International Bureaucrats under the Spotlight: The Case of the WTO TRIPS Council*

Sojun Park[†] Minju Kim[‡]

April 11, 2023

Abstract

International organizations (IOs) have become more transparent, partly to be more accountable to the needs of developing countries. How does transparency affect international bureaucrats who facilitate discussions at IOs? We answer the question using the World Trade Organization (WTO)'s change in the document de-restriction rule in 2002. After the rule is implemented, documents that did not become public for at least six to eight months are de-restricted after 60 days of circulation. We examine how the speedy public disclosure of documents affects the way international bureaucrats write reports for the WTO Trade-Related Aspects of Intellectual Property Rights (TRIPS) Council. Using the network statistic to estimate the distribution of state preferences on key topics, we find that the WTO Secretariat after the rule change is more likely to issue reports on polarizing issues in intellectual property negotiations. Transparency can discipline international bureaucrats to better represent contentious debates in international negotiations.

*We thank Lauren Konken, Sayumi Miyano, Siyao Li, and participants of the research seminar at the Niehaus Center for Globalization and Goverance for their comments. We are also grateful for comments and suggestions from Krzysztof Pelc and Erik Voeten.

†Ph.D. Candidate, Department of Politics, Princeton University (`sojunp@princeton.edu`)

‡Assistant Professor, Department of Political Science, Syracuse University (`mkim71@syr.edu`)

International organizations (IOs) have become more transparent in recent years. IOs can increase transparency in multiple ways,[1] but one common approach is to publicly disclose meeting minutes and internal reports. Public disclosure of documents improves accountability by allowing interested actors to monitor what is discussed and negotiated in IOs. Multiple IOs loosened the rules for document restriction accordingly. By doing so, IOs responded to the demands of the interested actors. Increasing transparency is also aligned with the interest of IOs as the IOs were able to use increased accountability to legitimize their existence (Dingwerth et al. 2020).

Like any other organizations, IOs are run by international bureaucrats. International bureaucrats, as members of IO Secretariat, carry out day-to-day work of IOs. They implement decisions made by member states. As for IOs that provide a regular forum of negotiations, IO Secretariat also participates in negotiations as a mediator and an agenda-setter (Odell 2004; Johns 2007). Given its crucial role in IOs, how does the increased transparency, namely public disclosure of internal documents, affect the way the IO Secretariat performs at IOs? What kinds of interests does the IO Secretariat represent in response to a high and low transparency?

We answer the question by examining the case of the World Trade Organization (WTO), the only IO that regulates global rules of trade. We look at how the WTO Secretariat writes its report for the Trade-Related Aspects of Intellectual Property Rights (TRIPS) Council. Intellectual property, among numerous issue areas discussed in the WTO, is notable for its polarized demands of member states. To identify how the WTO Secretariat responds to transparency, we leverage the WTO's change in the document de-restriction rule. The WTO has increased its transparency by automatically disclosing internal documents after 60 days of circulation since May 14, 2002. This contrasts with the previous approach of releasing

[1] For example, transparency can mean shared knowledge of implementation. IOs according to the definition could require notification on domestic compliance. This type of transparency promotes international cooperation by assuring member states that the others are abiding by international agreements (Keohane 1984)

internal documents after keeping them at least for six to eight months. The contentious nature of intellectual property negotiations as well as the institutional change of the WTO together make the WTO TRIPS Council an ideal setting to test how the IO Secretariat responds to different levels of transparency.

One challenge in identifying the kinds of interests IO Secretariat represents comes from estimating member states preferences. For other IOs such as the United Nations General Assembly (UNGA), states reveal their preference by voting whose variation mostly rises in a uni-dimensional space (Voeten 2000, 2004). However, changes in the WTO rules are made by consensus, making it difficult to check whether the members' preferences converge or diverge using the spatial models (Poole and Rosenthal 1985; Martin and Quinn 2002; Clinton et al. 2004). For the lack of common interests among WTO members in TRIPS, it is also challenging to theorize what makes up their ideal points and interpret its elements.

We overcome this challenge by adopting a new methodological approach using a network analysis. First, we collect all documents published by WTO members and secretariat throughout the TRIPS Council meetings. Next, for each topic they discuss about, we select documents published by multiple states for agenda setting and identify their latent membership. We do so by analyzing their document-sponsorship patterns using a network statistic, called the modularity. This allows us to quantify the degree of polarization among WTO members on each topic. Lastly, we check whether the WTO secretariat publishes a new document on the topic and if so, whether it contains any distinctive feature in texts. We compare how the secretariat's publication patterns differ before and after the document de-restriction policy change.

Using the network statistic, we find that transparency can discipline IO Secretariat to represent contentious debates in international negotiations. Specifically, after the rule change and subsequent speedy disclosure of internal documents, the WTO secretariat is more likely to cover issues that are more polarized among member states in its own reports. This finding stays robust after we specify our model and quantify the distribution of state preferences in a different way.

Our findings indicate that the procedural transparency affects which topic gets represented in IOs through the voice of international bureaucrats. The findings contribute to the debates on the effect of increased transparency on international organizations (Keohane 1984; Stasavage 2004; Hafner-Burton et al. 2016; Carnegie and Carson 2019; Pauwelyn and Pelc 2022b). Method-wise, our paper introduces a new way to estimate state preferences in international organizations. We demonstrate how the network statistics can be used to estimate their distribution, which often varies across multiple dimensions. The exploratory approach can be useful when IO researchers cannot pre-specify all components of state preferences.

The paper is organized as follows. After a brief overview of the literature on transparency and bureaucrats in IOs, we lay out our theory and empirical expectations. Next, we introduce our identification strategy and explain why we focus on the TRIPS Council as the case. We then test our main hypothesis and conduct robustness checks. Lastly, we discuss the implications of our findings.

Transparency in International Organizations

Like any other organizations, an IO strives to justify its existence. If failed to do so, an IO either officially dissolves or loses its vitality (Gray 2018). When an IO's existence is justified, an IO can exercise authority in international politics. One channel in which an IO can prove its existence is its appeal to democratic accountability. Democratic accountability empowers an IO by fostering its moral authority (Barnett et al. 2004). Indeed, IOs increasingly speak the language of accountability to justify their authority (Dingwerth et al. 2020).

Transparency is one popular design feature that can increase an IO's democratic accountability. Transparency informs multiple stakeholders in international community about what IO does. Member states change the design of an IO to further their interests (Koremenos et al. 2001). Existing studies identify benefits of maintaining opacity. With limited transparency, member states have freedom to maneuver discussions and can disguise their under-performance (Wallace 2016). Despite the benefits of maintaining opacity, there are clear benefits to transparency. Hollyer et al. (2019), for instance, find that the leader in autocracies choose transparency when they would like to use support from mass public to deter oppositions from rival elites. Likewise, when effectiveness of an IO is questioned, member states can signal democratic accountability to civil society to gain its support.

The consequence of transparency on IOs are debated. Past research finds out the positive and negative impact of transparency at different stages of international cooperation. When member states negotiate, transparency can impede conclusion of the negotiations by reducing flexibility of member state officials to compromise in the negotiations (Stasavage 2004; Hafner-Burton et al. 2016). At the stage of implementation of rules, transparency can promote compliance by providing information on the behavior of other member states (Keohane 1982). Sometimes IOs encourage member states to report other member states' violation of international treaties, and a high transparency might discourage active reporting of member states (Carnegie and Carson 2019). Member states under a high transparency fear the revelation of their sources and their methods of intelligence. The papers in common focus on how transparency affects behavior of member states in IOs.

It is surprising that the conventional discussions overlook the ways in which transparency can affect behavior of international bureaucrats who work as IO Secretariat. IO Secretariat makes daily decisions needed to run IOs. IO Secretariat assists member states at every stage of international cooperation. International bureaucrats exercise autonomy in IOs, and their exercise of autonomy can both further or impede state interests (Barnett et al. 2004).

This paper develops the discussions on transparency in IOs by examining how transparency affects the behavior of international bureaucrats. Among various aspects of transparency, the paper focuses on disclosure of internal documents to the public. Such disclosure allows international bureaucrats to secure a direct channel to communicate with the public. Under the high transparency, international bureaucrats can legitimize its presence by directly appealing to the public.

The rule change in WTO provides an opportunity to estimate the effect of transparency on the behavior of international bureaucrats. It is an institutional change clearly intended to increase accountability to the public. The rule change also has a clear start date which increases reliability of the estimation. Unlike many other IOs, the WTO has maintained robust Secretariat long before its increase in transparency. Because of its broad membership, the WTO is also one of the few organizations which member states have polarized interests. The characteristics together make the WTO an ideal setting to test the effect of transparency on international bureaucrats. In the following section, we introduce the background that led the WTO to change its rule on document de-restriction.

Transparency in the WTO

On May 16, 2002, WTO member states agreed on new procedures for document de-restriction (WT/L/452). Before the rule change, the public had an access to great majority of internal documents after waiting 8-9 months on average. With the rule change, the length waiting time got reduced to 6-12 weeks. After the rule change, documents produced by the Secretariat are automatically de-restricted after 30 days of circulation as opposed to 8 months. Member states can request additional restriction period, but the period cannot exceed 30 days.

A series of protests and criticisms from the public can explain why WTO member states agreed on the rule change. In November 1999, around the time WTO Ministerial Conference of 1999 was held, protesters representing non-governmental organizations, labor unions, and other interest groups gathered in Seattle to oppose globalization and economic liberalization. The slogan of the protesters were 'transparency and accountability.'[2] While chanting 'this

[2]See https://www.iatp.org/sites/default/files/Battle_of_Seattle_The.htm.

is what democracy looks like,' the protesters demanded reforms of the WTO.[3]

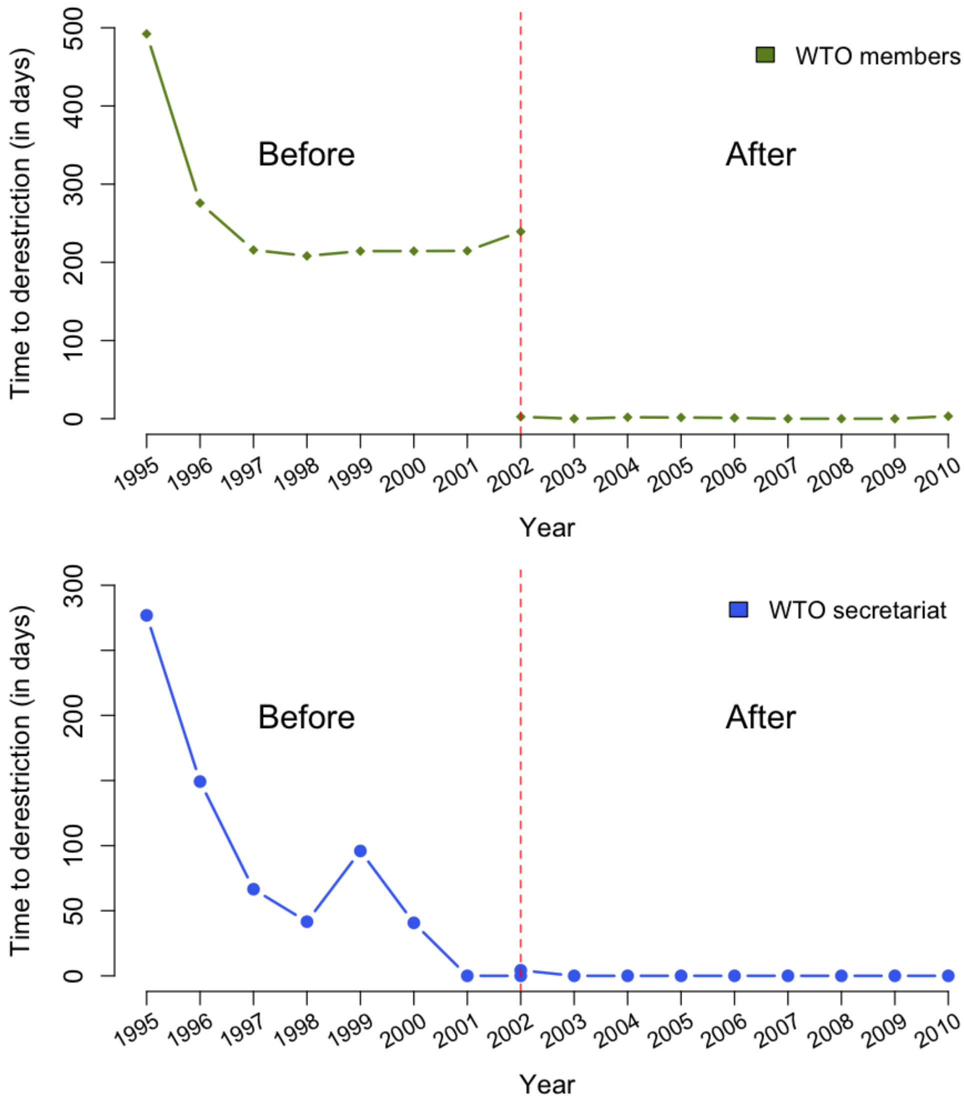


Figure 1: **The Mean Time to Document De-restriction: the Case of TRIPS**

The WTO responded to the public demands. WTO member states agreed to expedite public disclosure of internal documents as a response to public demands on transparency. The rule change 'emphasizes the importance of greater transparency in the functioning of the WTO' (WT/L/452), and is intended to 'make the organization more open and accountable

[3]The Guardian, December 4, 1999, Real Battle for Seattle, https://www.theguardian.com/world/1999/dec/05/wto.globalisation.

to the citizens of governments that WTO represent.'[4] There was an earlier effort to create a system of de-restricting documents (WT/L/160/Rev.1), but the decision in May 2002 has drastically increased the public's access to internal documents.

With a descriptive analysis, we confirm that the rule change actually expedited disclosure of internal documents. We pulled out all the 5,500 registered documents at the WTO TRIPS Council from 1995 to 2019, and calculated the length of days from the date of submission to the date of de-restriction for each document. Figure 1 shows that the average length of time needed for disclosure dropped dramatically after the rule change.

Bureaucrats under the Spotlight

An international bureaucrat makes daily decisions to run an international organization. As a member of the secretariat, an international bureaucrat works to achieve mission of an IO. IO Secretariat collects and analyzes data, monitors compliance of member states, participates in negotiations, and publishes reports. When writing reports, IO Secretariat summarizes meetings, provides background information upon member states' requests, and sometimes suggests agendas for negotiations in the future.

Existing studies on international bureaucrats explicate conditions under which an international bureaucrat can exercise autonomy (Barnett et al. 2004; Fang and Stone 2012; Johnson and Urpelainen 2014). One conventional explanation is that an international bureaucrat can exercise greater autonomy when member states are indifferent (Barnett et al. 2004). Such indifference often originates from member states' lack of knowledge on an issue area. Member states may also have weak preferences when an issue area is not important to them. When member states have polarized interests, member states would curtail autonomy of an international bureaucrat. Member states with polarized interests are concerned

[4] WTO Website, accessed on January 29, 2022. See https://www.wto.org/english/forums_e/ngo_e/derestr_explane_e.htmfor more details.

that a single member state might exert influence on an autonomous international bureaucrat (Urpelainen 2012). This indicates that an international bureaucrat would be pressured to stay silent when member states have polarized interests.

If an international bureaucrat works to justify why an IO exists, IO Secretariat should strategically use transparency for its interest. Under a high transparency, an international bureaucrat has a direct communication channel to the public. Under such environment, IO Secretariat would be inclined to bring up polarized issues to showcase what IO does. Existing literature would predict IO Secretariat's silence on polarized topics (Barnett et al. 2004), but we expect that transparency can break the silence. When international bureaucrats are under the spotlight, they can be emboldened to justify their existence .

Hypothesis 1. *IO secretariat publishes more proactive documents on polarizing issues under a high transparency.*

The WTO Secretariat under the TRIPS Council

The TRIPS Council is the legal bodies in the WTO, where its secretariat has made its presence felt the most by the public. Primarily, the secretariat monitors the TRIPS agreement by submitting annual reports on various issues on TRIPS to the General Council. Staff members at the General Council then administer these issues until the delegates of all WTO member states come together in the Ministerial Conference for every two years and make decisions on them, based on consensus.[5]

For example, after the outbreak of COVID-19 pandemic in 2020, some WTO member states suggested that the TRIPS Council ask the General Council for "a waiver from the implementation, application, and enforcement of Sections 1, 4, 5, and 7 of Part II of the TRIPS agreement in relation to prevention, containment or treatment of COVID-19."[6] The

[5] "Rules of Procedure for Sessions of the Ministerial Conference and Meetings of the General Council" (WT/L/28)

[6] "Waiver from Certain Provisions of the TRIPS Agreement for the Prevention, Containment and Treat-

sections list the scope of intellectual property protection for each type of asset, such as copyright and patents. The request was then reflected on the report in the following year,[7] responded by the Director General,[8] and put to a vote in the 12th Ministerial Conference in 2022.[9]

Why does the role of the WTO secretariat stand out in the TRIPS Council? First, it has to do with the way TRIPS was initially designed. During the Uruguay Round, the Global North and South struggled to reach an agreement on intellectual property protection (Deere 2009). As stated in Article 1 and re-emphasized during the Doha Round, this led TRIPS to leave much room for its interpretation among WTO members. In return, the freedom sparked communication among states on how other members implement the multilateral trade agreement throughout the council meetings, and the WTO secretariat has played a pivotal role in mediating their exchange of information. During the COVID-19 pandemic, for instance, the secretariat fostered recognition of public health emergencies developing countries face when they enforce protection of patented drugs.

The role of the secretariat became more prominent after the Doha Round, when the number of complaints filed to the dispute settlement bodies started to drop.[10] The Doha Declaration re-emphasized the degrees of freedom each country has to maintain its autonomy over public policies, such as public health. As a consequence, it prevented WTO members from consulting others' violations of TRIPS and escalating a formal dispute thereafter. Such

ment of COVID-19 - Communication from India and South Africa" (IP/C/W/669)

[7] "Annual Review of the Special Compulsory Licensing System - Report to the General Council" (IP/C/90)

[8] "Communication from the Chairperson" (IP/C/W/688)

[9] "Draft Ministerial Decision on the TRIPS Agreement - Revision" (WT/MIN22/W/15/Rev.2)

[10] A substantial body of research in international trade laws demonstrates how the legal bodies have adjudicated complaints about TRIPS. Check Shaffer (2004), Abbott (2005), and Pauwelyn (2010) for more information about the literature.

lack of space for adjudication made the TRIPS Council more crucial for preventing future disputes. In the council meetings, for instance, the IO secretariat not only channels debates among its member states but also identifies their common interests as a part of the rule-making process.

How much the WTO secretariat makes a difference with TRIPS and transparency disciplines the bureaucrat in this process was borne out clearly in 2022. Two years after the outbreak of COVID-19, the WTO held the 12th ministerial conference in Geneva to resolve various global issues, including the vaccine inequality. Specifically, states' opinions were polarized on TRIPS, where the South demanded its relaxation beyond COVID-19 vaccines and the North wanted to limit the scope to COVID-19 vaccines. At the end, however, WTO members were able to close the gap and make several achievements.[11]

It turns out that the Direct-General of the WTO at that time, Ngozi Okonjo-Iweala, mainly led the negotiation and transparency provided a source of her motivation. When WTO members were debating over TRIPS waiver on May 2022, for instance, the director published a document[12] and publicly announced her commitment to solving the issue at the ministerial conference. In the beginning of the conference, she made public the conflict of interests among WTO members as a barrier and stressed legitimacy of the WTO in a time of crisis as follows. Without such public appeals, the director would have been unwilling to extend the conference when the negotiation was stalled[13] and push WTO members further to reach an agreement.

> *"... While I am proud to be the first woman, first African and the first American in this role, what matters to me more is whether, on Wednesday when we conclude this conference, I am able to say that I was the DG who stood behind WTO members as they came together and delivered results at a moment when the world*

---

[11] These are a Ministerial Declaration on the WTO Response to the COVID-19 Pandemic and Preparedness for Future Pandemics and the Ministerial Decision on the TRIPS Agreement.

[12] "Communication from the Chairperson" (IP/C/W/688)

[13] Check the official website for more information about the schedule.

really needed them to do so. Will the road to deliver at this MC12 be smooth? Absolutely not. Expect a rocky, bumpy road with a few landmines along the way. But we shall overcome them. ... Between now and Wednesday, we have a chance to show the world that the WTO can step up to the plate. That we can act to correct this institution's problems, to reform and modernize it. ..."[14]

Identifying the Effect of Transparency on Bureaucrats

To test our hypothesis, there are a number of empirical challenges to overcome. First, it is not clear how one can identify a connection between IO member states' policy preferences and IO secretariat's response to their competing interests. In so doing, one also needs to distinguish normal activities of the secretariat, such as delivering messages between state representatives, from its distinct exercise of authority. The latter case includes expressing her individual concerns about the issue at hand and synthesizing information provided by multiple parties. Fleshing out these activities is vital for studying when IO bureaucrats no longer serve as an agent for member countries but rather as an independent entity.

Specifying a model for hypothesis testing is more daunting for our selected case. Primarily, the existing research in IO has widely adopted item response theory (IRT) models to estimate state preferences on foreign policies. The objective is to estimate unobservable quantities defining individual actor's utility, called ideal points, by assuming axes along which each actor is located. To do so, the key components constituting each dimension, such as direction and its magnitude, are established.

IRT model[15] was initially developed to quantify the degree of polarization between political parties in American politics (Poole and Rosenthal 1985). Its Bayesian model also made it possible to relax its key assumptions (Martin and Quinn 2002). This allowed researchers

[14]Check MC12 Opening Session for more information about the speech.

[15]For other spatial model using texts-as-data, check Laver et al. (2003) and Slapin and Proksch (2008). Kim et al. (2018) also synthesize roll call votes and floor speech in the US congress to estimate politicians' preferences.

in IO to unpack state voting behaviors in the UNGA, which vary over time (Bailey et al. 2017) across different dimensions (Bailey and Voeten 2018). Most recently, Mesquita et al. (2022) applied IRT method to UNGA sponsorship data to identify the underlying motive for agenda-setting in the UN.

For the WTO, however, note that rule-making decisions are made only by consensus, not by voting. This implies that one has to search for other fora, where WTO members reveal their preference on each topic without casting votes. Multi-dimensionality of state preferences on trade-related issues also makes it difficult to employ IRT approach. Unlike voting in the UNGA most of whose variation rises from the distribution of great powers (Voeten 2000, 2004), the literature highlights multi-faceted aspects of state's trade policy preference (Frieden and Rogowski 1996). These include but not limited to the difference in political regime (Mansfield et al. 2002; Milner and Kubota 2005), the distribution of factor endowments (Rogowski 1987, 1990), and firm heterogeneity (Kim 2017; Kim and Osgood 2019) among others. In this respect, intellectual property rights are not an exception, where the conflict of national interest rises across the Global North and South when it comes to patents and the Old and New World for geographical indications (Deere 2009).

Data Collection

To overcome these challenges, we first construct a new dataset. Specifically, we collect all documents on intellectual property rights, published between 1995 and 2019 by WTO member states, secretariat, and other international organizations attending the TRIPS Council meetings as observers. These documents are classified by specific document symbols,[16] all starting with 'IP.' The total number of the documents is 5526.

All the documents are labeled in a distinct, hierarchical way. For instance, WTO members are obliged by Article 63 of TRIPS to notify changes in their national IP laws and regulation

[16]For more comprehensive overview of the labelling system, check the WTO guidebook.

and how they fulfill the key principles, such as the Most-Favored Nation (MFN) rule. These documents published in compliance with Article 63 start with 'IP/N.' On the other hand, documents WTO members are working with begin with 'IP/C/W,' whose final decisions are announced using 'IP/C.' For our empirical analysis, we select documents whose symbols start with 'IP/C/W' and 'IP/C' for WTO members. The total number is 1276.

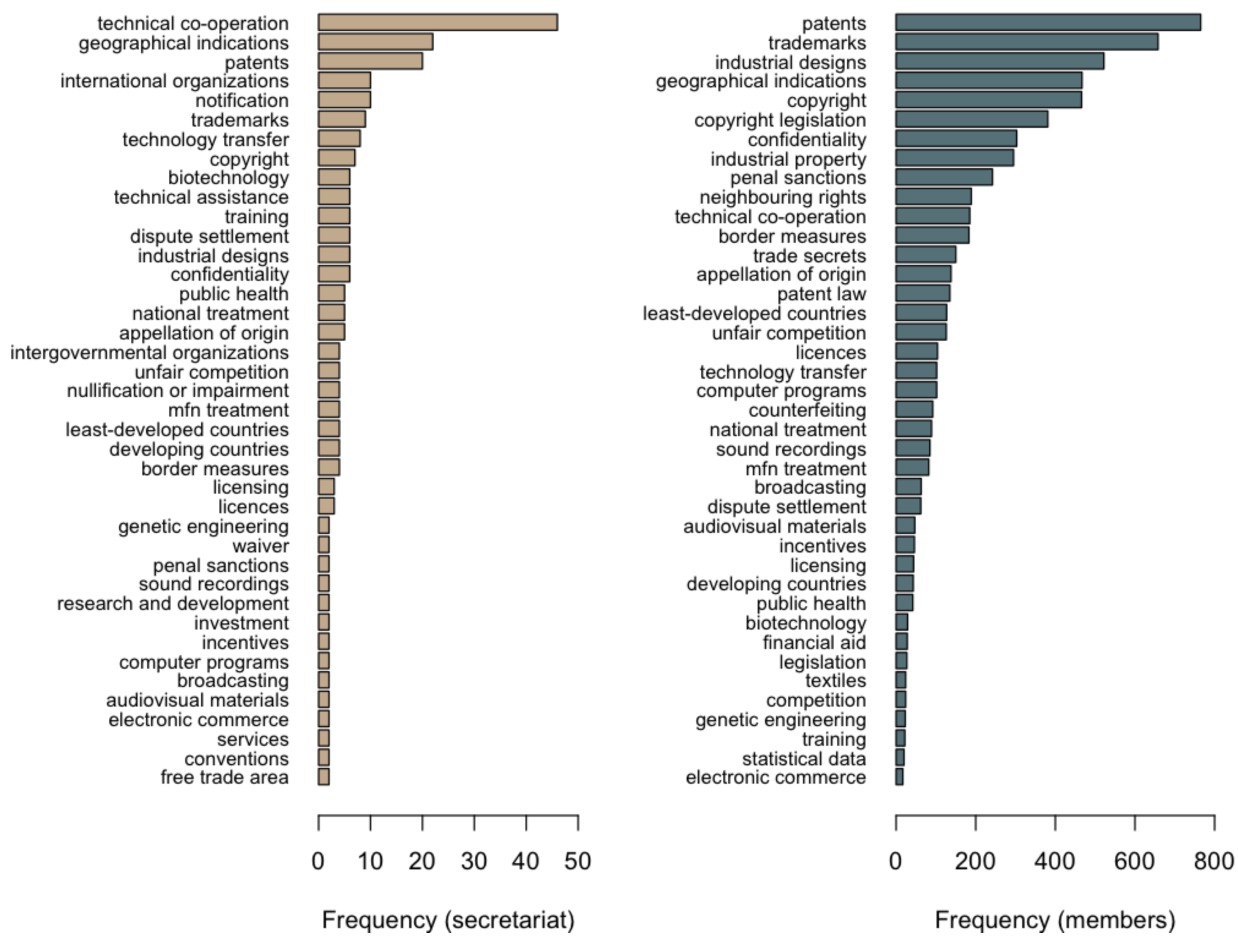


Figure 2: **Top topics discussed in the TRIPS Council meetings (1995-2019)**

To identify whether the WTO secretariat responds to the needs among WTO members, we subset the documents into different categories, based on their topics. In so doing, we make use of the meta data offering keywords of each document.[17] We subset the documents into

[17]WTO documents online database.

different categories, based on their common keywords, and use these keywords as a bridge between publications by WTO members and secretariat on each keyword. From Figure 2, note that both sides commonly address the issue of 'patents' while the secretariat visits global issues such as 'technical co-operation' more frequently than WTO members. In total, the number of unique keywords from both sides is 138.

Estimation of State Preferences

For each keyword observable in our data, we estimate the distribution of state preferences on each issue, instead of estimating individual preferences on the issue. We do so by first identifying which group of members publishes a document together or sponsors others' documents. We assume that co-publication and co-sponsorship of documents indicate alignment of national interests in each issue. This allows us to construct an adjacency matrix A for each keyword, where $a_{ij} = 1$ if states i and j publish the same document or sponsor each other's publication and $a_{ij} = 0$ otherwise. We repeat this process across different keywords to uncover how state preferences are spread across various topics.

For the alignment of state preferences identified in A, we calculate a network statistic summarizing the degrees of polarization among nodes and edges, called *modularity*. To do so, we first analyze the structure of latent communities each country belongs to using community detection.[18] This allows us to partition WTO members into several groups of countries who co-publish documents frequently. Next, we estimate how much fragmented the communities are using the modulartiy. By the definition, this is done by calculating the proportion of the edges that fall within the given groups minus the expected ratio if the nodes were connected at random. This means that the higher the modularity is, the more consolidated countries are within each group but fragmented across different groups.

[18] For a broad literature that uses community detection, check Lupu and Traag (2013), Renshon (2016) for international conflict and Lupu and Voeten (2012) for the study of IO.

WORLD TRADE ORGANIZATION

IP/C/W/670

23 November 2020

(20-8438) Page: 1/7

Council for Trade-Related Aspects of Intellectual Property Rights

Original: English

EXAMPLES OF IP ISSUES AND BARRIERS IN COVID-19 PANDEMIC

COMMUNICATION FROM SOUTH AFRICA

Figure 3: **An example of a solo-publication by WTO members**

WORLD TRADE ORGANIZATION

IP/C/W/672

15 January 2021

(21-0501) Page: 1/30

Council for Trade-Related Aspects of Intellectual Property Rights

Original: English

WAIVER FROM CERTAIN PROVISIONS OF THE TRIPS AGREEMENT FOR THE PREVENTION, CONTAINMENT AND TREATMENT OF COVID-19 – RESPONSES TO QUESTIONS

COMMUNICATION FROM THE PLURINATIONAL STATE OF BOLIVIA, ESWATINI, INDIA, KENYA, MOZAMBIQUE, MONGOLIA, PAKISTAN, SOUTH AFRICA, THE BOLIVARIAN REPUBLIC OF VENEZUELA AND ZIMBABWE

Figure 4: **An example of a co-publication by WTO members**

We repeatedly calculate the modularity for each keyword observed in our data. In this way, we can quantify the degree to which issues polarize WTO members, where higher scores of modularity imply higher degrees of polarization. How the statistic varies across keywords is summarized in Table 1. It is worth noticing that conflicting issues between the Global North and South on technology and public policies, such as 'patents,' 'electronic commerce,' and 'public health,' score at the top. These issues are known for their exclusivity of economic benefits and causing global conflicts. On the other hand, other keywords located in the middle and the lowest, such as 'developing countries,' 'least-developed countries,' and 'economic development,' are highly associated with international cooperation.

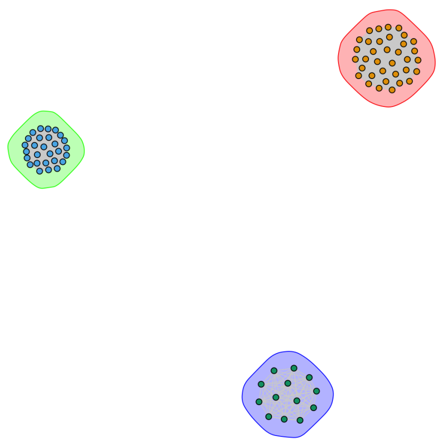
Keyword	M
patents	0.615
licences	0.545
electronic commerce	0.476
public health	0.443
...	...
epidemics	0.306
disease control	0.284
biotechnology & genetic engineering	0.253
developing countries	0.240
...	...
least-developed countries	0.122
environment	0.084
technical assistance	0.073
AIDS	0.027
economic development	0.020
...	...

Table 1: **Examples of the modularity: highest vs. intermediate vs. lowest**

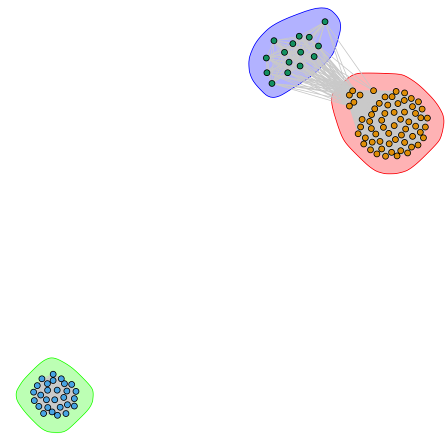
Figure 5 illustrates the configuration of WTO member state preferences on each issue. Each grey line represents cases in which WTO member states co-published documents or sponsored each other's publication on the issue. Boundaries with different colors describe latent groups, identified using community detection. Note that the ways state preferences are distributed vary across issue areas, and the networks with higher modularity exhibit more dense inner-group and sparse outer-group connections. For those issues polarizing WTO members, the grey lines become shorter within each group and longer across different groups of countries. In the appendix, we compute the modularity in various ways using different hyper-parameters.

Model Specification

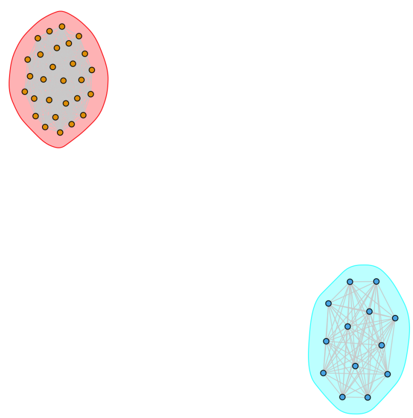
After measuring the degree of polarization for each keyword, we check whether the WTO secretariat publishes a proactive document on the same issue. By proactive, we mean that the bureaucrat often goes beyond its official role of monitoring the TRIPS agreement and



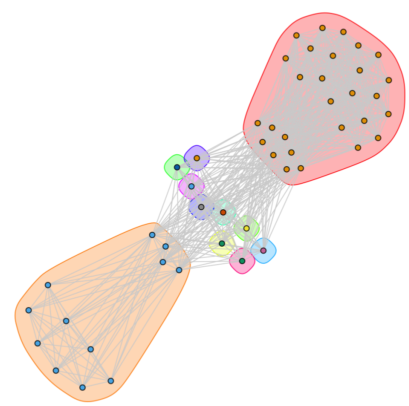
(a) highest (“licences”)



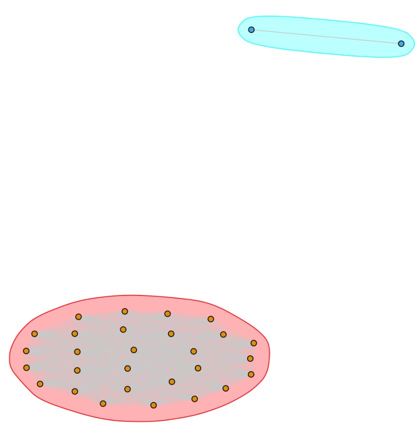
(b) highest (“patents”)



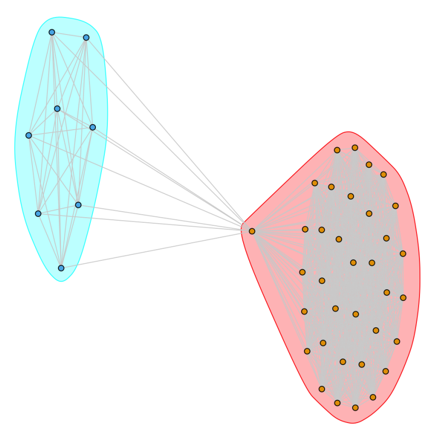
(c) intermediate (“infectious diseases”)



(d) intermediate (“rules of origin”)



(e) lowest (“information technology”)



(f) lowest (“environment”)

Figure 5: **The degrees of polarization: highest vs. intermediate vs. lowest**

carrying messages among WTO member states. Instead, the IO secretariat provides a new information to facilitate their communication. The bureaucrat also mediates their exchange of opinions by identifying their common interests and making a new suggestion.

WORLD TRADE ORGANIZATION

IP/C/W/273/Rev.1
18 February 2003

(03-1044)

Council for Trade-Related Aspects of Intellectual Property Rights

REVIEW OF THE PROVISIONS OF ARTICLE 27.3(b)

ILLUSTRATIVE LIST OF QUESTIONS

Prepared by the Secretariat

Revision

Figure 6: **An example of a reactive publication by WTO Secretariat**

WORLD TRADE ORGANIZATION

IP/C/W/658

4 October 2019

(19-6427)

Page: 1/12

Council for Trade-Related Aspects of Intellectual Property Rights

WTO SECRETARIAT TECHNICAL COOPERATION IN THE TRIPS AREA

NOTE BY THE SECRETARIAT

This document has been prepared under the Secretariat's own responsibility and is without prejudice to the positions of Members or to their rights and obligations under the WTO.

Figure 7: **An example of a proactive publication by WTO Secretariat**

We identify when the secretariat breaks out her ‘comfort zone’ by utilizing the WTO documents labeling system further. Specifically, when WTO member states and secretariat follow up on documents published earlier, their follow-up documents are labeled separately using suffixes.[19] These include "/Add." for addendum, "/Corr." for corrigendum, "/Rev." for revision, "/Suppl." for supplement, followed by numbers indicating their sequential order. Therefore, to distinguish the initiatives set forth by the WTO secretariat from their normal activities, we create an indicator that equals 1 if her documents do not contain the suffixes and 0 otherwise. The total number of documents published by the secretariat between 1995 and 2019 is 182, 69 of which does not contain the suffixes and classified as proactive activities of the secretariat.

For our hypothesis testing, it should be noted that we compare different versions of documents published by the WTO secretariat, instead of comparing them with the absence of any publication by the secretariat. We primarily do so to control for the selection process. That is, there are a number of cases where communication between WTO member states does not ask for any contribution to be made by the IO secretariat. Because the number of documents published by WTO member states for agenda setting far exceeds that of the WTO secretariat, considering keywords the IO secretariat does not speak to at all can cause biases in our statistical analysis.

We operationalize the effect of the document de-restriction policy on behaviors of the WTO secretariat in two separate ways. In the first model, we partition 182 documents published by the WTO secretariat into two sub-samples, one published before and the other published after the policy change, and compare their results.

Next, to check whether the results remain consistent, we pool the sub-samples and use a dummy variable I_t that equals 1 before the policy change and 0 otherwise. In this model, we add year fixed-effects μ_t to control for the effects of unobservable, year-specific events and account for topics discussed intensively at a specific point in time t. We also add a battery of other observable, document-level covariates Z_{it} as control variables, where i

[19]For more information about the hierarchy of WTO documents labeling system, check the WTO official guidance.

denotes each document published by the secretariat. These include the number of keywords each document contains and the number of TRIPS articles it refers to among others.

$$Y_{it} = \alpha + \beta_1 I_t + \beta_2 X_{it} + \beta_3 Z_{it} + \beta_4 I_t X_{it} + \beta_5 I_t Z_{it} + \mu_t + \epsilon_{it}$$

The alternative model can be specified formally as above, where Y_{it} is an indicator of proactive publication by the WTO secretariat. X_{it} measures the average degree of polarization among topics the WTO secretariat speaks to in each document, and the parameter of our interest is β_4. In this way, we examine how the change in document de-restriction policy in the WTO affects the extent to which the secretariat take actions on polarizing issues proactively.

Results

	Before the 2002 reform			After the 2002 reform		
	(1)	(2)	(3)	(4)	(5)	(6)
polarization	2.242	1.282	0.562	5.367***	5.329***	5.882***
	(1.485)	(1.594)	(1.564)	(1.317)	(1.409)	(1.564)
delays in publication (days)	0.008***	0.006***	0.006	0.297	0.309	0.282***
	(0.002)	(0.002)	(0.008)	(24.257)	(24.257)	(0.046)
Controls	No	Yes	Yes	No	Yes	Yes
Year FE	No	No	Yes	No	No	Yes
Observations	85	85	85	97	97	97
Log Likelihood	-44.877	-41.538	-31.128	-48.348	-46.848	-36.101

Standard errors are shown in parentheses. *p<0.1; **p<0.05; ***p<0.01

Table 2: **Sub-sample Analysis: Before vs. After the 2002 Reform**

The results of sub-sample analysis are presented in Table 2, demonstrating when IO bureaucrats take initiatives. It shows that when the public can monitor actions taken by the bureaucrats more easily, they are more likely to mention polarizing issues on their reports. The effects remain statistically significant after other controls, such as the number of issues addressed by the secretariat at the same time, and year-fixed effects are added.

Note that the effects of delays in publication also change dramatically before and after the document de-restriction reform. Before the reform, the WTO secretariat could work on salient issues behind the scenes for several months, saving more leeways to avoid public scrutiny. After the reform, however, the bureaucrat could no longer evade public criticism unless they request delaying their publication. This led the WTO secretariat to make the request after 2002 when it addresses more polarized issues.

	(1)	(2)	(3)
dummy (after the reform) × polarization	2.805**	3.458***	3.610**
	(1.357)	(1.342)	(1.670)
dummy (after the reform) × delays in publication (days)		0.567**	0.322*
		(0.262)	(0.194)
dummy (after the reform) × number of keywords		0.122	0.129
		(0.099)	(0.176)
dummy (after the reform) × number of TRIPS articles		-0.124	-0.214
		(0.241)	(0.245)
dummy (after the reform) × number of products		-0.129	-0.528
		(0.404)	(0.386)
dummy (after the reform)	16.265***	-1.150**	16.141***
	(1.104)	(0.528)	(1.259)
polarization	0.719	1.068	0.459
	(0.953)	(0.839)	(0.922)
delays in publication (days)	0.234***	0.254***	0.182***
	(0.067)	(0.058)	(0.066)
number of keywords		0.048	0.082**
		(0.034)	(0.035)
number of articles		-0.013	-0.005
		(0.024)	(0.033)
number of products		0.018	0.442*
		(0.212)	(0.226)
Year FE	Yes	No	Yes
Observations	182	182	182
Log Likelihood	-121.438	-314.496	-115.419

Robust standard errors are shown in parentheses. *p<0.1; **p<0.05; ***p<0.01

Table 3: **Pooled Analysis: Before vs. After the 2002 Reform**

The findings under pooled analysis are summarized in Table 3, reaffirming the previous results using sub-sample analysis. It should be noted that pooled analysis enables direct comparison between our samples before and after the reform, adding on to the power of our statistical test. This is also one of the reasons why the coefficients and p-values change in our pooled analysis. Yet, the results remain statistically significant at the level of $\alpha = 0.05$ when we add year-fixed effects. The consistent estimates of other control variables, such as delays in publication, also bear out our expectation about the impact of transparency.

Text Analysis

We also conduct a text analysis to assess whether there is a notable difference in texts between regular and proactive documents published by the WTO secretariat. Specifically, we ran a structural topic model developed by Roberts et al. (2014, 2019). In the model, we regressed the indicator on latent topics of all of the published documents. The number of topics was chosen based on several criteria for the model fit, such as semantic coherence.

Structural topic model allows us to assess whether our classification of the documents using the symbols was precise. Recall that we distinguish initiatives set forth by the WTO secretariat from its occupational duties by creating an indicator. Yet, the document symbols may be imperfectly coded or not fully incorporating information hidden in their text. In this respect, the semi-automated text analysis can uncover whether the documents coded as 'proactive' contain any distinct feature in their text.

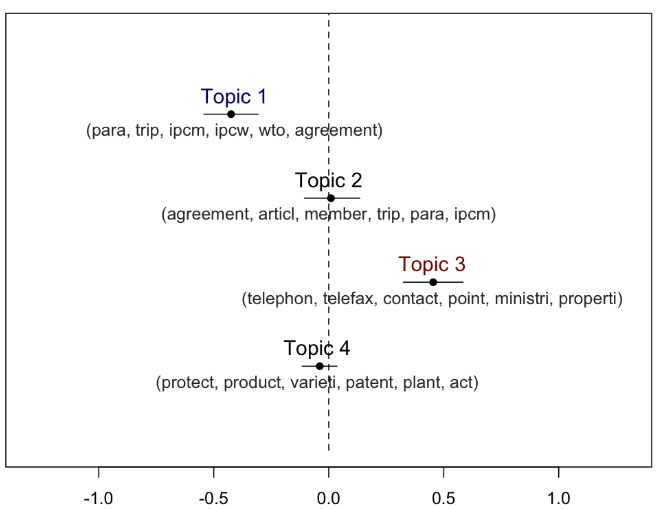


Figure 8: **The Difference in Topic Proportions ($K = 4$)**

The results of text analysis are visualized in Figure 8 and Figure 9. In Figure 8, the negative coefficients correspond to the indicator being 1 and presenting the secretariat's documents coded as 'proactive.' Topic 1 is dominant when the publications are categorized as proactive, while Topic 3 is prevalent when the documents are considered as 'reactive.' The latter case includes keywords many of which describe contact points among WTO member states. On the other hand, the former refers to other documents published as a part of agenda setting, such as "IP/C/M" or "IP/C/W," and cites specific paragraphs under the TRIPS agreement.

It should be noted that "IP/C/W" followed by suffixes are coded as 'reactive' in the earlier data generation process. This implies that the keyword is not followed by suffixes under documents classified as 'proactive' and the proposals are likely to be set forth by the secretariat for the first time. Citations of paragraphs in TRIPS also indicate that the secretariat is actively engaged in the agenda setting. This is mainly so because TRIPS does not list any formal course of actions the secretariat must follow under the TRIPS Council.

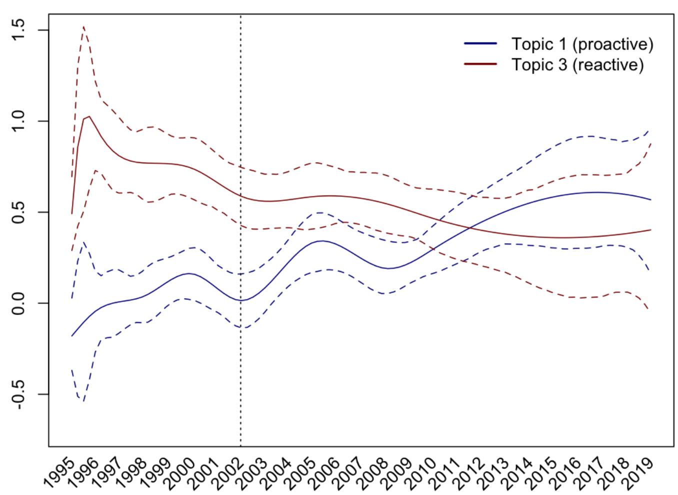


Figure 9: **Time Trend (Before and After the Reform)**

Figure 9 summarizes the time trend of prevalence of each topic. It is worth noticing that the prevalence of Topic 1 starts to take off after 2002 while Topic 3 steadily declines. Although the text analysis does not offer any conclusive evidence, it offers a suggestive evidence on whether the shift is driven by the document de-restriction policy in the WTO.

Cost of Transparency

Notably, our empirical findings indicate that the WTO secretariat after the transparency reform becomes more responsive to topics that member states care about. Transparency induces the WTO secretariat to mention polarizing topics in their reports. The text analysis shows that the secretariat uses proactive languages to describe those polarizing topics.

Then what would be the cost of adopting transparency in an IO? If transparency only provides benefits, transparency should have been adopted widely across IOs in the beginning. Past research discusses the cost of adopting transparency. Specific to WTO, member states under high transparency are deterred to strike a deal that benefits others in dispute settlements (Kucik and Pelc 2016; Johns and Pelc 2016). Transparency also does not protect WTO adjudicators who raise minority opinions from potential political retribution (Pauwelyn and Pelc 2022b). Increasing transparency in dispute settlements helps realize the principle of non-discrimination, but doing so discourages a swift resolution of disputes, one of very reasons that attracted member states to join the WTO in the beginning.

Our findings reignites discussions on the cost of transparency in the realm of multilateral negotiations. The WTO secretariat can signal its democratic accountability through transparency, but the polarizing topics they cover in their reports can deter conclusion of a multilateral trade agreement in a longer run. The secretariat plays various roles in guarding the WTO system (Odell 2004; Jawara and Kwa 2004; Pauwelyn and Pelc 2022a). If the WTO secretariat affects which agendas to be discussed in multilateral negotiations, their response to transparency could delay conclusion of a multilateral trade agreement. In a longer run, the secretariat's response to transparency could make the WTO less appealing as a negotiation forum.

Conclusion

Transparency can discipline international bureaucrats to better represent contentious debates among IO member states. We leverage the WTO's institutional change in 2002 to cut its time to de-restrict internal documents from 6-8 months to 60 days. The institutional change has enabled the public to access up-to-date conversations in WTO. We find that the WTO Secretariat, after the speedy disclosure of internal documents to the public, issues more reports on topics that are polarized among its member states. We also conduct text analysis and find that the WTO Secretariat after the rule change uses more proactive keywords in its reports. International bureaucrats adapt to transparency.

Existing studies indicate that international bureaucrats would stay silent when states have polarized interests (Barnett et al. 2004; Urpelainen 2012). Our findings illuminate that transparency can embolden international bureaucrats by creating them a direct communication channel to the public. As long as international bureaucrats would want to justify their existence, they would be motivated to exhibit responsiveness to the public by issuing more reports on contentious topics.

Methodologically, our paper explores a new approach to estimate the degree to which an agenda in an IO is polarized among member states. IRT model, the conventional approach to quantify the degree of polarization, can be useful when decisions are made by voting. However, some IOs like the WTO make rules based on consensus, in which case state preferences are not represented by voting. To overcome this challenge, we leverage keywords of IO documents and explore the degree to which member states co-publish the documents. Lastly, we calculate the degree of polarization for each keyword by examining how fragmented the co-publication patterns are. We suggest that this approach can be useful for other IOs adopting consensus in their decision-making, especially when the object of inquiry is not individual state preferences but their distribution.

Future studies could examine ways in which transparency can incentivize different kinds of international bureaucrats. Our theory rests upon the motivation of the secretariat as a whole to justify its existence to the public. IO secretariat is composed of multiple international bureaucrats. Depending on their tasks and exposure to the public, transparency could affect behavior of international bureaucrats within an international organization in different ways. One extension of the research thus would be to test the effect of transparency on a group of international bureaucrats who are highly exposed to the public, and investigate whether they adapt more strongly to changes in transparency.

Policy-wise, our findings indicate that increasing transparency can increase an international organization's accountability to the public through the channel of international bureaucrats. While we demonstrate one benefit of transparency, a question on the cost of transparency remains. Potentially, transparency can impede international cooperation by discouraging speedy conclusion of a trade agreement. Not only member states, but also IO secretariat responds to transparency. The secretariat's response to transparency could make the WTO less appealing as a negotiation forum in the longer-run.

References

Abbott, Frederick M (2005). The wto medicines decision: world pharmaceutical trade and the protection of public health. *American Journal of International Law 99*(2), 317–358.

Bailey, Michael A, Anton Strezhnev, and Erik Voeten (2017). Estimating dynamic state preferences from united nations voting data. *Journal of Conflict Resolution 61*(2), 430–456.

Bailey, Michael A and Erik Voeten (2018). A two-dimensional analysis of seventy years of united nations voting. *Public Choice 176*, 33–55.

Barnett, Michael, Martha Finnemore, et al. (2004). *Rules for the world: International organizations in global politics*. Cornell University Press.

Carnegie, Allison and Austin Carson (2019). The disclosure dilemma: Nuclear intelligence and international organizations. *American Journal of Political Science 63*(2), 269–285.

Clinton, Joshua, Simon Jackman, and Douglas Rivers (2004). The statistical analysis of roll call data. *American Political Science Review 98*(2), 355–370.

Deere, Carolyn (2009). *The implementation game: the TRIPS agreement and the global politics of intellectual property reform in developing countries*. Oxford University Press.

Dingwerth, Klaus, Henning Schmidtke, and Tobias Weise (2020). The rise of democratic legitimation: why international organizations speak the language of democracy. *European Journal of International Relations 26*(3), 714–741.

Fang, Songying and Randall W Stone (2012). International organizations as policy advisors. *International organization 66*(4), 537–569.

Frieden, Jeffry A and Ronald Rogowski (1996). The impact of the international economy on national policies: An analytical overview. *Internationalization and domestic politics 15*(1).

Gray, Julia (2018). Life, death, or zombie? the vitality of international organizations. *International Studies Quarterly 62*(1), 1–13.

Hafner-Burton, Emilie M, Zachary C Steinert-Threlkeld, and David G Victor (2016). Predictability versus flexibility: Secrecy in international investment arbitration. *World Politics 68*(3), 413–453.

Hollyer, James R, B Peter Rosendorff, and James Raymond Vreeland (2019). Why do autocrats disclose? Economic transparency and inter-elite politics in the shadow of mass unrest. *Journal of Conflict Resolution 63*(6), 1488–1516.

Jawara, Fatoumata and Aileen Kwa (2004). *Behind the scenes at the WTO: The real world of international trade negotiations*. London, UK: Zed Books.

Johns, Leslie (2007). A servant of two masters: communication and the selection of international bureaucrats. *International Organization 61*(2), 245–275.

Johns, Leslie and Krzysztof J Pelc (2016). Fear of crowds in world trade organization disputes: Why don't more countries participate? *The Journal of Politics 78*(1), 88–104.

Johnson, Tana and Johannes Urpelainen (2014). International bureaucrats and the formation of intergovernmental organizations: Institutional design discretion sweetens the pot. *International Organization 68*(1), 177–209.

Keohane, Robert O (1982). The demand for international regimes. *International organization 36*(2), 325–355.

Keohane, Robert O (1984). *After hegemony: Cooperation and discord in the world political economy*. Princeton, NJ: Princeton university press.

Kim, In Song (2017). Political cleavages within industry: Firm-level lobbying for trade liberalization. *American Political Science Review 111*(1), 1–20.

Kim, In Song, John Londregan, and Marc Ratkovic (2018). Estimating spatial preferences from votes and text. *Political Analysis 26*(2), 210–229.

Kim, In Song and Iain Osgood (2019). Firms in trade and trade politics. *Annual Review of Political Science 22*, 399–417.

Koremenos, Barbara, Charles Lipson, and Duncan Snidal (2001). The rational design of international institutions. *International Organization 55*(4), 761–799.

Kucik, Jeffrey and Krzysztof J Pelc (2016). Measuring the cost of privacy: a look at the distributional effects of private bargaining. *British Journal of Political Science 46*(4), 861–889.

Laver, Michael, Kenneth Benoit, and John Garry (2003). Extracting policy positions from political texts using words as data. *American political science review 97*(2), 311–331.

Lupu, Yonatan and Vincent A Traag (2013). Trading communities, the networked structure of international relations, and the kantian peace. *Journal of conflict resolution 57*(6), 1011–1042.

Lupu, Yonatan and Erik Voeten (2012). Precedent in international courts: A network analysis of case citations by the european court of human rights. *British Journal of Political Science 42*(2), 413–439.

Mansfield, Edward D, Helen V Milner, and B Peter Rosendorff (2002). Why democracies cooperate more: Electoral control and international trade agreements. *International Organization 56*(3), 477–513.

Martin, Andrew D and Kevin M Quinn (2002). Dynamic ideal point estimation via markov chain monte carlo for the us supreme court, 1953–1999. *Political analysis 10*(2), 134–153.

Mesquita, Rafael, Rodrigo Martins, and Pedro Seabra (2022). Estimating ideal points from un general assembly sponsorship data. *International Interactions*, 1–20.

Milner, Helen V and Keiko Kubota (2005). Why the move to free trade? democracy and trade policy in the developing countries. *International organization 59*(1), 107–143.

Odell, John S (March 17-20, 2004). Mediating multilateral trade negotiations. In *Annual Meeting of the International Studies Association*, Montreal, Canada. International Studies Association.

Pauwelyn, Joost (2010). The dog that barked but didn't bite: 15 years of intellectual property disputes at the wto. *Journal of International Dispute Settlement 1*(2), 389–429.

Pauwelyn, Joost and Krzysztof Pelc (2022a). Who guards the" guardians of the system"? the role of the secretariat in wto dispute settlement. *AJIL 116*, 534.

Pauwelyn, Joost and Krzysztof Pelc (2022b). WTO rulings and the veil of anonymity. *European Journal of International Law 33*(2), 527–564.

Poole, Keith T and Howard Rosenthal (1985). A spatial model for legislative roll call analysis. *American journal of political science*, 357–384.

Renshon, Jonathan (2016). Status deficits and war. *International Organization 70*(3), 513–550.

Roberts, Margaret E, Brandon M Stewart, and Dustin Tingley (2019). Stm: An r package for structural topic models. *Journal of Statistical Software 91*, 1–40.

Roberts, Margaret E, Brandon M Stewart, Dustin Tingley, Christopher Lucas, Jetson Leder-Luis, Shana Kushner Gadarian, Bethany Albertson, and David G Rand (2014). Structural topic models for open-ended survey responses. *American journal of political science 58*(4), 1064–1082.

Rogowski, Ronald (1987). Political cleavages and changing exposure to trade. *American Political Science Review 81*(4), 1121–1137.

Rogowski, Ronald (1990). *Commerce and coalitions: How trade affects domestic political alignments*. Princeton University Press.

Shaffer, Gregory (2004). Recognizing public goods in wto dispute settlement: who participates? who decides? the case of trips and pharmaceutical patent protection. *Journal of International Economic Law 7*(2), 459–482.

Slapin, Jonathan B and Sven-Oliver Proksch (2008). A scaling model for estimating time-series party positions from texts. *American Journal of Political Science 52*(3), 705–722.

Stasavage, David (2004). Open-door or closed-door? transparency in domestic and international bargaining. *International organization 58*(4), 667–703.

Urpelainen, Johannes (2012). Unilateral influence on international bureaucrats: an international delegation problem. *Journal of Conflict Resolution 56*(4), 704–735.

Voeten, Erik (2000). Clashes in the assembly. *International organization 54*(2), 185–215.

Voeten, Erik (2004). Resisting the lonely superpower: Responses of states in the united nations to us dominance. *The Journal of Politics 66*(3), 729–754.

Wallace, Jeremy L (2016). Juking the stats? Authoritarian information problems in China. *British Journal of Political Science 46*(1), 11–29.