensive, systematic and detailed mapping of the TRIPS-plus provisions found in PTAs, which culminated into the creation of the T + PTA dataset.

The realisation that several multilateral trade negotiations have failed to deliver an updated version of TRIPS until now, along with the need to improve our understanding on the causes and the legal, economic and social consequences of novel rules on IPR, have motivated Morin and Surbeck (2019) to bring about a dataset that could be a point of departure for future comparative research and in-depth analyses. Indeed, given its scope and depth, the T + PTA dataset is a promising empirical source for shedding light on questions of whether or not the set of TRIPS-plus provisions pertaining to the US and China's PTAs differ one from the other, and how they might affect the bedrock principles of the multilateral trade regime.

Building on the Design of Trade Agreements (DESTA) dataset, where information on around 1,160 PTAs, which were concluded from 1947 to 2016, have been compiled and coded for different issue areas, the T + PTA dataset only encompasses those agreements presenting specific provisions that go beyond the standard commitments spelled out in the TRIPS (Dur *et al.*, 2014). Thus, 126 TRIPS-plus agreements in total (Morin and Surbeck, 2019).

Furthermore, the coding of the T + PTA contains 90 variables organised into the following 13 categories: copyright, domain names, encrypted program-carrying satellite signals, enforcement, exhaustion, geographical indications, industrial design, new plant varieties, patents, semiconductors, trademarks, traditional knowledge and genetic resources, and undisclosed information (Morin and Surbeck, 2019). For each category, there are between one and 12 binary variables associated with specific TRIPS-plus provisions.

For instance, the copyright category includes six variables, as are the cases of the following two: whether the duration of literary work amounts to 90 years or more beyond the death of the author (Yes/No), and whether there exists a private use exception in copyright (Yes/No) (Morin and Surbeck, 2019). On the other hand, nine variables comprise

the patent protection category, such as whether second-use patents is permitted (Yes/No), and whether an extension might be given to patent term when regulation requirements have unduly delayed market entry (Yes/No) (Morin and Surbeck, 2019).

It is worth pointing out that each of the 90 variables corresponds to a grouping of provisions, which might reveal legal variation among specific provisions belonging to the same variable (Morin and Surbeck, 2019). Indeed, one might come across with different conditions and requirements for giving effect to the extension of a patent term due to market entry delays, for instance. Moreover, for the selection of the variables, Morin and Surbeck (2019) decided to exclude from their dataset references to other treaties on IPRs, and variables with dubious interpretation, of minor social and economic impact as well as variables found only in a single PTA (Morin and Surbeck, 2019).

Being the T + PTA dataset the most robust empirical source for academic research on IPRs provisions enshrined in PTAs up to date, any attempt of creating a template for a qualitative study on the implications of IPRs rules sponsored by the US' and Chinas' PTAs for the embedded liberalism compromise cannot dismiss the constituent elements of that dataset. Nevertheless, because of the very nature of the qualitative study, whose intrinsic characteristics tend to privilege in-depth analyses over statistically significant results typically associated with large-N studies, it will thus be imperative to select the most meaningful elements from the T + PTA dataset to be included in the template. In fact, the straightforward incorporation of all elements into the template would make this task unattainable, since every choice needs to be justified on the basis of its close relation to the underlying principle of the multilateral trade regime.

The puzzle though is how to proceed with a selection from a total universe of 90 variables out of the 13 categories without losing sight of the objectives of the further comparative analyses. The precise difficulty lies in choosing as much IPRs categories and variable as possible to represent the bulk of the TRIPS-plus provisions holding the potential to affect the embedded liberalism compromise.

Morin and Surbeck (2019) offer a good starting point for overcoming this hurdle. By making use of coded variables to fashion an index that show the number of TRIPS-plus provisions in any trade agreement of the T + PTA dataset, the authors tracked major trends over time. One historic development concerns the average number of TRIPS-plus provisions per PTA, which has increased significantly since the 2001 WTO Doha Round (Morin and

Surbeck, 2019). Another interesting pattern refers to the main drivers of this variation, as only three categories of variables account for 60% of total TRIPS-plus rules, namely patent, copyright and trademark (Morin and Surbeck, 2019). Consequently, the other nine variables taken together are of much less relevance in prompting the same phenomenon (Morin and Surbeck, 2019). The fact that patent, copyright and trademark are responsible for the highest percentage of TRIPS-plus provisions across PTAs, what makes them an indispensable source for comparative analyses, is not only a sufficient condition for justifying their inclusion into the template, but also a reasonable criterion for excluding other IPRs categories.

The next three subsections will focus on the constituent elements of three IPRs categories – patent, copyright and trademark – selected to integrate the general template. A special attention will be paid to how each of these variables affects the embedded liberalism compromise. In this vein, three specific templates will be provided, each corresponding to one of those three IPRs category.

3.1. Linking the Variables of the Template on Patents with the Embedded Liberalism Compromise

Drawing mostly on the T + PTA dataset, the template on TRIPS-plus rules regarding patents will comprise nine variables (see *Table 9*), albeit eight from the same dataset and another one that was added to it. In both cases, explanations on the decision to exclude as well as to incorporate a variable will be further provided. The existence, or absence, of these elements in the US' and China's PTAs is consequential for knowing how, and to what extent, these trade agreements converge to, or move away from, the quintessential characteristics of the embedded liberalism compromise.

The first of these elements corresponds to the verification of whether, or not, the PTA broadens the scope of patentability by mandating that patent protection also be available for plants. The explicit obligation to provide patent for plants is, in this regard, a clear restriction to the flexibility laid out in TRIPS, since its Article 27(3)(b) explicitly allows WTO members to exclude plants from patentability, yet keeping their commitment to protect plant varieties through patents or a *sui generis* system, or through the adoption of both mechanisms (WTO TRIPS, 1994). Moreover, this notion of flexibility becomes even

more salient when Article 27(3)(b) is interpreted in tandem with Article 8, which states that members may 'adopt measures necessary to protect public health and nutrition, and to promote the public interest in sectors of vital importance to their socio-economic and technological development', as they formulate or amend laws and regulations (WTO TRIPS, 1994).

Underlying this flexibility found in TRIPS there is the intention to solve the following dilemma: as plant patenting spurs research and development in plant varieties because of the economic opportunities they create, such increased level of protection often leads to the creation of monopolies on seeds manufacturing and distribution, therefore, to rising costs for farmers (Lindstrom, 2010). This explains why developing countries that strongly depend on agriculture tend to oppose patent protection for plants, given the threat they pose to food security (Lindstrom, 2010).

Environmental sustainability is also negatively affected when there are obstacles to purchase seeds, either as the result of shortage supply or higher prices in the market. This phenomenon has turned out a critical bottleneck in the quest to tackle climate change through reforestation initiatives. In many countries, it is the most effective policy to avert the ominous situation where large chunks of biomes are being wiped out of at an unprecedented pace. In this vein, the prerogative that falls upon WTO members of deciding whether to grant patent rights for plant breeders is aligned with the general concept of embedded liberalism.

The second element of the template deals with the extension of patent protection to animals. This variable tracks PTAs that either explicitly oblige signatory parties to provide patent protection to animals or simply have no general exclusion of animals from patentability. As with mandatory plant patenting, the curb on the possibility to bypass such scope of coverage for some life forms runs against the notion of embedded liberalism, which treasures a certain level of flexibility to balance-off divergent interests among WTO members. Correa (2014) recalls that several patent laws in Latin America explicitly ban the patentability of plants, animals and substances existing in nature, much in accordance with the exception foreseen in Article 27.3(b) of the TRIPS agreement.

With regards to the third variable, 'transitional extension for developing countries', its purpose is to find out whether the PTA under analysis reassures the right conferred by Article 65(2) of TRIPS to the parties, or even deepens its content. According to this WTO

rule, 'a developing country is entitled to delay for a further period of four years the date of application (...) of the provisions of this Agreement (...)' (WTO TRIPS, 1994, Article 65, § 2).

The flexibility to be looked for in the US' and China's PTAs, which alludes to the embedded liberalism compromise, is therefore the period of suspension of the legal validity of the overall patent protection if the party to the agreement under consideration is a developing or a least developed country. The exemption favouring both categories of countries aims to bring about a level-playing field within the new circumstances of the trade relations after the agreement enters into force. Indeed, the process of adapting domestic legislations and institutions to the PTAs' new binding commitments is both time-consuming and financially expensive, obstacles of which developing countries have the most difficulties to overcome (Dutfield and Suthersanen, 2004).

The fourth element, 'second-use patent', also deals with the extension of the scope of patentability. It can be manifested in two ways. On the one hand, it means the availability of patent for a subclass of a previously patent genus by claiming a particular feature that had been overlooked or disregarded from the initial patent granting. On the other hand, it simply refers to the provision of patents for new uses of a known product. In both ways, one might argue that an overstretching of the patent holder's rights that already had enjoyed a good deal of protection over a reasonable length of time comes at the expense of consumers and producers expecting cheaper prices and lower costs after a period of difficult access. In other words, the presence of rules of such nature in PTAs tends to enfeeble the notion of flexibility, hence giving an edge to monopolists.

The inclusion of the variable 'patent term extensions for unreasonable delay' into the template seeks to track down PTAs provisions that permit – tautologically speaking notwithstanding – the extension of the patent term whenever delays occur either throughout the regulatory approval processes or during the granting of the patent itself.

At first, this TRIPS-plus rule seems to be just another fair measure for coping with deliberated misconducts. However, when 'unreasonable delay' becomes a one-fits-all expression for evaluating any circumstance, fairness loses ground, even when the agreement defines the period. This might happen in the process of marketing approval for pharmaceutical products (Fink and Reichenmiller, 2005). Since this sort of approval usually demands the submission of test data on the drug's safety and efficacy to domestic regulatory authorities, which is an administrative procedure that differs from country to

country and runs on distinct deadlines, arguments might qualify the expected deadline as an 'unreasonable delay' with a view of claiming further protection (Fink and Reichenmiller, 2005).

Correa (2014) contends that several studies on the effects of these provisions found in PTAs signed between the US and Andean countries pointed out negative trends, such as rising prices and failures in the access to medicines. As a whole, it suffices to stress that unduly delayed market entry justifies the extension of patent protection without balancing off this determination with some flexibilities that would go in tandem with the spirit of embedded liberalism.

The fifth element of the template, under the name 'compulsory licences', is set to identify PTA provisions that limit the adoption of these licenses only to certain scenarios, such as to emergency situations, anti-trust remedies, and to public non-commercial use (Fink and Reichenmiller, 2005). Conversely, multilateral rules safeguard some degree of flexibility by authorising the use of compulsory licenses without imposing upon WTO members the obligation to specify the reasons for issuing them (Matsushita, Schoenbaum, Mavroidis and Hahn, 2015).

When enshrined as PTAs' provisions, the restriction on the use of compulsory licences hampers governments' leeway to boost competition by introducing generic products into the market. In fact, narrowing down the circumstances in which parties would be allowed to resort to compulsory licences to only a few critical situations curbs the likelihood of overriding the exclusivity derived from patent rights. Countries deprived of manufacturing capabilities suffer the most, especially when a quick response is key for solving a public health crisis that does not fit squarely into the specific circumstances outlined in the trade agreement. Moreover, the grant of compulsory licences might linger more than reasonably expected, given that they are entirely subject to the approval of patent rights holders.

'Disclosure grace period' refers to the TRIPS-plus provisions on the patentee's right to publicly disclose the invention without being subject to invalidation of the patent due to further claims of a missing novelty or inventive step. By and large, the existence of a grace period that precedes the date of filing of the application tends to benefit patent right holders, given the extra level of protection accrued to them. Nonetheless, it is hard to determine how this variable would play out in the assessment of the positive and negative

impacts for the embedded liberalism compromise. To avoid false assumptions, this element will not be applied to the further comparative analyses.

Also featuring as a variable in the template is whether the burden of proof³² lies on the patent office rather than on the applicant to demonstrate patentability or non-patentability. The existence of such provisions in a PTA indicates that the state would have an upper hand on decisions regarding the concession of patent rights over private actors. *Ceteris paribus*, exerting such control over this process means that the government authority would hold the vantage position to determine which invention merits the patent rights that best suit the public interests.

Another constituent element of the template on TRIPS-plus provisions on patent is 'restriction of revocation'. It consists of PTAs' provisions that restrict the revocation rights concerning patents to cases of fraud and misrepresentation only, therefore, invalidating the flexibilities set out in the TRIPS agreement. In line with Article 8 and 40 of that WTO multilateral agreement, for instance, governments are allowed to take measures with a view to prevent patent and other holders of IPRs from committing misconducts, such as restraining trade or impeding the transfer of technology. The blow against the notion of embedded liberalism would then result of governments having their authority jeopardised to intervene when they deem public interests are somewhat threatened by the overwhelming protection granted to patent owners.

Lastly, along with the eight elements from the T + PTA dataset described thus far, there is a need to incorporate into the template another variable that makes possible to track down normative provisions on test data for pharmaceutical products. Fink and Reichenmiller (2005) recall that the TRIPS Agreement mandates that test data be protected against unfair commercial use, however some bilateral trade agreements set out test data exclusivity instead. This often precludes a competing manufacturer from resorting to submitted original test data for a certain period, usually for five years.

Given that the use of compulsory licenses relies on obtaining market approval, which in turn depends on the submission of test data on the medicines' safety and efficacy to regulatory authorities, such exclusivity hampers the governments' ability to use compulsory

³² One should not mistake this with the TRIPS burden of proof, as laid out in its Article 34. This WTO rule refers to cases of infringement of the owner's rights when 'the subject matter of the patent is a process for obtaining a product' (WTO TRIPS, 1994, Article 34).

licensing in an effective manner. Furthermore, the authors point out that competing manufacturers usually take several years and vast expenditures to get a new compilation of a comparable test data (Fink and Reichenmiller, 2005). For these reasons, PTAs' provisions that foresee test data exclusivity are deemed to weaken the embedded liberalism compromise.

Table 9: The Template on TRIPS-Plus Provisions on Patent

Variables

1. Scope of coverage (plants)
 2. Scope of coverage (animals)
 3. Transitional extension for developing countries
 4. Second-use patents
 5. Patent term extensions for unreasonable delay
 6. Compulsory licences
 7. Burden of proof
 8. Restriction of revocation
 9. Test data protection for pharmaceutical products
-

3.2. Linking the Variables of the Template on Copyright with the Embedded Liberalism Compromise

As pointed out before, the template on the TRIPS-plus rules on copyright protection has a total of six elements, all of which extracted from T + PTA dataset (see *Table 10*). The identification of such normative provisions in the US and China PTAs is also key for finding out the level of attachment of these agreements to the embedded liberalism compromise. Hence it is necessary to describe how each element of the template relate to that constructivist concept before comparing the agreements' content.

The first element of the template concerns the sort of TRIPS-plus provisions that extend the duration of protection of literary work beyond the death of the authors in 70

years. This term of protection³³ outpaces in 20 years the one set forth by the TRIPS agreement, which defines as the standard period for the validity of that same right the life of the author plus 50 years after his death (Matsushita, Schoenbaum, Mavroidis and Hahn, 2015). At the same token, the second variable helps to identify PTAs that establish an even longer term of protection, which amount to a total of 90 years that begins to run immediately after the author's decease.

It can be argued that both additional extensions of protection – and, in many cases, the right of his/her heirs – enhance the privileges associated with the legal exclusivity of exploiting the work over a longer period than the standard time span set out by the WTO rules. Such monopolist stance might forge negative impacts for the society's overall welfare. It hampers not only consumers' expectation to enjoy an easier access to the literary work, but also the diffusion of knowledge once the author's right falls into the public domain. As for this latter aspect, sharing academic knowledge paves the way for socioeconomic developments, and it is not every societal group, or even country, which is able to afford the costs derived from monopolist privileges. Consequently, PTAs that extend the term of protection beyond TRIPS rules are deemed less aligned with the spirit of embedded liberalism.

The element 'scope of protection for videograms' is another TRIPS-plus rule commonly found in PTAs. Its main purpose is thus to broaden the coverage of copyright protection by encompassing all sorts of video productions other than cinematographic works. Since the TRIPS agreement only refers to the latter, the legal protection that the multilateral rules provide is more limited. Conversely, an overstretch of the intellectual property protection occurs when PTAs grant the same rights to other categories of work, striking a balance between private and public interests that tend to benefit more the former.

Another element of the template consists of identifying whether PTAs provide for private use exceptions in copyright. In other words, its goal is to determine if there are circumstances in which PTA parties are allowed to exploit the work without breaching any copyright protection. For instance, agreements may foresee the private use exception solely for the purpose of teaching or scientific research.

³³ This term of protection had initially been defined by Article 7(1) of the Berne Convention and only later incorporated into the TRIPS agreement.

It is relevant to stress that Article 13 of the TRIPS agreement allows WTO members to adopt 'limitations or exceptions to exclusive rights to certain special cases' as long as they do not 'conflict with a normal exploitation of the work and do not unreasonably prejudice the legitimate interests of the right holder' (WTO TRIPS, 1994, Article 13). Accordingly, PTAs that provide for such exceptions are more in line with the embedded liberalism compromise, given that they tend to safeguard some of the public interests over a disproportionately overprotection granted to copyright holders.

An increased level of copyright protection is also observed in PTAs that have added Article 6bis of the Berne Convention to its legal text. Therefore, the fifth element of the template seeks to pinpoint provisions that reproduce these rights. Basically, this incremental protection refers to the author's right to claim authorship of the work as well as to object to any modification of the said work that would tarnish his honour or reputation in some way (Berne Convention, 1979). Furthermore, the legal validity of this rule extends beyond the author's death and must be exercisable by the domestic authorities of the country where protection is sought (Berne Convention, 1979). Arguably, this might function as a legal impairment for further use and exploitation of the work by a wider margin of consumers, and to the best interest of the government, regardless of the actual validity of the author's economic rights, which could have already been transferred to another person or institution.

The last element of the template on TRIPS-plus copyright protection deals with PTAs provisions that aim to tackle actions intended to circumvent technology protection measures, and, as such, are regarded as copyright infringement. Despite its rightful and welcomed intention to avoid misconducts at large, the wording 'adequate protection' against acts of circumvention, which is often found in PTAs and converted into civil and criminal liability, strengthens the right holder's position in the market *vis-à-vis* unharmed consumers who are not able to pose any significant threat to the commercial status of the author of the work, performance, or phonogram. This becomes even more acute when this legal power is not tamed by some exemptions, such is the situation when circumvention is not carried out for commercial purpose, for instance, in cases of lawfully authorized government activities, reverse engineering, and to feed information to education institutions, non-profit libraries and archives.

Table 10: The Template on TRIPS-Plus Provisions on Copyright

Variables

1. Duration of 70 years
 2. Duration of 90 years
 3. Scope of protection for videograms
 4. Private use exceptions
 5. Article 6bis of the Berne Convention
 6. Anti-circumvention of technology protection measures
-

3.3. Linking the Variables of the Template on Trademark with the Embedded Liberalism Compromise

Also drawing from the T + PTA dataset, the template on trademark is made of nine elements that seek to unveil the most recurrent TRIPS-plus provisions in PTAs. The embracement of these rules by the parties is likely to affect the embedded liberalism compromise due to the overprotection that mostly benefits right holders and often clashes with the government's prerogative of deciding what is best for social welfare.

The first six elements of this template could be grouped into one category for sharing a common feature, which is the ultimate goal of broadening the scope of protection by determining the sorts of marks that may be registered under trademark legislation. The only feature that distinguishes one element from the other is the subject matter that each one addresses. Accordingly, the scope of protection might range from 3-D marks to sounds, holograms, scents or smells, movements and colours³⁴.

The WTO rules, as one reads from Article 15, § 1 of the TRIPS agreement, do not explicitly mention the above subject matters. Instead, they only make reference to any sign or combination of signs, such as 'particular words including personal names, letters, numerals, figurative elements and combination of colours', as being 'eligible for registration as trademarks'. Yet Article 15, § 2 of said agreement allows registration of a trademark

³⁴ The T+PTA Codebook refers to the decision to trademark a specific colour, leaving out of the scope of protection the arrangements of colours.

based on other grounds if it does not conflict with the provisions of the Paris Convention (1967).

Notwithstanding this possibility to innovate through future law-making, this legal innovation has not been realised within the WTO normative framework through the enactment of complementary multilateral norms to the TRIPS agreement, but rather through PTAs' TRIPS-plus rules by which only the signing parties must abide.

These TRIPS-plus provisions also contribute to strengthen the stance of intellectual right holders in relation to other societal groups. Indeed, a direct consequence of widening the scope of protection is the likely increase in the number of trademark registration, given that more elements could be associated with a mark. This leaves little room for other potential competitors, consumers, or even public authorities, to also partake in the economic exploitation of what could not be eligible for trademark had not been for the TRIP-plus rule. Whenever such advancement of trade-related rules – which are allegedly fashioned to boost trade among WTO members – comes at the expense of the state's ability to intervene in its domestic affairs to promote the public interests, the embedded liberalism compromise weakens at some level.

The seventh element of the template refers to whether the term of initial registration of trademarks, which also concerns each renewal, is more than seven years. In this vein, its purpose is to look for the TRIPS-plus provisions that extend the deadline beyond the minimum baseline set forth in the TRIPS agreement. One critical consequence of changes of this sort is that trademark holders would enjoy a longer period of exclusive rights before running through the same bureaucratic process again in order to prove that the conditions for renewal are met. Surely, this new legal circumstance tilts the balance in favour of private enterprises *vis-à-vis* the state, in cases, for instance, where public royalty expenditures are too high for the latter to bear even when the conditions for renewal are no longer met.

The above caveats also apply to the next element of the template, which is set to identify the TRIPS-plus provisions that grant more than three years to the duration of protection without the use of the trademark. The maximum duration set forth in TRIPS Article 19, § 1 is only three years. Therefore, the extension that some PTAs grant to trademark holders allows them to refrain from using the mark without being subject to the loss of protection.

Finally, the last element of the template (see *Table 11*) is the least likely to have a significant impact for the notion of embedded liberalism, although the presumably effects cannot be entirely overlooked. It seeks to find out whether the PTA under analysis mandates members to provide for an electronic registration system for trademarks. Notwithstanding the virtues and benefits driving such undertaking, mainly to trademark applicants, questions could be raised concerning the convenience of implementing a nationwide enterprise that might turn into fiscal costs and interference with other public priorities.

Table 11: The Template on TRIPS-Plus Provisions on Trademark

Variables

1. Scope of protection: 3-D marks
 2. Scope of protection: Sounds
 3. Scope of protection: Holograms
 4. Scope of protection: Scents/Smells
 5. Scope of protection: Movements
 6. Scope of protection: Colours
 7. Term of initial trademark protection
 8. Duration of protection without use: more than 3 years
 9. Electronic registration system
-

3.4. Linking the Variables of the Template on Accession to Intellectual Property Right Agreements and Enforcement of Intellectual Property Terms with the Embedded Liberalism Compromise

A complementary template (see *Table 12*) to the ones dealing with patents, copyrights and trademarks will also underpin the empirical findings of this qualitative study. Differently from the other three, this template is a blend of seven constituent elements, of which three pertain to the same category (enforcement of intellectual property terms), whereas the rest belongs to other specific areas of IPRs. Common to them, there is the significant influence they exert over the embedded liberalism compromise.

In a study on the Asia-Pacific PTAs containing provisions that go beyond TRIPS standards, Lindstrom (2010) underscores four main areas in which normative innovations usually take place, namely patenting of pharmaceuticals, patenting of life forms, accession to international intellectual property right agreements, and enforcement of intellectual property terms. These findings are key to the effort of tailoring a template that would not turn a blind eye to singular characteristics that could be attributed to Chinese agreements, yet perhaps absent from the US' PTAs, with regards to the TRIPS-plus provisions.

The first two areas – patenting of pharmaceuticals³⁵ and patenting of life forms – have already been discussed at length and added to the template on TRIPS-plus provisions, in spite of referring to them respectively as 'test data protection for pharmaceutical products' and 'scope of coverage' for either plants or animals.

As for the latter two, their effects are almost intuitively understood. As provisions call for a higher number of accessions to international property right agreements and for more enforcement measures to strengthen the compliance of the rights, the level of IPRs' protection will enhance accordingly. Assuming that the notion of embedded liberalism hinges on norms that safeguard some manoeuvring for state intervention in its domestic market, any attempt of curbing such goal by granting more protection to right holders beyond what multilateral rules already have established would mean a detour from the said concept.

The importance of identifying mandatory accessions to other international agreements through provisions found in the US's and China's PTAs is due to the fact that the regime on IPRs is not entirely confined to the TRIPS Agreement. In fact, a parallel multilateral normative framework on this subject area has been evolving even before TRIPS came about, most notoriously since the creation of the WIPO in 1967, which assumed the role of overseeing and harmonizing the norms on IPRs spread out in various international treaties (Dutfield and Suthersanen, 2004). Although a great deal of overlapping does exist between the content of these agreements and the TRIPS' rules, substantive differences also feature in. This amounts to inevitable consequences for the embedded liberalism compromise.

³⁵ Even though the term could make reference to more than one PTA provision, test data protection for pharmaceutical products has been chosen as a proxy variable for its likely impact on the embedded liberalism compromise.

In the case of enforcement measures, the TRIPS Agreement has been groundbreaking. It was the first multilateral agreement to introduce a set of specific obligations on the enforcement of IPRs. This deterrent mechanism against breaches and misconducts paved the way for a stronger protection of the rights' owners on an unprecedented scale through judicial decisions.

Underneath the overarching umbrella of enforcement measures, Fink and Reichenmiller (2005) underscore a few rules that are worth adding to the complementary template on TRIPS-plus provisions for their potential effects upon the concept of embedded liberalism. As these variables also compound the T + PTA dataset, the adoption of the same names aims to facilitate their further description. They are the restriction of institutional flexibility, the border measures and the criminal sanctions for intellectual property right infringement.

The first of the above three elements alludes to the TRIPS' rule on institutional flexibility by not setting forth any obligation regarding 'the distribution of resources as between enforcement of IPRs and the enforcement of law in general' (WTO TRIPS, 1994). As a result, derogations from certain enforcement provisions become possible as long as institutional constraints manifest themselves, such as limited human resources or budgetary (Fink and Reichenmiller, 2005). This is a recognition of the material restrictions that usually affect developing countries; hence, a flexibility that goes in tandem with the notion of embedded liberalism. Nonetheless, there are PTAs' provisions explicitly banning such legal prerogative by prohibiting parties to invoke resource constraints as a way of bypassing enforcement obligations.

Border measures is another hot issue that interferes in the state's policies and duties. Yet, at this time, PTAs' rules call for a more active role from government authorities to beef up border controls in favour of IPRs protection. While the TRIPS Agreement requires customs authorities to halt trade in pirated and counterfeit goods that are object of importation, PTAs have spelled out rules that extend these requirements to exported or/and transiting goods. One logical consequence of this is the submission of state duties to the interests of IPRs owners, who may held government authority accountable for any surveillance failure that could arise, even in situations where illegal goods were only crossing the state territory.

The third element of the enforcement measure – criminal sanctions for intellectual property right infringement – is one the most consequential in terms of its impact for the protection of IPRs. Indeed, while the TRIPS Agreement grants criminal sanctions only for copyrights and trademarks, although without specifying them, some PTAs also include patents in their list. Ranging from imprisonment to fines, capital punishment and restitution, these criminal sanctions aspire to forge more compliance to the rules by broadening their scope and making clear what the punishments are.

As what happens when new kinds of border measures are required from regulatory authorities, the expansion of criminal sanctions is expected to propel a negative effect upon the embedded liberalism compromise. A resulting loss in the state sovereign power to fashion its own policies and take the right decisions in light of specific contexts and what would be the best outcome to society as whole cannot be overlooked altogether in this case. In fact, much of the political space to decide upon public policies is curtailed in the name of increasing the protection of IPRs through bilateral institutional arrangements.

3.5. Linking the Variables of the Template on Article 8 of TRIPS, the Doha Declaration on the TRIPS Agreement and Public Health, and Paragraph 6 of the TRIPS with the Embedded Liberalism Compromise

The selection of the elements to make up the template has until here privileged only TRIPS-plus provisions. Nonetheless, three exceptions ought to be made, given the existence of legal obligations belonging to TRIPS normative domain that perfectly capture the axiological spirit of embedded liberalism. These are Article 8 of TRIPS, the Doha Declaration on the TRIPS Agreement and Public Health, and the WTO Decision on the Interpretation of Paragraph 6 of the TRIPS Agreement.

Under the heading of ‘Principles’, Article 8 of TRIPS is segmented into two paragraphs. The first gives permission to members to ‘(...) adopt measures necessary to protect public health and nutrition, and to promote the public interest in sectors of vital importance to their socio-economic and technological development (...)’ (WTO GATT, 1994, Article 8, § 1). The second paragraph, in its turn, allows WTO members to take appropriate measures with a view ‘(...) to prevent the abuse of intellectual property rights by right holders or the resort to practices which unreasonably restrain trade or adversely affect the

international transfer of technology' (WTO GATT, 1994, Article 8, § 2). Both provisions seek to ensure the right balance between what is best for IPRs protection and the public interests at large.

The Doha Declaration on the TRIPS Agreement and Public Health reinforces the flexibilities granted to WTO members by Article 8 of TRIPS. Adopted at the WTO Ministerial Conference of 2001, which took place in Doha on 14 November 2001, the Doha Declaration reaffirmed the right to permit the circumvention of patents. It was a reassertion of the existing TRIPS flexibilities in the face of US pressure to get rid of them. Such reassurance encouraged WTO members to vindicate the issuing of compulsory licence. Thus, by making use of this legal mechanism, the licensee receives the authorization to produce a patented good without having the consent of the patent owner, or simply intends to use the patent-invention itself (Matsushita, Schoenbaum, Mavroidis and Hahn, 2015).

However, there was a remaining obstacle to overcome for the TRIPS Agreement's flexibilities to be fully realised. This is so because its Article 31(f) sets forth that any use of compulsory licensing should be 'predominantly for the supply of the domestic market' (WTO TRIPS, 1994, Article 31f). Countries with either insufficient or no manufacturing capability were, thus, completely left out in the beneficial scheme of making effective use of compulsory licensing.

A reversal of that legal impairment came about in 2003, when a WTO Decision on the Interpretation of Paragraph 6 heralded a new form of compulsory licence specifically tailored for the export of medicines to countries in need (Chung, 2010). From this moment on, compulsory licencing would no longer be restricted to mainly supply the domestic market, as it broadened its scope to also become a means to export generic versions of patented medicines to nations lacking the capability to manufacture pharmaceuticals (Matsushita, Schoenbaum, Mavroidis and Hahn, 2015). Later, the new Article 31*bis* of the TRIPS Agreement gave effect to this so-called 'Paragraph 6 system', allowing WTO members to obtain generic medicines from elsewhere. Should this impairment arise, thus, countries would still be able to obtain generic medicines from elsewhere provided they are not able to domestically produce them (Chung, 2010).

From all this, it is easy to assume that developing and least-developing countries are the preferable beneficiaries of the flexibilities and exceptions set out in the TRIPS agreement. Usually devoid of sufficient resources to spend on research and investments on

the pharmaceutical sector, these countries are expected to lag far behind their developed counterparts in both the number of patent holders as well as in terms of domestic manufacturing capacity. This is a disadvantage that becomes even more acute and daring when situation of national emergencies arises, such as the spread of endemic and pandemic diseases, which severely affect their population.

In this regard, both Article 8 of TRIPS agreement and the Doha TRIPS Declaration consist of an irrevocable manifestation of the normative grammar evoked by the embedded liberalism compromise. While general TRIPS provisions create incentives for trade on a global scale through the protection of patent rights, those two legal instruments safeguard the WTO members' political space for intervening whenever it becomes necessary to override injustices related to overwhelmingly protective privileges. Looking for the existence of provisions that emulate the content of Article 8 of TRIPS and/or explicitly mention the Doha TRIPS Declaration as well as the new interpretation of Paragraph 6 of the TRIPS Agreement in the selected US and China PTAs is another logical way of ascertaining the extent to which these countries champion the notion behind the embedded liberalism compromise. For this reason, these two normative species will also be included in the template (see *Table 12*) that will guide the further comparative analyses.

Table 12: The Complementary Template on TRIPS-Like and TRIPS-Plus provisions

Variables

1. Number of accessions to international intellectual property right agreements
 2. Restriction of institutional flexibility
 3. Border measures
 4. Criminal sanctions for intellectual property right infringement
 5. Article 8 of the TRIPS Agreement
 6. The Doha Declaration on the TRIPS Agreement and Public Health
 7. The Interpretation of Paragraph 6 of the TRIPS Agreement
-

4. Mapping the Patent Provisions in US PTAs

Among the five US PTAs underpinning this comparative study, two of them present provisions that extend the scope of patent protection to plants. They are the US-Chile and the US-Peru PTAs. The rest of the bilateral agreements is therefore devoid of any normative content regulating the same subject.

It is worth stressing that the only difference identified on the legal text of both the US-Chile and the US-Peru PTAs concerns the deadline for granting such protection. On the one hand, the US-Chile PTA requests parties to only adopt such scope of patent protection in four years after the agreement enters into force. For the US-Peru PTA, on the other hand, this right is expected to be valid by the date the agreement comes to fruition. If parties fail to provide accordingly, they shall make the necessary efforts to accomplish this goal.

Regarding the scope of coverage to animals, the US-Peru PTA stands out as the only agreement out of the selected set to demand that parties uphold to patent protection on the treaty's date of entry into force or, if protection is granted afterwards, that parties maintain the same right.

On transition extension for developing countries, there are provisions that deal with this subject in the US-Chile, the US-Peru and the US-Singapore PTAs. Conversely, the protection that tends to benefit the party fitting into this category of countries is not found in the US-Korea as well as in the US-Australia PTAs. Perhaps this absence verified in both agreements might derive from the fact the neither parties, Korea and Australia, received the label of developing countries.

Whereas the transition period encompasses only patent protection for plants in the US-Chile PTA, which spans until four years since the data of entry into force of the agreement, this possibility is also extended to other IPRs in the US-Peru and the US-Singapore PTAs, in which there are different deadlines for the implementation of specific obligations.

The US-Korea and the US-Australia are the only agreements to acknowledge the right of granting second-use patents. Thus, in light with both legal texts, parties to the agreements must make patent 'available for any new uses or methods of using a known product' (e.g. the US-Australia PTA, Article 17.9, § 1). Such requirement, however, is not seen in the US-Chile, the US-Peru and the US-Singapore PTAs.

Provisions on patent term extensions for unreasonable delay are a common feature across all the selected US PTAs. As previously underscored, the delay might occur during the

patent examination process and/or throughout the marketing approval phase. Notwithstanding the imperative to adjust the term of a patent as a way of compensating right holders for unreasonable delays, a deeper analysis on the legal texts reveals that what constitutes a delay varies from one agreement to another.

For instance, for both the US-Chile and the US-Peru PTAs, the term means more than five years from the date the application is filed, or three years after an examination of the application has been requested. Shorter periods are put forward by the US-Australia and the US-Singapore PTAs, as they correspond to more than four years and two years accordingly. And the US-Korea PTA permits adjustment to the patent term when issuance of the protection takes more than four years from the date of filing the application, or three years after the request for examining the application has already been made.

The agreements also differ from each other when it comes to the possibility to restore patent term with respect to pharmaceutical product covered by a patent. Whereas in the US-Korea PTA as well as in the US-Australia PTA there is a provision assuring the right to compensate the patent owner for unreasonable curtailment of the patent term as a result of the marketing approval process associated with the first commercial marketing of the product, the same rule is missing from the US-Chile and the US-Singapore PTAs. Such assurance is much weaker in the US-Peru PTA, since it is not treated as an obligation, but instead as a possibility to which the parties might resort if they deem necessary.

The next element of the template sought to unveil legal provisions that put forward some restrictions on the use of compulsory licenses. Two out of the five agreements were identified as setting out specific grounds on which parties could recur to them, hence curbing the chances of taking advantage of the more favourable circumstances and flexibility yielded by the TRIPS Agreement. These two agreements are the US-Australia and the US-Singapore PTAs, and their normative contents permit one party to waive the authorization of the right holder only if the main purpose of such undertaking is to tackle a national emergency, to act as an anticompetitive remedy, or in case of public non-commercial use. This latter circumstance relates to the intention of limiting competition by impeding generic products from entering the market, such as medicines.

Concerning the variable of the template on TRIPS-plus provisions on patent, none of the US's PTAs contains any rule determining that patent offices are in charge of proving whether an invention is or is not patentable. Thus, the analyses revealed that the burden of

proof does not lie on any governmental institution of the parties to the bilateral agreements under scrutiny.

In stark contrast to the empirical results right above highlighted, restrictions of revocation of patent rights were found in all five US's PTAs. In-depth analyses on the legal texts, however, capture differences among some of the PTA's provisions. In common, these rules constrain the flexibility secured by the WTO norms, yet the limits are less or more acute depending on the agreement.

Both in the US-Australia and in the US-Peru PTAs, the basis for revoking a patent not only includes the same reasons that would have denied the concession of the patent in the first place, but it also encompasses fraud, misrepresentation, or inequitable conduct. Besides regulating the same issues likewise, the US-Korea and the US-Singapore PTAs also prohibit the adoption of proceedings that allow a third party to question and oppose the grant of a patent before the concession of the protection is authorised, where such mechanism is available. The US-Chile PTA narrows down the possibilities of revoking a patent to the same grounds that would have justified a refusal to grant the right as well as to cases of fraud in the attempt to obtain the patent.

The last-mapped element of the template focused on test data exclusivity for pharmaceutical products. Despite the existence of provisions regulating this subject in all five US's PTAs, careful comparative analyses on the legal text showed a degree of variation as to what exclusivity really means. In the cases of the US-Chile and the US-Peru PTAs, test data exclusivity comprises only the prohibition for third parties to freely access undisclosed information regarding the safety and efficacy of a pharmaceutical product, as a requirement for granting a market approval, without the consent of the entity or person that first submitted that information, to obtain authorization for marketing the product. On top of this, The US-Singapore PTA adds another provision validating the same data exclusivity for PTA members when seekers of marketing approval intend to rely on data already provided for marketing a product in a third party territory. Going a step further along this continuum of incremental strictness, the US-Korea and the US-Australia PTAs lay out an addition three years of data exclusivity because of new clinical information.

5. Mapping the Patent Provisions in Chinese PTAs

As laid out in the introduction, one out of all the selected Chinese PTAs – the China-Singapore PTA – does not present a chapter on IPRs. Consequently, each further mapping on specific IPR provisions found in China PTAs will only take into account four agreements, falling short to match the exact number of the US PTAs. This minor incongruence, however, does not invalidate the comparative analyses, given that the main features of each rule will be underscored, allowing comparisons to be made in pairs as well.

Eloquent empirical findings were unveiled from mapping the targeted patent provisions. Not a single constituent element belonging to the template was identified in the form of rule across the Chinese agreements. Indeed, none of them contains legal provisions extending the scope of coverage to plants and animals for the purpose of patent protection as well as any mention to transition extension for developing countries, which benefits trade partners that fit into this label in buying time to implement and adapt to the new normative framework brought by the trade agreement. ’

In a concise overview, the same pattern of missing regulatory provisions applies to ‘second-use patents’, to ‘patent term extensions for unreasonable delay’, to ‘compulsory licences’, to ‘burden of proof’, to ‘restriction of revocation’, and to ‘test data protection for pharmaceutical products’. Therefore, a void of normative content that significantly differs from the US’PTAs, as further analytical comparisons will clarify even more.

The following table summarises the comparisons on the TRIPS-plus provisions on patent across the US and China PTAs by attributing ‘0’ to the topics not found in the agreements and ‘1’ to the elements identified in the PTAs’ legal content.

Table 13: Mapping of TRIPS-Plus Provisions on Patent

MAPPING OF TRIPS-PLUS PROVISIONS ON PATENT										
Elements	US – Korea	China – Korea	US – Australia	China – Australia	US – Chile	China – Chile	US – Peru	China – Peru	US – Singapore	China – Singapore
1. Scope of coverage (plants)	0	0	0	0	1	0	1	0	0	N/A

2. Scope of coverage (animals)	0	0	0	0	0	0	1	0	0	N/A
3. Transitional extension for developing countries	0	0	0	0	1	0	1	0	1	N/A
4. Second-use patents	1	0	1	0	0	0	0	0	0	N/A
5. Patent term extensions for unreasonable delay	1	0	1	0	1	0	1	0	1	N/A
6. Compulsory licences	0	0	1	0	0	0	0	0	1	N/A
7. Disclosure grace period	1	0	1	0	1	0	1	0	0	N/A
8. Burden of proof	0	0	0	0	0	0	0	0	0	N/A
9. Restriction of revocation	1	0	1	0	1	0	1	0	1	N/A
10. Test data protection for pharmaceutical products	1	0	1	0	1	0	1	0	1	N/A

6. Mapping the Copyright Provisions in US PTAs

The first two elements of the template on TRIPS-plus rules on copyright deal with the length of period that a work is under protection before turning into public domain. Provisions were then found to have settled the maximum deadline to last 70 years after the author's death across the five US PTAs selected for this study. Accordingly, none of those agreements extended the total duration to 90 years.

Also uncovered from copyright protection are videograms in the set of US PTAs. Likewise, the variable 'private use exceptions' is missing from those treaties. In fact, there are no specified circumstance in the agreements that would allow the use of certain work without breaching the rules that secure its copyright protection.

Moreover, none of the US PTAs contains any legal passage referring to Article 6bis of the Berne Convention, an incremental protection that would give right holders more sway in

objecting to any modification of his/her work, provided it is regarded as offensive to his/her reputation or honour, even after his/her death.

Contrary to the last four constituent elements thus far analysed, the mapping of rules on anti-circumvention of technology protection measures reveals a prolific result. This is because each one of the US's agreements has provisions on the protection and effective legal remedies against this wrongdoing. An in-depth analysis on these shared rules also reveals that a person held liable for such conduct becomes automatically subject to criminal procedures and penalties, after it has been proven a wilful action for prohibited commercial purposes. Surely, this is a key deterrent element foreseen in these bilateral agreements that bolster the level of protection in favour of the right holders.

7. Mapping the Copyright Provisions in Chinese PTAs

None of the five Chinese PTAs extended the copyright term *vis-à-vis* the cap period set out by the WTO rules. Hence, provisions on the duration of 70 years or 90 years for copyright protection to continue legally valid after the author's death are absent from the China's agreements.

Neither rules on the scope of protection for videograms nor on the private use exceptions were identified in the China's selected PTAs. As for provisions making reference to Article 6bis of the Berne Convention, only the China-Australia PTA reaffirmed its legally binding compromise. Thus, the other Chinese agreements did not present any normative content addressing this subject matter in the same or similar fashion.

Also standing as the only agreement among the five is the China-Korea PTA when it comes to laying out rules on the adoption of measures to prevent and punish the circumvention of technology protection. A careful examination of such provisions, which comprise the three paragraphs of Article 15.8, however, shows a limited scope of their normative content. The obligation to provide 'adequate legal protection and effective legal remedies against the circumvention' of technological measures is only mentioned in general terms in the text (China-Korea PTA, Article 15.8, § 1). Indeed, one does not encounter any detailed specification of which forms would these measures take, and the circumstances they ought to be applied accordingly. In light of such vagueness, thus, the parties to the

agreement would enjoy much discretion as to the nature of the measure aiming to tame certain circumvention.

Table 14 below illustrates the resulting comparative mapping of the legal elements on copyright across the US and China PTAs.

Table 14: Mapping of TRIPS-Plus Provisions on Copyright

MAPPING OF TRIPS-PLUS PROVISIONS ON COPYRIGHT										
Elements	US – Korea	China – Korea	US – Australia	China – Australia	US – Chile	China – Chile	US – Peru	China – Peru	US – Singapore	China – Singapore
1. Duration of 70 years	1	0	1	0	1	0	1	0	1	N/A
2. Duration of 90 years	0	0	0	0	0	0	0	0	0	N/A
3. Scope of protection for videograms	0	0	0	0	0	0	0	0	0	N/A
4. Private use exceptions	0	0	0	0	0	0	0	0	0	N/A
5. Article 6bis of the Berne Convention	0	0	0	1	0	0	0	0	0	N/A
6. Anti-circumvention of technology protection measures	1	1	1	0	1	0	1	0	1	N/A

8. Mapping the Trademark Provisions in US PTAs

As noted before, the first six elements of the template on trademark provisions share the common trait of specifying which quality of a certain mark is eligible for

registration under trademark legislation. Each of these variables then enhances the scope of the trademark protection. The aggregate empirical findings derived from mapping these rules in US PTAs reveals a heterogeneous outlook.

On the one hand, none of the agreements presents rules on extending the scope of protection to 3-D marks, holograms, and movements. On the other hand, provisions bringing into the scope of protection sounds, scents or smells, and colours can be found in most of the US PTAs. In this vein, the only bilateral treaty that does not include sounds into this sort of scope of protection is the US-Singapore PTA. As for scents and smells, not a single agreement is left out. And, the US-Peru and the US-Singapore PTAs are devoid of rules that permit marks identified only by their colours to be registered for trademark protection.

Still within the set of US PTAs, a careful analysis on the above normative provisions helped to pinpoint two almost unnoticed details, yet consequential in terms of the effects they might bring about to the parties. The first concerns the wording of the provision extending the scope of protection to colours marks in the US-Chile PTA. Contrary to the other agreements where this rule exists, where one reads the expression 'single colors', the referred PTA only states 'colors' as sign or combination of signs that could be granted protection. Although this may seem just a small detail, interpretations could arise as to indicate that only arrangement of colours would be eligible for registering as a trademark, therefore, ruling out registration of single colours.

The second remark framing another tiny detail, though relevant, was identified in the US-Singapore PTA, more precisely in a passage of the legal text authorising the parties to register scent marks. Thus, while the other four US PTAs explicitly oblige their members to proceed with registration of scent marks when requirements are met, the US-Singapore PTA only calls on parties to 'make the best effort to register scent marks'. Once again, it is plausible to assume that one might argue that making the best effort not necessarily mean actually giving effect to the normative commanding.

The analyses on the provisions moved on to the next element of the template, which is the 'term of initial trademark protection'. Among the five US's bilateral agreements, three of them present rules regulating this subject matter: the US-Korea, the US-Australia, and the US-Peru PTAs. Accordingly, lacking this type of rules figure the US-Chile and the US-Singapore PTAs. Moreover, it is worth noting that in all three agreements containing the

targeted rule, not only the term of initial protection, but also each renewal of the trademark registration ought to be no less than ten years.

Normative provisions on the duration of protection, in the event of more than three years has gone by without use, are missing from all five PTAs. This makes expungements due to refrainment from using the trademark much easier to happen than it would be if a longer period of more than three years were adopted.

Lastly, the obligation for parties to provide an electronic registration system is a common feature verified in the US-Korea, the US-Australia, the US-Chile, and the US-Peru PTAs. The only bilateral trade agreement, therefore, not having any provision on this normative issue is the US-Singapore PTA.

9. Mapping the Trademark Provisions in Chinese PTAs

The search for provisions based on the constituent elements of the template on trademark rules led to scant results. In fact, out of the eleven variables comprising the whole template, only two were identified in the Chinese PTAs, albeit confined to only two bilateral treaties.

On the types of marks that are eligible for trademark protection, only sounds are object of this kind of regulation in the China-Korea PTA and in the China-Australia PTA. The bulk of variables dealing with other marks that may also be registered under trademark legislation, notably 3-D marks, holograms, scents/smells, movements, and colours, is absent from all five PTAs. Likewise, missing from all the selected China PTAs are provisions that extend the term of initial trademark protection as well as the duration of protection when right holders spend more than three years without using the trademark.

With regards to the last element of the template, the mapping of provisions mandating the national regulatory authorities to install an electronic registration system for trademarks found out that only the US-Korea PTA contains such legal obligation. The other four Chinese PTAs are, thus, deprived of any rule making the same or a similar demand from the parties.

Table 15 outlines the comparisons on the constituent elements concerning the TRIPS-plus provisions on trademark across the US and China selected PTAs.

Table 15: Mapping of TRIPS-Plus Provisions on Trademark

MAPPING OF TRIPS-PLUS PROVISIONS ON TRADEMARK										
Elements	US – Korea	China – Korea	US – Australia	China – Australia	US – Chile	China – Chile	US – Peru	China – Peru	US – Singapore	China – Singapore
1. Scope of protection: 3-D marks	0	0	0	0	0	0	0	0	0	N/A
2. Scope of protection: sounds	1	1	1	1	1	0	1	0	0	N/A
3. Scope of protection: holograms	0	0	0	0	0	0	0	0	0	N/A
4. Scope of protection: scents/smells	1	0	1	0	1	0	1	0	1	N/A
5. Scope of protection: movements	0	0	0	0	0	0	0	0	0	N/A
6. Scope of protection: colours	1	0	1	0	1	0	0	0	0	N/A
7. Term of initial trademark protection	1	0	1	0	0	0	1	0	0	N/A
8. Duration of protection without use: more than 3 years	0	0	0	0	0	0	0	0	0	N/A
9. Electronic registration	1	1	1	0	1	0	1	0	0	N/A

n system										
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10. Mapping the Other IPR Provisions in US PTAs

This session turns to the complementary template on IPRs provisions with also an intrinsic highly likelihood to affect the embedded liberalism compromise at some extent. As explained before in the description of each element of the template, mapping the corresponding normative provisions will provide additional empirical findings to the previous results, which are commensurate to the sheer TRIPS-plus rules seen in PTAs.

Beginning by displaying the number of mandatory accessions to IPRs multilateral agreements across the five US's PTAs, it is interesting to note that each one of them contains normative commands requesting their members to commit themselves to other rules beyond the ones already seen in the TRIPS agreement. Taken together, the US-Korea PTA stands out as presenting the largest number of accessions, with 10 in total, and the US-Chile PTA with the fewest among the five PTAs, amounting to four multilateral treaties. Tying with seven accessions required are the US-Peru and the US-Singapore PTAs, and the US-Australia PTA surpassing both agreements in one accession as it mandates the parties to adhere to a total of eight multilateral treaties on specific IPRs.

On the next element of the template, which sought to identify normative provisions banning the possibility of claiming shortness of resources with a view of overriding certain enforcement obligations, there are three agreements setting out such prohibition: the US-Chile, the US-Peru and the US-Singapore PTAs. At least two of them signed with trade partners undeniably known for being developing countries, therefore, characterizing a hindrance to the flexibility assured by WTO rules. Furthermore, there is no substantive difference with respect to the content of the provisions addressing this subject matter, as the three agreements clearly state that any decision on how parties distribute enforcement resources shall not be taken as an excuse for not complying with the obligations laid out in these legal texts.

Border measures are another element of the template that brings about additional obligations in terms of enforcement actions. Rules on this issue were found in each one of the selected US PTAs. Their normative language mandates members to initiate *ex officio*

border measures to imported, exported and/or even in-transit merchandise, depending on the agreement on the spotlight, when coping with a suspected counterfeit trademark or a pirated copyright good. In the case of the US-Korea, the US-Chile, the US-Peru and the US-Singapore PTAs, the adoption of border measures encompasses those three circumstances. As for the US-Australia PTA, however, this possibility applies only to imported merchandises.

Across the US PTAs there are plenty of criminal procedures and remedies that deepen the content of TRIPS's rules, usually in two ways: either by specifying the array of these enforcement measures, or by adding up willful infringements as another condition for applying remedies, which goes beyond the purpose of pursuing financial gains. Nevertheless, only the US-Chile PTA, among all five agreements, makes available for right holders criminal penalties as enforcement measures against patent infringements.

An explicit mention to the full spectrum of Article 8 of the TRIPS Agreement (which sets out the principles for the right to take measures with the purpose of protecting public health and nutrition, promoting the public interests in sectors of vital importance to their socio-economic and technological development, and preventing the abuse of IPR by the right holders or the adoption of practices that unreasonably end up restraining trade or adversely affecting the international transfer of technology) is not verified in any of the US PTAs. Nonetheless, part of its normative content is mirrored to a certain degree by provisions found in the US-Chile and the US-Peru PTAs, at least with respect to the second paragraph of the referred article.

The risk of overstretching the meaning of these rules notwithstanding, it is conceivable to interpret the possibility to adopt measures necessary to 'prevent anticompetitive practices that may result from the abuse of the intellectual property rights' (the US-Chile PTA, Article 17.1, § 13), which is the wording stated in both bilateral agreements, as indicative of an intention to forbid the adoption of 'practices which unreasonably restrain trade', as one reads from the WTO rules (WTO TRIPS, 1994, Article 8, § 2). Left out in both bilateral agreements is the objective to take measures against practices that 'adversely affect the international transfer of technology', as the very second paragraph closes the sentence (WTO TRIPS, 1994, Article 8, § 2).

Once again, the same provision that could only partially converge to the aforementioned TRIPS rule is absent from the other three US PTAs. It is worth noting that not a singular reference to the need of adopting measures necessary to protect public

health and nutrition as well as 'to promote the public interest in sectors of vital importance to their socio-economic and technological development' is made by any of the five PTAs (WTO TRIPS, 1994, Article 8, §1). Had not this been the case, the PTAs provisions would have embraced a notorious flexibility championed by the TRIPS Agreement, much in line with its Article 8 legal content.

On the final element of the template, the US-Korea and the US-Peru PTAs are the only bilateral treaties to contain provisions that explicitly refer to the Doha Declaration on the TRIPS Agreement and Public Health as well as to its Paragraph 6 (which calls upon the Council for TRIPS to act promptly to find a solution to the problem that some WTO members lack sufficient or no manufacturing capacities in the pharmaceutical sector, a situation in which the effective use of compulsory licensing might be hampered). The content of those PTAs provisions are identical.

If the US-Chile PTA also asserts legally binding commitment to that Declaration, yet without including Paragraph 6, is debatable. The controversy³⁶ may arise from inquires revolving around the issue of whether or not the preamble of the Chapter on IPRs in legal text is able to unleash legal effects upon the signatory parties to that agreement.

11. Mapping the Other IPR Provisions in Chinese PTAs

The China-Korea PTA stands alone among the four Chinese agreements to require from the parties accessions to other IPRs treaties besides the TRIPS Agreement. In this particular case, the total number of accessions amounts to ten agreements. Surely, this expressive quantity clearly deviates from the pattern of missing rules on such matter across the other four PTAs.

Concerning the next element of the template, none of the Chinese PTAs presents normative provisions curbing the institutional flexibility secured by the TRIPS Agreement. Consequently, a shortness of resources from the part of a developing country might justify non-compliance with some legal obligations when the right circumstance emerges, such as the lack of budgetary and human resources.

³⁶ In light of the Vienna Convention on the Law of Treaties (1969), the preamble is regarded as soft law, therefore, it cannot be invoked as a legal binding commitment.

With regards to the search of rules authorizing members to apply border measures as a means to enforce IPRs, it is worth pointing out that each one of the Chinese PTA contains provisions on this subject. As noted before, these rules regulate the power to make use of *ex officio* border measures to imported, exported and/or even in-transit goods. However, the scope of such power changes accordingly to the PTA at hand. For instance, the China-Australia and the China-Chile PTAs frame this scope to imported and exported merchandise, whereas the China-Korea as well as the China-Peru PTAs enhance it by also including in-transit goods.

When the qualitative analysis turned to criminal sanctions aimed at tackling patent infringements, a novel enforcement measure *vis-à-vis* the WTO rules on the penalties at the disposal of members, there was no provision identified in each one of the Chinese PTAs selected for this comparative study.

The mapping of the rules validating the legal content of Article 8 of the TRIPS Agreement revealed a fragmented outcome, given that most of the PTAs provisions do not replicate the entire legal content of the said article, despite featuring in all China's PTAs analysed. The only exception is the China-Australia PTA, whose legal text addresses the two paragraphs comprising Article 8: one dealing with appropriate measures to combat practices that distort competition, curb trade or impair the transfer of technology, and other regarding measures to protect public health and nutrition.

Focusing only on the former set of objectives figure the China-Korea, the China-Chile and the China-Peru PTAs. In other words, these three agreements did not bring into their text any mention to measures aimed at the protection of public health and nutrition. The China-Chile PTA also has the peculiar feature of adopting a light tone by only encouraging the parties to reject the forbid practices, *in lieu* of firmly committing them to act accordingly whenever circumstances dictate.

As for the last element of the template, each one of China's PTAs explicitly recognizes the principles set out in the Declaration on the TRIPS Agreement and Public Health. Moreover, the four bilateral treaties assure anew the commitment to take part in the efforts to adopt the Decision of the WTO General Council of 30 August 2003 on the Implementation of Paragraph 6 of the referred Declaration.

Table 16 summarises the comparisons on the complementary elements related to other legal provisions on IPRs across US and China PTAs.

Table 16: Mapping of Other Provisions on IPRs

MAPPING OF OTHER PROVISIONS ON IPR										
Elements	US – Korea	China – Korea	US – Australia	China – Australia	US – Chile	China – Chile	US – Peru	China – Peru	US – Singapore	China – Singapore
1. Number of accessions to IPR agreements	1	1	1	0	1	0	1	0	1	N/A
2. Restriction of institutional flexibility	0	0	0	0	1	0	1	0	1	N/A
3. Border measures	1	1	1	1	1	1	1	1	1	N/A
4. Criminal sanctions for patent infringement	0	0	0	0	1	0	0	0	0	N/A
5. Article 8 of the TRIPS Agreement	0	1	0	1	1	1	1	1	0	N/A
6. The Doha Declaration on the TRIPS Agreement and Public Health	1	1	0	1	1	1	1	1	0	N/A

12. Concluding Remarks

The empirical findings displayed in each of the comparative analyses allow to draw conclusions on the main features of both the US' and China's set of PTAs. Particularly relevant in this qualitative study was to find out which normative aspects of those legal texts go in tandem with or diverge from the embedded liberalism compromise. This premise drove the elaboration of the templates on IPRs, which were designed to apprehend the

PTA's core TRIPS-plus rules as well as other highly consequential provisions to the bedrock principle of the multilateral trade regime in light of Ruggie's constructivist perspective.

In the realm of patents, the comparative analysis has showed a startling difference between the US and China selected PTAs. Unlike the bountiful presence of provisions in the US' agreements dealing with the subjects of the template, none of such rules exists in the Chinese PTAs. Taking into account only the five treaties in which the US takes part, the record on the number of regulations amounts to 29 in total.

A similar pattern is also observed in the TRIPS-plus rules on copyright and trademark mappings. Indeed, in the case of the former IPR, the figures correspond to 10 regulations across US PTAs, but only two with regards to China's bilateral agreements. As for the latter area of IPRs, the total score is 19 regulations with respect to US's PTAs against three when the counting is made for the Chinese PTAs.

A more balanced outcome comes to the fore by evaluating the empirical findings attributed to the elements of the last template. The record, in effect, points to 19 regulations found across US PTAs and 13 of them when the Chinese agreements are taken together. This small difference would turn out to be even less significant if the US-Singapore PTA had not been included into the comparison, an arguably fair reasoning given the exclusion of the China-Singapore PTA from this specific comparative study due to the lack of rules on IPRs in its legal text, as pointed out before.

Yet the assessment of the overall provisions on IPRs reveals striking discrepancies between the US's and China's agreements. By taking into consideration the aggregate data, it is safe to affirm that the rules in the US's PTAs enhance the level of IPR protection beyond the benchmark level that stems from the WTO normative framework. As a consequence, these legal innovations inevitably reduce the state's capacity to intervene in the domestic market by curbing its ability to put in place public policies that aim to tame the excesses of IPRs in order to safeguard the interests of society. Conversely, by preserving a great deal of the flexibilities put forward by the WTO rules, the provisions found in the Chinese PTAs converge towards much of the essence underpinning the embedded liberalism compromise. These different attitudes expressed exclusively through their trade policies on PTAs frame the US and China, respectively, as a system challenging and a *status quo* powers in the multilateral trade regime, when these stances refer exclusively to trade related aspects of IPRs.

Conclusion

1. Final Considerations

The US and China own attributes as the world's largest economies and trading nations spurred efforts to interpreting and characterizing their stance in the realm of the multilateral trade regime. As the international order has become ever more hostage to their complex and less amicable relationship, the momentum to continue making such academic forays has lately grown even greater. A simple formula has long been to apply the dichotomous framing of a *status quo* or a system-challenging power to the labelling of those countries. Less than a way to sort out which actor is 'the good or bad cop' in the eyes of moral judges, this reasoning seeks to find out which country is best poised to bring about deep changes to a certain international regime.

With regards specifically to global trade governance, there is no consensus as to which label suits best for each country. Far from delivering an exhaustive summary of the major academic works on the subject and deliberately attributing labels where authors refrained from doing so, the literature review sought to provide an overview of several conceptualizations of whether the US and China trade policies have been affecting, either in a negative or positive fashion, the bedrock of the multilateral trading system.

The breaching of WTO rules as the chief channel through which trade policies could hinder the multilateral trading system was a common trait across the selected studies. Missing from them, however, are thorough analyses on the intrinsic relationship between the normative provisions found in the US and China PTAs and the multilateral normative framework with a view to providing a full-fledged characterization of both countries' engagement with the trade regime.

When this topic was partially and tangentially addressed, academic discussions centred on the motivations prompting both countries to engage in bilateral arrangements, the dynamics of domestic politics, and the primary features of the political economy influencing the content of PTAs. These discussions also examined the similarities and disparities among such agreements and their significance in comprehending the relationship between regionalism and multilateralism.

Because of unequivocal influence on the fate of the multilateral trade regime, as the concept of the 'spaghetti bowl' or 'noodle bowl' phenomenon has already enlightened the academic debate, the comparative studies on the US and China PTAs until here carried out were intended to pave the way for a complementary evaluation on both countries' trade policies. Two methodological pathways were then proposed to arrive at satisfactory empirical evidence.

The first hinged on a quantitative methodological approach by resorting to *Jaccard* indexes with the aim of determining the level of similarity among the PTAs as well as between their chapters on specific trade disciplines and the corresponding WTO core multilateral agreements. The text-as-data analyses built on computer coding to help with the vast amount of normative provisions across the selected bilateral agreements.

Among the most remarkable findings, it is worth underscoring, on the one hand, the high level of similarity among the US PTAs, suggesting the adoption of a template in the negotiations with trading partners, and, on the other hand, the low level of similarity among the Chinese PTAs, alluding to the absence of a preferable treaty design and to a flexible stance in the bargaining of which rules should feature in the final legal texts.

With respect to the comparisons between the PTAs chapters on the most common WTO-plus trade areas and the WTO normative framework, the results also unveiled telling differences. Out of 31 chapters analysed across the US and China agreements with overlapping trading partners, 22 Chinese chapters bore more similarity to their respective WTO rules, leaving only a total of nine US chapters holding a greater degree of congruence towards the WTO multilateral agreements.

Chinese normative provisions were found to be more similar to the GATS, the SPS, the TBT, the ROO and the SG agreements, whereas the US rules shared a higher level of similarity with the TRIPS and the TRIMS agreements. Furthermore, statistics on dispersion by taking into account the *Jaccard* indexes confirmed the first set of concluding remarks by highlighting the greater degree of homogeneity among the US PTAs as opposed to the Chinese agreements.

The recognition that text-as-data analyses are not completely shielded from flawed inferences and have limitations of their own as to which questions they are able to answer made the adoption of a complementary methodological approach inescapable. More precisely, since the number of equal or similar normative provisions to the WTO rules that

have been identified in the PTAs does not tell much about the actual content of the legal provisions not found to overlap – or overlap little – with the WTO normative framework, there was a need for a more detailed and in-depth examination that allowed to uncover essential features of the bilateral agreements.

Qualitative studies helped to puzzle out this conundrum by bringing in John G. Ruggie's concept of the embedded liberalism compromise to serve as a baseline for comparative analyses on the PTAs rules. Ultimately, this complementary methodological pathway was designed to answer inquires concerning the stance of both states within certain regulatory areas of the multilateral trade regime.

Key in choosing a concept derived from a constructivist theoretical framework was the assumption that social phenomena, such as foreign trade policy, are usually a result of not only the interplay between structure and agency, but also material and ideational forces. In this regard, PTAs are ultimately policy outcomes of the co-constitutive social construction dynamics which derive from both the distribution of capabilities among the states and the way their agency interacts with the same structure. Within the realm of trade policies, this agency is also realised through ideas epitomizing the state-society fundamental relations. Ideas that are also constitutive of the US and China trade policies and, thus, the beacons for the definition of their PTAs legal content.

Also, in Ruggie's view, international regimes are not a mere repository of concrete elements, such as legal provisions, norms and rules, but rather a guardianship of a generative grammar, which is the very underlying principle of order and meaning that drive their creation and transformation. In the case of the multilateral trade regime, this generative grammar was predicated on the embedded liberalism compromise: the idea that governments would make their best effort to strike a balance between multilateral liberalism and state interventionism with the purpose of securing domestic stability and the well-being of their societies.

Due to the inviability of carrying out qualitative comparative analyses as broad as text-as-data approach allowed, a delimitation of which PTA trade areas would entail the comparisons was necessary. To tame the impulse of wholly arbitrary picking, the choice was based on two reasonings: the two trade areas had to play a relevant role in the US and China bilateral trade relation, usually as highly contentious issues, and they also had to be potential normative repositories of rules that could safeguard space for state intervention in

critical situations. Trade remedies and IPRs fulfilled these criteria, therefore vindicating the choices.

Trade remedies evoke embedded liberalism whenever temporary relief and protection are provided to domestic industries for the purpose of basically supporting them to adapt to circumstances of sudden increased competition that arise from either fair or unfair trade practices. For streamlining the selection of the most relevant PTAs rules on such trade issue, a template for each trade remedy was thus adopted.

Specific rules on antidumping duties and countervailing measures were found to feature only in a handful of these agreements, in spite of not departing much from the WTO normative framework. In most cases, they refer to administrative proceedings that parties must undertake along the different phases leading up to their implementation, hence revealing little impact upon embedded liberalism.

Convergence to the multilateral rules is also observed among provisions on bilateral safeguards. While there were additional normative regulations regarding this category of trade remedy across the PTAs, their substance typically does not indicate substantial repercussions for the embedded liberalism compromise. This is mainly because most rules governing these matters are also administrative, posing difficulties in evaluating their practical impact.

Unlike the pattern prevailing across the previous three trade remedies, PTAs rules on global safeguards were identified as the most consequential to the realisation of embedded liberalism. In this case, the mere existence of a single legal provision had the potential to produce more noticeable practical results. Indeed, the specific rule on the permission to exclude PTA members from global safeguards, exposing their domestic industries to continued competition by triggering trade among PTA members, is to blame for these expected outcomes. Claiming more rules of this kind, the US agreements stand less aligned to the social purpose of the multilateral trading system than the Chinese.

A much wider and divergent picture was conveyed through the comparative analyses focused on the PTAs provisions on IPRs. Drawing on reformulated templates that covered not only the bulk of the core WTO-plus rules on patents, copyrights and trademarks, but also on other consequential provisions to the social purpose underpinning the multilateral trade regime, stark differences came to the fore. On the overall assessment, whereas the rules found across the US PTAs are set to buttress the level of IPR protection

much further than the WTO benchmark, the Chinese PTA provisions espouse more coherently the embedded liberalism compromise.

Certainly, this warrants more flexibility for Chinese government authorities and their counterparts in PTAs to independently craft public policies that they believe serve the best interests of their societies. Otherwise, such autonomy would be constrained by legal obstacles arising from the added burden of IPR, purportedly intended to enhance investment and trade. Conversely, US PTAs indicate a contrasting trend, wherein governmental discretion is curbed in favor of providing greater assurance of profitability to IPR-generating companies.

The seemingly contradictory findings on the PTAs provisions on IPR – with text-as-data analyses indicating a higher level of similarity between the US legal texts and the TRIPS agreement, on the one hand, and the qualitative analyses attesting a higher convergence of the Chinese bilateral agreements towards the embedded liberalism compromise, on the other hand – only underscored the utility of applying both methodological approaches as complementary to each other. A combination that certainly paved the way for a more accurate evaluation of the normative content of the PTAs, as the latter methodology proved keen in rooting out nuances of the actual meaning of the rules that did not match the WTO normative framework through the *Jaccard* distances and indexes.

The aggregate empirical findings stemming from the qualitative analyses on trade remedies and IPR legal provisions frame the US and China as more closely akin to the ideal type of a system-challenging and a *status quo* power, respectively. Given that both ideal types are at the extremes, a more nuanced classification would position the US closer to the label of a system-challenging power in the regulatory domain of IPR but slightly farther from that characterization concerning trade remedies.

Moreover, the empirical evidence shall not lead us to draw the false conclusion that the same labels fit just as well to US and China when it comes to the assessment of their engagement with other regulatory areas through trade agreements. Nor that they should be employed as binary codes for villain and redeemer with regards to their trade policies on PTAs. In fact, value judgments should be ruled out altogether. Nevertheless, evidence abound to disqualify misleading views that tend to stigmatize the US bilateral agreements as guardrails for the multilateral trade regime and, conversely, the Chinese as outright

revisionist legal instruments (Steinberg, 1998; Cooper, 2004; Destler, 2005; Schott, 2004, 2006; Hufbauer and Isaacs, 2015; Griffith, Steinberg and Zysman, 2017; Synder, 2009).

Despite the absence of a precise operational definition of social purpose, which makes it challenging to objectively identify within a particular setting of institutional arrangements, embedded liberalism maintains its descriptive and explanatory power in elucidating the identity and function of the trade regime. This assertion is bolstered by the ongoing adherence to binding principles and rules within multilateral trade agreements, reflecting the foundational intent of the regime, despite calls from some quarters within the WTO membership for updates to the multilateral rules to accommodate neoliberal agendas. Furthermore, at the epicenter of the trade regime, the WTO continues to stand as the primary institution driving the standardization of global trade rules and norms, cementing international trade law jurisprudence and providing mechanisms for the resolution of trade disputes.

A final point, which is credited on the empirical results, turns to the critical role that the agency of the main trade players wields in defining the course of critical transformations to which the multilateral trade regime have always been subject. This runs against some of the general assumptions, mostly underwritten by recent mainstream liberal analyses, which tend to overstress the full-fledged effects of global network production upon the legal content of PTAs. In short, according to this view, twenty-first-century supply chains are the main trait of the current phase of globalization, whereby trade arrangements become hostage to the whole trade-investment-service-intellectual-property 'nexus' (Baldwin 2016a, 2016b). Hence, countries engaged with this new *modus operandi* of international trade, as is the case of China, would have no other option than to embrace the adoption of PTAs rules designed to foster the international coordination of production that requires the continuous two-way flow of goods, people, ideas, and investment (Baldwin 2016a, 2016b).

As much as this sort of reasoning presents an unequivocally credible and appealing explanation for how a host of states defines the normative content of their PTAs, the case of China does not seem to fit squarely into this top-down analytical and theoretical perspective, at least with respect to the range of the comparative elements that took part in the mixed methodological approach of this study. The same also seems to hold true if decisions on trade policies during the Trump administration were to be brought into the analyses, whose findings would very likely make of this period a notorious example of

exarcebated presidential self-will, as heralded early on by the swiftly withdrawing from the TPP.

2. Further Academic Research

A more accurate and all-encompassing evaluation of the US and Chinese PTAs, however, is yet to come to fruition. A point of departure has already been laid out and hopes are that future academic researches will carry on the task of expanding the qualitative studies on whether other PTAs trade issues are more tuned with the embedded liberalism compromise or simply following the trend dictated by global network production. As in many other domains of social phenomena, such undertaking should inexorably take into account the assumption that China's agency would not necessarily mirror what is expected for others to follow accordingly. Below there are a few brief suggestions that might improve our knowledge on the US and China trade policies on PTAs as well as on their implication for the multilateral trade regime:

1. First, as hinted before, qualitative studies should continue to unveil how normative provisions on other trade issues – beyond trade remedies and IPRs – found across the US and China PTAs relate to the embedded liberalism compromise. This would lead to greater latitude for confirming or refuting the initial findings derived from this study with regards to the stance that each superpower takes on within the multilateral trade regime.
2. Second, academic works should pay more attention to the agency the US and China wield through their practices of defining the legal content of their PTAs. In light with Ruggie's theoretical perspective, it is then imperative to delve into the main ideas that govern the state and society relations in order to provide a clearer understanding of how these ideational forces guide their agency towards their engagement with PTAs. Such approach goes in tandem with the understanding that political authority is not only rooted in material capabilities, given that ideas are also central to the very formation – hence transformation – of the legitimate social

purpose of the multilateral trade regime. Ultimately, this undertaking could arrive at conclusions on the existence of a 'Washington consensus' and/or a 'Beijing consensus' on the particular subject of PTAs rules.

3. Third, scholars could engage with a broader research programme focused on how the fragmented process of rules making through PTAs might bring about transformations to the multilateral trade regime. This endeavour would demand expanding the comparative studies on the US and China agreements to include a larger set of countries, among which key players positioned at the main nodes of the global production network as well as today most relevant emerging economies, like the ones forming the BRICS grouping. By combining text-as-data analyses to determine the level of similarity between PTAs rules and the WTO normative framework with qualitative studies on how dissimilar rules relate to the embedded liberalism compromise, researchers would be able to amass enough empirical evidence to find out whether a change *of* regime is already underway. In Ruggie's view, a phenomenon that could only take place if new 'constitutive rules' were to be enacted to the point of unleashing another intersubjective framework of meaning that replaces the embedded liberalism compromise.

Once again, assessments of whether the two most powerful trade actors are strengthening or undermining the multilateral trading system have been overly focused on their actions within the WTO. While this is clearly crucial, it is also necessary to examine in more detail their actions through bilateral arrangements, as these trade tools will have deep implications for the future of the multilateral system. In order for this to happen, however, a comprehensive analysis of how the content of these agreements stand to the WTO normative framework is a necessary but not a sufficient condition.

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Annex I

Chart 4: Heatmap I on the Level of Similarity among the US and China PTAs

```
###
### This code extracts chapter-specific article lists and investigates them.
###

# Load libraries
library("xml2")
library("stringdist")
library("rvest")
library("stringi")
library("jsonlite")

#####
##### Prepare scraping of ToTA texts directly from the GitHub website
#####

url <- "https://github.com/mappingtreaties/tota/tree/master/xml/"

# We can then read the website into R using the read_html() command.
website<- read_html(url)
data <- fromJSON(website %>% html_text())
filenames <- data$payload$tree$items$name
filenames <- strsplit(filenames, "\n")

# We then only retain the links to TOTA xml
filenames_link <-character()
for(f in filenames) {
  xml_true<-grepl("xml", f)
  if (xml_true==TRUE) {
    filenames_link<-c(filenames_link,f)
  }
}
filenames_link<-filenames_link[-c(1:2)]

# Finally, we add the proper url.
url_raw <- "https://raw.githubusercontent.com/mappingtreaties/tota/master/xml/"
filenames_link <- lapply(filenames_link, function(x) (paste(url_raw,x,sep="")))
filenames_link <- filenames_link[-1]

##
## Extract entire text
```

```

##
# create empty bucket which we fill with the ToTA texts
treaty_list<-data.frame(matrix(ncol = 6, nrow = 0))
counter<-0

# loop through all 450 ToTA XMLs and extract information from each XML
for(xml_url in filenames_link) {
  # Extract meta information
  tota_xml <- read_xml(xml_url)
  tota_id <- as.numeric(as.character(xml_find_all(tota_xml,
"/treaty/meta/treaty_identifier/text()")))
  tota_name <- as.character(xml_find_all(tota_xml, "/treaty/meta/name/text()"))
  tota_year <- as.character(xml_find_all(tota_xml, "/treaty/meta/date_signed/text()"))
  tota_year <- as.numeric(substr(tota_year, 1, 4))
  tota_parties <- as.character(xml_find_all(tota_xml,
"/treaty/meta/parties/partyisocode/text()"))
  tota_parties <- paste0(tota_parties, collapse = ";")
  full_text <- xml_text(xml_find_all(tota_xml, "/treaty/body"))
  tota_row<-cbind(tota_id,tota_name,xml_url,tota_year,tota_parties, full_text)
  treaty_list<-rbind(treaty_list, tota_row)
  counter<-counter+1
  print (counter)
}

# Subset to the ToTA XMLs that you want to look at
# based on variable values
treaty_list_subset<-subset(treaty_list, tota_id==7 | tota_id==159 |tota_id==37
|tota_id==52 |tota_id==141 | tota_id==336 | tota_id==385 | tota_id==398 | tota_id==53 |
tota_id==156 | tota_id==389 | tota_id==51 | tota_id==50 | tota_id==384 | tota_id==330 |
tota_id==139 | tota_id==376 | tota_id==17 | tota_id==342 | tota_id==121 | tota_id==63 |
tota_id==26 | tota_id==158 | tota_id==157)

#####

####
#### Similarity Analysis
####
# Load packages
library(stringdist)
# Create a distance matrix
distance_matrix_5gram <- stringdistmatrix(treaty_list_subset$full_text,
treaty_list_subset$full_text, method = "jaccard", q = 5)

# Load packages
library(ggplot2)
library(gplots)

```

```
# Now we can visualizing the distance matrix.
heatmap.2(distance_matrix_5gram,
  dendrogram='none', # no dendrogram displayed
  Rowv=TRUE, # column clustering
  Colv=TRUE, # row clustering
  symm = TRUE,
  trace='none',
  density.info='none',
  main = "Similarity of provisions", # heat map title
  labCol = treaty_list_subset$tota_name,
  labRow = treaty_list_subset$tota_name,
  cexRow = 0.7,
  cexCol = 0.7,
  margins = c(4, 4))
```

```
#####
```

Chart 5: Heatmap II on the Level of Similarity among the US PTAs

```
###
### This code extracts chapter-specific article lists and investigates them.
###
```

```
# Load libraries
library("xml2")
library("stringdist")
library("rvest")
library("stringi")
library("jsonlite")
```

```
#####
##### Prepare scraping of ToTA texts directly from the GitHub website
#####
```

```
url <- "https://github.com/mappingtreaties/tota/tree/master/xml/"
```

```
# We can then read the website into R using the read_html() command.
website<- read_html(url)
data <- fromJSON(website %>% html_text())
filenames <- data$payload$tree$items$name
filenames <- strsplit(filenames, "\n")
```

```
# We then only retain the links to TOTA xml
filenames_link <-character()
for(f in filenames) {
```

```

xml_true<-grepl("xml", f)
if (xml_true==TRUE) {
  filenames_link<-c(filenames_link,f)
}
}
filenames_link<-filenames_link[-c(1:2)]

# Finally, we add the proper url.
url_raw <- "https://raw.githubusercontent.com/mappingtreaties/tota/master/xml/"
filenames_link <- lapply(filenames_link, function(x) (paste(url_raw,x,sep="")))
filenames_link <- filenames_link[-1]

##
## Extract entire text
##
# create empty bucket which we fill with the ToTA texts
treaty_list<-data.frame(matrix(ncol = 6, nrow = 0))
counter<-0

# loop through all 450 ToTA XMLs and extract information from each XML
for(xml_url in filenames_link) {
  # Extract meta information
  tota_xml <- read_xml(xml_url)
  tota_id <- as.numeric(as.character(xml_find_all(tota_xml,
"/treaty/meta/treaty_identifier/text()")))
  tota_name <- as.character(xml_find_all(tota_xml, "/treaty/meta/name/text()"))
  tota_year <- as.character(xml_find_all(tota_xml, "/treaty/meta/date_signed/text()"))
  tota_year <- as.numeric(substr(tota_year, 1, 4))
  tota_parties <- as.character(xml_find_all(tota_xml,
"/treaty/meta/parties/partyisocode/text()"))
  tota_parties <- paste0(tota_parties, collapse = ";")
  full_text <- xml_text(xml_find_all(tota_xml, "/treaty/body"))
  tota_row<-cbind(tota_id,tota_name,xml_url,tota_year,tota_parties, full_text)
  treaty_list<-rbind(treaty_list, tota_row)
  counter<-counter+1
  print (counter)
}

# Subset to the ToTA XMLs that you want to look at
# based on variable values
treaty_list_subset<-subset(treaty_list, tota_id==159 | tota_id==37 | tota_id==52 |
tota_id==53| tota_id==156 | tota_id==17 | tota_id==342 | tota_id==121 | tota_id==63 |
tota_id==26 | tota_id==158 | tota_id==157)

#####

####

```

```
#### Similarity Analysis
####
# Load packages
library(stringdist)
# Create a distance matrix
distance_matrix_5gram <- stringdistmatrix(treaty_list_subset$full_text,
treaty_list_subset$full_text, method = "jaccard", q = 5)

# Load packages
library(ggplot2)
library(gplots)

# Now we can visualizing the distance matrix.
heatmap.2(distance_matrix_5gram,
  dendrogram='none', # no dendrogram displayed
  Rowv=TRUE, # column clustering
  Colv=TRUE, # row clustering
  symm = TRUE,
  trace='none',
  density.info='none',
  main = "Level of Similarity", # heat map title
  labCol = treaty_list_subset$tota_name,
  labRow = treaty_list_subset$tota_name,
  cexRow = 0.7,
  cexCol = 0.7,
  margins = c(8, 8))
```

```
#####
```

Chart 6: Heatmap III on the Level of Similarity among China PTAs

```
###
### This code extracts chapter-specific article lists and investigates them.
###

# Load libraries
library("xml2")
library("stringdist")
library("rvest")
library("stringi")
library("jsonlite")

#####
##### Prepare scraping of ToTA texts directly from the GitHub website
#####
```

```

url <- "https://github.com/mappingtreaties/tota/tree/master/xml/"

# We can then read the website into R using the read_html() command.
website<- read_html(url)
data <- fromJSON(website %>% html_text())
filenames <- data$payload$tree$items$name
filenames <- strsplit(filenames, "\n")

# We then only retain the links to TOTA xml
filenames_link <-character()
for(f in filenames) {
  xml_true<-grepl("xml", f)
  if (xml_true==TRUE) {
    filenames_link<-c(filenames_link,f)
  }
}
filenames_link<-filenames_link[-c(1:2)]

# Finally, we add the proper url.
url_raw <- "https://raw.githubusercontent.com/mappingtreaties/tota/master/xml/"
filenames_link <- lapply(filenames_link, function(x) (paste(url_raw,x,sep="")))
filenames_link <- filenames_link[-1]

##
## Extract entire text
##
# create empty bucket which we fill with the ToTA texts
treaty_list<-data.frame(matrix(ncol = 6, nrow = 0))
counter<-0

# loop through all 450 ToTA XMLs and extract information from each XML
for(xml_url in filenames_link) {
  # Extract meta information
  tota_xml <- read_xml(xml_url)
  tota_id <- as.numeric(as.character(xml_find_all(tota_xml,
"/treaty/meta/treaty_identifier/text()")))
  tota_name <- as.character(xml_find_all(tota_xml, "/treaty/meta/name/text()"))
  tota_year <- as.character(xml_find_all(tota_xml, "/treaty/meta/date_signed/text()"))
  tota_year <- as.numeric(substr(tota_year, 1, 4))
  tota_parties <- as.character(xml_find_all(tota_xml,
"/treaty/meta/parties/partyisocode/text()"))
  tota_parties <- paste0(tota_parties, collapse = ";")
  full_text <- xml_text(xml_find_all(tota_xml, "/treaty/body"))
  tota_row<-cbind(tota_id,tota_name,xml_url,tota_year,tota_parties, full_text)
  treaty_list<-rbind(treaty_list, tota_row)
  counter<-counter+1
}

```



```

print (counter)
}

# Subset to the ToTA XMLs that you want to look at
# based on variable values
treaty_list_subset<-subset(treaty_list, tota_id==7 | tota_id==141 | tota_id==336 |
tota_id==385 | tota_id==398 | tota_id==389 | tota_id==51 | tota_id==50 | tota_id==384 |
tota_id==330 | tota_id==139 | tota_id==376)

#####

####
#### Similarity Analysis
####
# Load packages
library(stringdist)
# Create a distance matrix
distance_matrix_5gram <- stringdistmatrix(treaty_list_subset$full_text,
treaty_list_subset$full_text, method = "jaccard", q = 5)

# Load packages
library(ggplot2)
library(gplots)

# Now we can visualizing the distance matrix.
heatmap.2(distance_matrix_5gram,
  dendrogram='none', # no dendrogram displayed
  Rowv=TRUE, # column clustering
  Colv=TRUE, # row clustering
  symm = TRUE,
  trace='none',
  density.info='none',
  main = "Level of Similarity", # heat map title
  labCol = treaty_list_subset$tota_name,
  labRow = treaty_list_subset$tota_name,
  cexRow = 0.7,
  cexCol = 0.7,
  margins = c(8, 8))

```

```
#####
```

Chart 7: Heatmap IV on the Level of Similarity among the US and China PTAs with the Same Trading Partner

```

###
### This code extracts chapter-specific article lists and investigates them.

```

```

###

# Load libraries
library("xml2")
library("stringdist")
library("rvest")
library("stringi")
library("jsonlite")

#####
##### Prepare scraping of ToTA texts directly from the GitHub website
#####

url <- "https://github.com/mappingtreaties/tota/tree/master/xml/"

# We can then read the website into R using the read_html() command.
website<- read_html(url)
data <- fromJSON(website %>% html_text())
filenames <- data$payload$tree$items$name
filenames <- strsplit(filenames, "\n")

# We then only retain the links to TOTA xml
filenames_link <-character()
for(f in filenames) {
  xml_true<-grepl("xml", f)
  if (xml_true==TRUE) {
    filenames_link<-c(filenames_link,f)
  }
}
filenames_link<-filenames_link[-c(1:2)]

# Finally, we add the proper url.
url_raw <- "https://raw.githubusercontent.com/mappingtreaties/tota/master/xml/"
filenames_link <- lapply(filenames_link, function(x) (paste(url_raw,x,sep="")))
filenames_link <- filenames_link[-1]

##
## Extract entire text
##
# create empty bucket which we fill with the ToTA texts
treaty_list<-data.frame(matrix(ncol = 6, nrow = 0))
counter<-0

# loop through all 450 ToTA XMLs and extract information from each XML
for(xml_url in filenames_link) {
  # Extract meta information

```

```

tota_xml <- read_xml(xml_url)
tota_id      <-      as.numeric(as.character(xml_find_all(tota_xml,
"/treaty/meta/treaty_identifier/text()")))
tota_name <- as.character(xml_find_all(tota_xml, "/treaty/meta/name/text()"))
tota_year <- as.character(xml_find_all(tota_xml, "/treaty/meta/date_signed/text()"))
tota_year <- as.numeric(substr(tota_year, 1, 4))
tota_parties      <-      as.character(xml_find_all(tota_xml,
"/treaty/meta/parties/partyisocode/text()"))
tota_parties <- paste0(tota_parties, collapse = ";")
full_text <- xml_text(xml_find_all(tota_xml, "/treaty/body"))
tota_row<-cbind(tota_id,tota_name,xml_url,tota_year,tota_parties, full_text)
treaty_list<-rbind(treaty_list, tota_row)
counter<-counter+1
print (counter)
}

```

Subset to the ToTA XMLs that you want to look at

based on variable values

```

treaty_list_subset<-subset(treaty_list,  tota_id==7  |  tota_id==159  |tota_id==37  |
tota_id==52 | tota_id==141 | tota_id==336 | tota_id==385 | tota_id==398 | tota_id==53 |
tota_id==156)

```

```
#####
```

```
####
```

```
#### Similarity Analysis
```

```
####
```

```
# Load packages
```

```
library(stringdist)
```

```
# Create a distance matrix
```

```

distance_matrix_5gram      <-      stringdistmatrix(treaty_list_subset$full_text,
treaty_list_subset$full_text, method = "jaccard", q = 5)

```

```
# Load packages
```

```
library(ggplot2)
```

```
library(gplots)
```

```
# Now we can visualizing the distance matrix.
```

```

heatmap.2(distance_matrix_5gram,
  dendrogram='none', # no dendrogram displayed
  Rowv=TRUE, # column clustering
  Colv=TRUE, # row clustering
  symm = TRUE,
  trace='none',
  density.info='none',
  main = "Level of Similarity", # heat map title
  labCol = treaty_list_subset$tota_name,

```

```
labRow = treaty_list_subset$tota_name,  
cexRow = 0.7,  
cexCol = 0.7,  
margins = c(8, 8))
```

Annex II

Chart 8: The 15th Most Frequent Chapters across the US and China PTAs

```
library(httr)
library(xml2)
library(dplyr)
library(ggplot2)

xml_list <- c(
  'pta_7.xml',
  'pta_159.xml',
  'pta_37.xml',
  'pta_52.xml',
  'pta_141.xml',
  'pta_336.xml',
  'pta_385.xml',
  'pta_398.xml',
  'pta_53.xml',
  'pta_156.xml',
  'pta_389.xml',
  'pta_51.xml',
  'pta_50.xml',
  'pta_384.xml',
  'pta_330.xml',
  'pta_139.xml',
  'pta_376.xml',
  'pta_17.xml',
  'pta_342.xml',
  'pta_121.xml',
  'pta_63.xml',
  'pta_26.xml',
  'pta_158.xml',
  'pta_157.xml'
)

chapters_to_exclude <- c(
  'Preamble',
  'Conclusion',
  'Initial Provisions',
  'Final Provisions',
  'General Definitions',
  'Exceptions',
  'Initial Provisions and Definitions',
  'General Provisions and Exceptions',
```

```

'General and Final Provisions',
'Initial Provisions and General Definitions',
'Administration of the Agreement',
'Definitions of General Application',
'General Principles',
'Other Provisions',
'General Provisions'
)

chapter_names <- vector()
chapter_frequencies <- vector()

non_standard_xml <- c()

for (l in xml_list) {
  xml_url
  paste0("https://raw.githubusercontent.com/mappingtreaties/tota/master/xml/", l)
  response <- GET(xml_url)
  xml_data <- content(response, as = "text")

  tryCatch({
    root <- read_xml(xml_data)
    chapters <- xml_find_all(root, "./body/chapter")

    for (i in chapters) {
      k <- xml_attr(i, "name")

      if (k %in% chapters_to_exclude) {
        next
      }

      if (k %in% chapter_names) {
        index <- which(chapter_names == k)
        chapter_frequencies[index] <- chapter_frequencies[index] + 1
      } else {
        chapter_names <- c(chapter_names, k)
        chapter_frequencies <- c(chapter_frequencies, 1)
      }
    }
  }, error = function(e) {
    non_standard_xml <- c(non_standard_xml, xml_url)
  })
}

cat(paste0(length(non_standard_xml), " Non-standard XML: ", non_standard_xml), "\n")

# Create the data frame

```

```

df <- data.frame(
  Chapter = chapter_names,
  Frequency = chapter_frequencies,
  stringsAsFactors = FALSE
)

# Sort the data frame by Frequency in descending order and select the top 10 rows
top_15 <- df[order(df$Frequency, decreasing = TRUE), ][1:15, ]

# Create the horizontal bar plot using ggplot2
plot <- ggplot(top_15, aes(x = reorder(Chapter, Frequency), y = Frequency)) +
  geom_bar(stat = "identity", fill = "steelblue") +
  geom_text(aes(label = Frequency), hjust = +2, size = 4) +
  labs(x = "Chapters", y = "Frequency")

hplot <- plot + coord_flip()
# Display the plot
print(hplot)

#####

library(readxl)
library(ggplot2)
df <- read_excel("Table - the 15th most frequent chapters.xlsx")
View(df)

# Create the horizontal bar plot using ggplot2
plot <- ggplot(df, aes(x = reorder(Chapters, Frequency), y = Frequency)) +
  geom_bar(stat = "identity", fill = "steelblue") +
  geom_text(aes(label = Frequency), hjust = +1, size = 4) +
  labs(x = "Chapters", y = "Frequency")

hplot <- plot + coord_flip()
# Display the plot
print(hplot)

```

Annex III

Table 1: The Jaccard Indexes for the Comparisons between the PTAs and the ROO

Table 2: The Jaccard Indexes for the Comparisons between the PTAs and the GATS

Table 3: The Jaccard Indexes for the Comparisons between the PTAs and the TRIMS

Table 4: The Jaccard Indexes for the Comparisons between the PTAs and the SG

Table 5: The Jaccard Indexes for the Comparisons between the PTAs and the TBT

Table 6: The Jaccard Indexes for the Comparisons between the PTAs and the SPS

Table 7: The Jaccard Indexes for the Comparisons between the PTAs and the TRIPS

This code generates the Jaccard indexes for the comparisons between the PTAs (chapter or specific provisions) and their corresponding WTO multilateral agreements.

#The indexes can be found in the file 'result_output.xlsx' after running the code below.

```
library('xml2')
library("readxl")
library("stringr")
library("pdftools")
library("stringdist")
library("openxlsx")
```

```
#Init variables
```

```
file_name_template <- "xml/pta_<ID>.xml"
```

```
#read input file
```

```
columns <- read_excel(path = "input.xlsx", n_max = 1)
```

```
column_name <- as.character(columns[1,])
```

```
df_input <- read_excel(path = "input.xlsx", col_names = column_name, skip = 2)
```

```
print(df_input)
```

```
#Extract text from XML, based on input data frame, and append into a new column on result data frame
```

```
#create a result DF as a copy of input
```

```
df_result <- df_input
```

```
#define a function witch extract a text
```

```
extract_text <- function(row){
```



```

tota_id <- row["tota_id"]
tota_id <- str_replace_all(tota_id, " ", "")
comparation_type <- row["comparation_type"]
text_id <- row["text_id"]
print(paste("Finding text from tota id ", tota_id, comparation_type, text_id))
file_name <- str_replace(file_name_template, "<ID>", tota_id)
xml <- read_xml(file_name)
extracted_text <- ""
if(comparation_type == "CHAPTER"){
  ids <- str_split_1(text_id, ";");
  for(id in ids){
    chapter <- xml_find_all(xml, paste("//chapter[@chapter_identifer='',id,']", sep = ""))
    text = xml_text(chapter)
    extracted_text <- paste(extracted_text,text)
  }
}
else{
  ids <- str_split_1(text_id, ";");
  for(id in ids){
    chapter <- xml_find_all(xml, paste("//article[@article_identifer='',id,']", sep = ""))
    text = xml_text(chapter)
    extracted_text <- paste(extracted_text,text)
  }
}
extracted_text
}

#Apply the extract_text function for each row on dataframe
extracted_text_column = apply(df_result, MARGIN = 1, extract_text)

#create a new column "text" on result DF with the text os ARTICLES OU CHAPTERS
especificds
df_result$text = extracted_text_column

#Calculate jaccard index

#define a function witch calculate jaccard index based on input
calculate_jaccard_index <- function(row){
  text_to_compare = row['text']
  template = row['compare_to']
  text_template = paste(pdf_text(paste("templates/",template,".pdf", sep = "")), collapse = "
")
  stringdist(text_template, text_to_compare, method = "jaccard", q = 5)
}

jaccard_index_colum <- apply(df_result, MARGIN = 1, calculate_jaccard_index)

```

```
#Append jaccard index result to dataframe result  
df_result$jaccard_index = jaccard_index_colum
```

```
#export result do xlsx  
write.xlsx(df_result, 'result_output.xlsx')  
print(df_result)
```

Annex IV

Table 8: Descriptive Statistics on the Jaccard Indexes

R codes to generate the descriptive statistics for the Jaccard Indexes between the US and China PTAs and the GATS

```
library(readxl)
PTAS_vs_GATS <- read_excel("~/Desktop/PTAS vs WTO/PTAS vs GATS.xlsx")

# Calculating the descriptive statistics of the whole dataframe
summary(PTAS_vs_GATS)

# Calculating the descriptive statistics of only the first five PTAs of the same dataframe
summary(PTAS_vs_GATS[1:5, ])

# Calculating the standard deviation for the Jaccard Indexes of the US PTAs with the
exclusion of NA values
sd(PTAS_vs_GATS$`Jaccard Distance 1`, na.rm = TRUE)

# Calculating the standard deviation for the Jaccard Indexes of only the first five US PTAs
sd(PTAS_vs_GATS$`Jaccard Distance 1`[1:5], na.rm = TRUE)

# Calculating the variance for the Jaccard Indexes of the US PTAs with the exclusion of NA
values
var(PTAS_vs_GATS$`Jaccard Distance 1`, na.rm = TRUE)

# Calculating the variance for the Jaccard Indexes of only the first five US PTAs
var(PTAS_vs_GATS$`Jaccard Distance 1`[1:5], na.rm = TRUE)

# Calculating the standard deviation for the Jaccard Indexes of China PTAs with the
exclusion of NA values
sd(PTAS_vs_GATS$`Jaccard Distance 2`, na.rm = TRUE)

# Calculating the standard deviation for the Jaccard Indexes of only the first five China PTAs
sd(PTAS_vs_GATS$`Jaccard Distance 2`[1:5], na.rm = TRUE)

# Calculating the variance for the Jaccard Indexes of China PTAs with the exclusion of NA
values
var(PTAS_vs_GATS$`Jaccard Distance 2`, na.rm = TRUE)
# Calculating the variance for the Jaccard Indexes of only the first five China PTAs
var(PTAS_vs_GATS$`Jaccard Distance 2`[1:5], na.rm = TRUE)
```

#####

R codes to generate the descriptive statistics for the Jaccard Indexes between the US and China PTAs and the ROO

```

library(readxl)
PTAS_vs_ROO <- read_excel("~/Desktop/PTAS vs WTO/PTAS vs ROO.xlsx")

# Calculating the descriptive statistics of the whole dataframe
summary(PTAS_vs_ROO, na.rm = TRUE)

# Calculating the descriptive statistics of only the first five PTAs of the same dataframe
summary(PTAS_vs_ROO[1:5, ], na.rm = TRUE)

# Calculating the standard deviation for the Jaccard Indexes of the US PTAs with the
exclusion of NA values
sd(PTAS_vs_ROO$`Jaccard Distance 1`, na.rm = TRUE)

# Calculating the standard deviation for the Jaccard Indexes of only the first five US PTAs
sd(PTAS_vs_ROO$`Jaccard Distance 1`[1:5], na.rm = TRUE)

# Calculating the variance for the Jaccard Indexes of the US PTAs with the exclusion of NA
values
var(PTAS_vs_ROO$`Jaccard Distance 1`, na.rm = TRUE)

# Calculating the variance for the Jaccard Indexes of only the first five US PTAs
var(PTAS_vs_ROO$`Jaccard Distance 1`[1:5], na.rm = TRUE)

# Calculating the standard deviation for the Jaccard Indexes of China PTAs with the
exclusion of NA values
sd(PTAS_vs_ROO$`Jaccard Distance 2`, na.rm = TRUE)

# Calculating the standard deviation for the Jaccard Indexes of only the first five China PTAs
sd(PTAS_vs_ROO$`Jaccard Distance 2`[1:5], na.rm = TRUE)

# Calculating the variance for the Jaccard Indexes of China PTAs with the exclusion of NA
values
var(PTAS_vs_ROO$`Jaccard Distance 2`, na.rm = TRUE)

# Calculating the variance for the Jaccard Indexes of only the first five China PTAs
var(PTAS_vs_ROO$`Jaccard Distance 2`[1:5], na.rm = TRUE)

#####

# R codes to generate the descriptive statistics for the Jaccard Indexes between the US
and China PTAs and the TRIPS

```

```

library(readxl)
PTAS_vs_TRIPS <- read_excel("~/Desktop/PTAS vs WTO/PTAS vs TRIPS.xlsx")

# The following function converts the data type of a whole column from character to
numeric
PTAS_vs_TRIPS$`Jaccard Distance 1` <- as.numeric(PTAS_vs_TRIPS$`Jaccard Distance 1`)

# Calculating the descriptive statistics of the whole dataframe
summary(PTAS_vs_TRIPS)

# Calculating the descriptive statistics of only the first five PTAs of the same dataframe
summary(PTAS_vs_TRIPS[1:5, ])

# Calculating the standard deviation for the Jaccard Indexes of the US PTAs with the
exclusion of NA values
sd(PTAS_vs_TRIPS$`Jaccard Distance 1`, na.rm = TRUE)

# Calculating the standard deviation for the Jaccard Indexes of only the first five US PTAs
sd(PTAS_vs_TRIPS$`Jaccard Distance 1`[1:5], na.rm = TRUE)

# Calculating the variance for the Jaccard Indexes of the US PTAs with the exclusion of NA
values
var(PTAS_vs_TRIPS$`Jaccard Distance 1`, na.rm = TRUE)

# Calculating the variance for the Jaccard Indexes of only the first five US PTAs
var(PTAS_vs_TRIPS$`Jaccard Distance 1`[1:5], na.rm = TRUE)

# Calculating the standard deviation for the Jaccard Indexes of China PTAs with the
exclusion of NA values
sd(PTAS_vs_TRIPS$`Jaccard Distance 2`, na.rm = TRUE)

# Calculating the standard deviation for the Jaccard Indexes of only the first five China PTAs
sd(PTAS_vs_TRIPS$`Jaccard Distance 2`[1:5], na.rm = TRUE)

# Calculating the variance for the Jaccard Indexes of China PTAs with the exclusion of NA
values
var(PTAS_vs_TRIPS$`Jaccard Distance 2`, na.rm = TRUE)

# Calculating the variance for the Jaccard Indexes of only the first five China PTAs
var(PTAS_vs_TRIPS$`Jaccard Distance 2`[1:5], na.rm = TRUE)

#####

# R codes to generate the descriptive statistics for the Jaccard Indexes between the US
and China PTAs and the TRIMS

```

```

library(readxl)
PTAS_vs_TRIMS <- read_excel("~/Desktop/PTAS vs WTO/PTAS vs TRIMS.xlsx")

# The following function converts the data type of a whole column from character to
numeric
PTAS_vs_TRIMS$`Jaccard Distance 2` <- as.numeric(PTAS_vs_TRIMS$`Jaccard Distance 2`)

# Calculating the descriptive statistics of the whole dataframe
summary(PTAS_vs_TRIMS)

# Calculating the descriptive statistics of only the first five PTAs of the same dataframe
summary(PTAS_vs_TRIMS[1:5, ])

# Calculating the standard deviation for the Jaccard Indexes of the US PTAs with the
exclusion of NA values
sd(PTAS_vs_TRIMS$`Jaccard Distance 1`, na.rm = TRUE)

# Calculating the standard deviation for the Jaccard Indexes of only the first five US PTAs
sd(PTAS_vs_TRIMS$`Jaccard Distance 1`[1:5], na.rm = TRUE)

# Calculating the variance for the Jaccard Indexes of the US PTAs with the exclusion of NA
values
var(PTAS_vs_TRIMS$`Jaccard Distance 1`, na.rm = TRUE)

# Calculating the variance for the Jaccard Indexes of only the first five US PTAs
var(PTAS_vs_TRIMS$`Jaccard Distance 1`[1:5], na.rm = TRUE)

# Calculating the standard deviation for the Jaccard Indexes of China PTAs with the
exclusion of NA values
sd(PTAS_vs_TRIMS$`Jaccard Distance 2`, na.rm = TRUE)

# Calculating the standard deviation for the Jaccard Indexes of only the first five China PTAs
sd(PTAS_vs_TRIMS$`Jaccard Distance 2`[1:5], na.rm = TRUE)

# Calculating the variance for the Jaccard Indexes of China PTAs with the exclusion of NA
values
var(PTAS_vs_TRIMS$`Jaccard Distance 2`, na.rm = TRUE)

# Calculating the variance for the Jaccard Indexes of only the first five China PTAs
var(PTAS_vs_TRIMS$`Jaccard Distance 2`[1:5], na.rm = TRUE)

#####

# R codes to generate the descriptive statistics for the Jaccard Indexes between the US
and China PTAs and the SPS

```

```

library(readxl)
PTAS_vs_SPS <- read_excel("~/Desktop/PTAS vs WTO/PTAS vs SPS.xlsx")

# Calculating the descriptive statistics of the whole dataframe
summary(PTAS_vs_SPS, na.rm = TRUE)

# Calculating the descriptive statistics of only the first five PTAs of the same dataframe
summary(PTAS_vs_SPS[1:5, ], na.rm = TRUE)

# Calculating the standard deviation for the Jaccard Indexes of the US PTAs with the
exclusion of NA values
sd(PTAS_vs_SPS$`Jaccard Distance 1`, na.rm = TRUE)

# Calculating the standard deviation for the Jaccard Indexes of only the first five US PTAs
sd(PTAS_vs_SPS$`Jaccard Distance 1`[1:5], na.rm = TRUE)

# Calculating the variance for the Jaccard Indexes of the US PTAs with the exclusion of NA
values
var(PTAS_vs_SPS$`Jaccard Distance 1`, na.rm = TRUE)

# Calculating the variance for the Jaccard Indexes of only the first five US PTAs
var(PTAS_vs_SPS$`Jaccard Distance 1`[1:5], na.rm = TRUE)

# Calculating the standard deviation for the Jaccard Indexes of China PTAs with the
exclusion of NA values
sd(PTAS_vs_SPS$`Jaccard Distance 2`, na.rm = TRUE)

# Calculating the standard deviation for the Jaccard Indexes of only the first five China PTAs
sd(PTAS_vs_SPS$`Jaccard Distance 2`[1:5], na.rm = TRUE)

# Calculating the variance for the Jaccard Indexes of China PTAs with the exclusion of NA
values
var(PTAS_vs_SPS$`Jaccard Distance 2`, na.rm = TRUE)

# Calculating the variance for the Jaccard Indexes of only the first five China PTAs
var(PTAS_vs_SPS$`Jaccard Distance 2`[1:5], na.rm = TRUE)

#####

# R codes to generate the descriptive statistics for the Jaccard Indexes between the US
and China PTAs and the TBT

library(readxl)
PTAS_vs_TBT <- read_excel("~/Desktop/PTAS vs WTO/PTAS vs TBT.xlsx")

# Calculating the descriptive statistics of the whole dataframe

```

```

summary(PTAS_vs_TBT, na.rm = TRUE)

# Calculating the descriptive statistics of only the first five PTAs of the same dataframe
summary(PTAS_vs_TBT[1:5, ], na.rm = TRUE)

# Calculating the standard deviation for the Jaccard Indexes of the US PTAs with the
exclusion of NA values
sd(PTAS_vs_TBT$`Jaccard Distance 1`, na.rm = TRUE)

# Calculating the standard deviation for the Jaccard Indexes of only the first five US PTAs
sd(PTAS_vs_TBT$`Jaccard Distance 1`[1:5], na.rm = TRUE)

# Calculating the variance for the Jaccard Indexes of the US PTAs with the exclusion of NA
values
var(PTAS_vs_TBT$`Jaccard Distance 1`, na.rm = TRUE)

# Calculating the variance for the Jaccard Indexes of only the first five US PTAs
var(PTAS_vs_TBT$`Jaccard Distance 1`[1:5], na.rm = TRUE)

# Calculating the standard deviation for the Jaccard Indexes of China PTAs with the
exclusion of NA values
sd(PTAS_vs_TBT$`Jaccard Distance 2`, na.rm = TRUE)

# Calculating the standard deviation for the Jaccard Indexes of only the first five China PTAs
sd(PTAS_vs_TBT$`Jaccard Distance 2`[1:5], na.rm = TRUE)

# Calculating the variance for the Jaccard Indexes of China PTAs with the exclusion of NA
values
var(PTAS_vs_TBT$`Jaccard Distance 2`, na.rm = TRUE)

# Calculating the variance for the Jaccard Indexes of only the first five China PTAs
var(PTAS_vs_TBT$`Jaccard Distance 2`[1:5], na.rm = TRUE)

#####

# R codes to generate the descriptive statistics for the Jaccard Indexes between the US
and China PTAs and the SG

library(readxl)
PTAS_vs_SG <- read_excel("~/Desktop/PTAS vs WTO/PTAS vs SG.xlsx")

# The following function converts the data type of a whole column from character to
numeric
PTAS_vs_SG$`Jaccard Distance 1` <- as.numeric(PTAS_vs_SG$`Jaccard Distance 1`)

# Calculating the descriptive statistics of the whole dataframe

```



```
summary(PTAS_vs_SG, na.rm = TRUE)

# Calculating the descriptive statistics of only the first five PTAs of the same dataframe
summary(PTAS_vs_SG[1:5, ], na.rm = TRUE)

# Calculating the standard deviation for the Jaccard Indexes of the US PTAs with the
exclusion of NA values
sd(PTAS_vs_SG$`Jaccard Distance 1`, na.rm = TRUE)

# Calculating the standard deviation for the Jaccard Indexes of only the first five US PTAs
sd(PTAS_vs_SG$`Jaccard Distance 1`[1:5], na.rm = TRUE)

# Calculating the variance for the Jaccard Indexes of the US PTAs with the exclusion of NA
values
var(PTAS_vs_SG$`Jaccard Distance 1`, na.rm = TRUE)

# Calculating the variance for the Jaccard Indexes of only the first five US PTAs
var(PTAS_vs_SG$`Jaccard Distance 1`[1:5], na.rm = TRUE)

# Calculating the standard deviation for the Jaccard Indexes of China PTAs with the
exclusion of NA values
sd(PTAS_vs_SG$`Jaccard Distance 2`, na.rm = TRUE)

# Calculating the standard deviation for the Jaccard Indexes of only the first five China PTAs
sd(PTAS_vs_SG$`Jaccard Distance 2`[1:5], na.rm = TRUE)

# Calculating the variance for the Jaccard Indexes of China PTAs with the exclusion of NA
values
var(PTAS_vs_SG$`Jaccard Distance 2`, na.rm = TRUE)

# Calculating the variance for the Jaccard Indexes of only the first five China PTAs
var(PTAS_vs_SG$`Jaccard Distance 2`[1:5], na.rm = TRUE)
```

Annex V

Chart 9: The US and China PTAs vis-à-vis GATS

R codes to generate comparative geo_boxplots based on the jaccard indexes between the PTAs and GATS:

```
# Install and load the required packages
install.packages("ggplot2") # If not already installed
library(ggplot2)
library(readxl)

# Read the Excel file and load the data into a data frame
df <- read_excel("~/Desktop/PTAS vs WTO/Comparisons to GATS.xlsx")

# Convert 'Jaccard Indexes A' column to numeric
df$`Jaccard Indexes A` <- as.numeric(df$`Jaccard Indexes A`)

# Convert 'Jaccard Indexes B' column to numeric
df$`Jaccard Indexes B` <- as.numeric(df$`Jaccard Indexes B`)

# Create comparative box plots
ggplot(df, aes(x = `US Preferential Trade Agreements`, y = `Jaccard Indexes A`, fill = `Jaccard
Indexes A`)) +
  geom_boxplot() +
  ggtitle("US PTAs vs GATS") +
  xlab("US Preferential Trade Agreements") +
  ylab("Jaccard Indexes A") +
  theme_minimal()

ggplot(df, aes(x = `China Preferential Trade Agreements`, y = `Jaccard Indexes B`, fill =
`Jaccard Indexes B`)) +
  geom_boxplot() +
  ggtitle("China PTAs vs GATS") +
  xlab("China Preferential Trade Agreements") +
  ylab("Jaccard Indexes B") +
  theme_minimal()
```

#####

Chart 10: The US and China PTAs vis-à-vis TRIPS

R codes to generate comparative geo_boxplots based on the jaccard indexes between the PTAs and TRIPS:

```
# Install and load the required packages
install.packages("ggplot2") # If not already installed
library(ggplot2)
library(readxl)

# Read the Excel file and load the data into a data frame
df <- read_excel("~/Desktop/PTAS vs WTO/Comparisons to TRIPS.xlsx")

# Convert 'Jaccard Indexes A' column to numeric
df$`Jaccard Indexes A` <- as.numeric(df$`Jaccard Indexes A`)

# Convert 'Jaccard Indexes B' column to numeric
df$`Jaccard Indexes B` <- as.numeric(df$`Jaccard Indexes B`)

# Create comparative box plots
ggplot(df, aes(x = `US Preferential Trade Agreements`, y = `Jaccard Indexes A`, fill = `Jaccard Indexes A`)) +
  geom_boxplot() +
  ggtitle("US PTAs vs TRIPS") +
  xlab("US Preferential Trade Agreements") +
  ylab("Jaccard Indexes A") +
  theme_minimal()

ggplot(df, aes(x = `China Preferential Trade Agreements`, y = `Jaccard Indexes B`, fill = `Jaccard Indexes B`)) +
  geom_boxplot() +
  ggtitle("China PTAs vs TRIPS") +
  xlab("China Preferential Trade Agreements") +
  ylab("Jaccard Indexes B") +
  theme_minimal()
```

#####

Chart 11: The US and China PTAs vis-à-vis TRIMS

R codes to generate comparative geo_boxplots based on the jaccard indexes between the PTAs and TRIMS:

```
# Install and load the required packages
install.packages("ggplot2") # If not already installed
library(ggplot2)
library(readxl)
```

```

# Read the Excel file and load the data into a data frame
df <- read_excel("~/Desktop/PTAS vs WTO/Comparisons to TRIMS.xlsx")

# Convert 'Jaccard Indexes A' column to numeric
df$`Jaccard Indexes A` <- as.numeric(df$`Jaccard Indexes A`)

# Convert 'Jaccard Indexes B' column to numeric
df$`Jaccard Indexes B` <- as.numeric(df$`Jaccard Indexes B`)

# Create comparative box plots
ggplot(df, aes(x = `US Preferential Trade Agreements`, y = `Jaccard Indexes A`, fill = `Jaccard
Indexes A`)) +
  geom_boxplot() +
  ggtitle("US PTAs vs TRIMS") +
  xlab("US Preferential Trade Agreements") +
  ylab("Jaccard Indexes A") +
  theme_minimal()

ggplot(df, aes(x = `China Preferential Trade Agreements`, y = `Jaccard Indexes B`, fill =
`Jaccard Indexes B`)) +
  geom_boxplot() +
  ggtitle("China PTAs vs TRIMS") +
  xlab("China Preferential Trade Agreements") +
  ylab("Jaccard Indexes B") +
  theme_minimal()

```

```
#####
```

Chart 12: The US and China PTAs vis-à-vis SPS

R codes to generate comparative `geom_boxplots` based on the jaccard indexes between the PTAs and SPS:

```

# Install and load the required packages
install.packages("ggplot2") # If not already installed
library(ggplot2)
library(readxl)

# Read the Excel file and load the data into a data frame
df <- read_excel("~/Desktop/PTAS vs WTO/Comparisons to SPS.xlsx")

# Convert 'Jaccard Indexes A' column to numeric
df$`Jaccard Indexes A` <- as.numeric(df$`Jaccard Indexes A`)

```

```

# Convert 'Jaccard Indexes B' column to numeric
df$`Jaccard Indexes B` <- as.numeric(df$`Jaccard Indexes B`)

# Create comparative box plots
ggplot(df, aes(x = `US Preferential Trade Agreements`, y = `Jaccard Indexes A`, fill = `Jaccard
Indexes A`)) +
  geom_boxplot() +
  ggtitle("US PTAs vs SPS") +
  xlab("US Preferential Trade Agreements") +
  ylab("Jaccard Indexes A") +
  theme_minimal()
ggplot(df, aes(x = `China Preferential Trade Agreements`, y = `Jaccard Indexes B`, fill =
`Jaccard Indexes B`)) +
  geom_boxplot() +
  ggtitle("China PTAs vs SPS") +
  xlab("China Preferential Trade Agreements") +
  ylab("Jaccard Indexes B") +
  theme_minimal()

```

```
#####
```

Chart 13: The US and China PTAs vis-à-vis TBT

R codes to generate comparative geo_boxplots based on the jaccard indexes between the PTAs and TBT:

```

# Install and load the required packages
install.packages("ggplot2") # If not already installed
library(ggplot2)
library(readxl)

# Read the Excel file and load the data into a data frame
df <- read_excel("~/Desktop/PTAS vs WTO/Comparisons to TBT.xlsx")

# Convert 'Jaccard Indexes A' column to numeric
df$`Jaccard Indexes A` <- as.numeric(df$`Jaccard Indexes A`)

# Convert 'Jaccard Indexes B' column to numeric
df$`Jaccard Indexes B` <- as.numeric(df$`Jaccard Indexes B`)

# Create comparative box plots
ggplot(df, aes(x = `US Preferential Trade Agreements`, y = `Jaccard Indexes A`, fill = `Jaccard
Indexes A`)) +
  geom_boxplot() +
  ggtitle("US PTAs vs TBT") +
  xlab("US Preferential Trade Agreements") +

```

```
ylab("Jaccard Indexes A") +
theme_minimal()
```

```
ggplot(df, aes(x = `China Preferential Trade Agreements`, y = `Jaccard Indexes B`, fill =
`Jaccard Indexes B`)) +
geom_boxplot() +
ggtitle("China PTAs vs TBT") +
xlab("China Preferential Trade Agreements") +
ylab("Jaccard Indexes B") +
theme_minimal()
```

```
#####
```

Chart 14: The US and China PTAs vis-à-vis ROO

R codes to generate comparative geo_boxplots based on the jaccard indexes between the PTAs and ROO:

```
# Install and load the required packages
```

```
install.packages("ggplot2") # If not already installed
library(ggplot2)
library(readxl)
```

```
# Read the Excel file and load the data into a data frame
```

```
df <- read_excel("~/Desktop/PTAS vs WTO/Comparisons to ROO.xlsx")
```

```
# Convert 'Jaccard Indexes A' column to numeric
```

```
df$`Jaccard Indexes A` <- as.numeric(df$`Jaccard Indexes A`)
```

```
# Convert 'Jaccard Indexes B' column to numeric
```

```
df$`Jaccard Indexes B` <- as.numeric(df$`Jaccard Indexes B`)
```

```
# Create comparative box plots
```

```
ggplot(df, aes(x = `US Preferential Trade Agreements`, y = `Jaccard Indexes A`, fill = `Jaccard
Indexes A`)) +
geom_boxplot() +
ggtitle("US PTAs vs ROO") +
xlab("US Preferential Trade Agreements") +
ylab("Jaccard Indexes A") +
theme_minimal()
```

```
ggplot(df, aes(x = `China Preferential Trade Agreements`, y = `Jaccard Indexes B`, fill =
`Jaccard Indexes B`)) +
geom_boxplot() +
ggtitle("China PTAs vs ROO") +
```

```
xlab("China Preferential Trade Agreements") +
ylab("Jaccard Indexes B") +
theme_minimal()
```

```
#####
```

Chart 15: The US and China PTAs vis-à-vis SG

R codes to generate comparative geo_boxplots based on the jaccard indexes between the PTAs and SG:

Install and load the required packages

```
install.packages("ggplot2") # If not already installed
```

```
library(ggplot2)
```

```
library(readxl)
```

Read the Excel file and load the data into a data frame

```
df <- read_excel("~/Desktop/PTAS vs WTO/Comparisons to SG.xlsx")
```

Convert 'Jaccard Indexes A' column to numeric

```
df$`Jaccard Indexes A` <- as.numeric(df$`Jaccard Indexes A`)
```

Convert 'Jaccard Indexes B' column to numeric

```
df$`Jaccard Indexes B` <- as.numeric(df$`Jaccard Indexes B`)
```

Create comparative box plots

```
ggplot(df, aes(x = `US Preferential Trade Agreements`, y = `Jaccard Indexes A`, fill = `Jaccard Indexes A`)) +
```

```
  geom_boxplot() +
```

```
  ggtitle("US PTAs vs SG") +
```

```
  xlab("US Preferential Trade Agreements") +
```

```
  ylab("Jaccard Indexes A") +
```

```
  theme_minimal()
```

```
ggplot(df, aes(x = `China Preferential Trade Agreements`, y = `Jaccard Indexes B`, fill = `Jaccard Indexes B`)) +
```

```
  geom_boxplot() +
```

```
  ggtitle("China PTAs vs SG") +
```

```
  xlab("China Preferential Trade Agreements") +
```

```
  ylab("Jaccard Indexes B") +
```

```
  theme_minimal()
```

