



Quantifying the Policy Space for Regulating Capital Flows in Trade and Investment Treaties

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Abstract

The International Monetary Fund as well as many in the academic community have identified that some trade and investment treaties restrict the ability of nation states to regulate volatile capital flows in order to prevent and mitigate financial instability. This paper summarizes that literature and then quantifies the variation across over 200 trade and investment treaties with respect to their level of policy space for capital flow management measures (CFMs). With these data we measure the level of stringency of a particular treaty by creating a composite score and then examine the collective level of policy space across the global treaty system. Our findings are as follows:

- In terms of the total number of treaties, we find that the majority of trade and investment treaties leave significant policy space for regulating cross border finance in the world economy. South-South treaties tend to have the most policy space, whereas North-South and North-North treaties have less.
- When weighted by the level of trade and foreign investment however, we find that those treaties with the least amount of policy space for CFMs represent 68 percent of world GDP and 76 percent of global capital flows. What is more, it appears that the global trend is toward treaties without the policy space for appropriate regulation.
- Our findings may be underestimates given the consistent practice of international tribunals allowing more stringent treaty terms to be imported into more flexible treaties through ‘most-favored-nation’ clauses.

From a policy perspective we have identified a major inconsistency across the global economic governance system. Whereas the IMF board, the G20, and the Bank of International Settlements have all reiterated the need for policy space to regulate capital flows within the space provided under the IMF Articles of Agreement, the international trade and investment system is increasingly taking away that policy space (IMF, 2012b; G20 2011; BIS, 2009). The world economy lacks a global body to address inconsistencies across global treaty regimes. Whereas the IMF has recommended that new treaties have the proper policy space, even if such a recommendation was carried out, the world economy would still have hundreds of treaties (not including thousands of bilateral investment treaties) that do not permit trade and investment treaties. These inconsistencies should be addressed at the IMF, G20, in the United Nations system, and in the trade and investment regime itself.

I. Introduction

Leading up to and in the wake of the global financial crisis, there has been a significant amount of literature in the economics profession that has shown how regulating cross-border financial flows helps prevent and mitigate financial crises. This literature played a role in the political economy of the post-global financial crises governance architecture where the International Monetary Fund (IMF), G20, and other international bodies recommitted policy frameworks to enable nations to regulate cross-border financial flows (IMF, 2012b; G-20, 2011; BIS, 2009).. In parallel to this research, a growing body of legal scholarship has shown that trade and investment treaties can be at odds with the policies of the IMF and G20—so much so that the IMF may advise or require countries to deploy policies to prevent and mitigate financial crises in a manner that might also violate the country's obligations under a trade and investment treaty. A comprehensive review of this literature is beyond the scope of this paper but can be found in Jeanne et al. (2012) and Gallagher (2015).

A wave of new thinking has occurred in the economics profession on these questions in recent years. According to the ‘new welfare economics of capital controls,’ unstable capital flows to emerging markets can be viewed as negative externalities on recipient countries. Therefore, regulations on cross-border capital flows are seen as tools to correct for market failures that can make markets work better and enhance growth, not worsen it. This work has been developed by economists Anton Korinek, Olivier Jeanne, and others, and is summarized by Korinek in the August 2011 issue of the *IMF Economic Review* (Korinek, 2011). According to this research, externalities are generated by capital flows because individual investors and borrowers do not know what the effects of their financial decisions will be on the level of financial stability in a particular nation. A better analogy than protectionism would be the case of an individual firm not incorporating its contribution to urban air pollution. Like in the case of pollution, the polluting firm can accentuate the environmental harm done by its activity, in the case of capital flows, a foreign investor might tip a nation into financial difficulties and even a financial crisis. This is a classic market failure argument and calls for what is referred to as a Pigouvian tax that will correct for the market failure and make markets work more efficiently.

Of course, economists such as Keynes argued long ago that capital controls are important to prevent crises and to maintain an independent monetary policy that can strive for full employment and financial stability. This new work, however, elegantly models capital flows and capital controls in a broader contemporary economics context, and thus, could be seen by some to be a more rigorous justification for policy action on capital flows (see Gallagher, 2015, for a full treatment of this literature).

Under these circumstances, regulations on cross-border financial transactions can be effective to smooth the inflows and outflows of capital and protect developing economies. Most existing regulations target highly short-term capital inflows, usually conducted for speculative purposes. For example, Colombia’s 2007 regulations required foreign investors to set aside a percentage of their investment in the central bank, which helped that nation escape some of the damage from the global financial crisis (Coelho & Gallagher, 2012). Magud et al. (2011) conduct

an exhaustive review of the econometric literature on this matter for the National Bureau of Economic Research, and conclude that the regulations on capital inflows have been effective in preventing financial instability and controls on outflows, in the case of Malaysia during the Asian Financial Crisis of the 1990s, were effective as well (Magud et al., 2011). A pathbreaking IMF study found found that capital controls helped buffer some of the worst effects of the financial crisis in some developing countries. In lieu of these findings, the IMF now endorses the use of capital account regulations as a part of the macroeconomic policy toolkit (Ostry et al., 2010).

On December 3, 2012, the IMF made public an Executive-Board approved “institutional view” on capital account liberalization and the management of capital flows. In a nutshell, the IMF’s new ‘institutional view’ is that nations should *eventually* and sequentially open their capital accounts, and maintain ‘capital flow management measures’ (CFMs) in the toolkit to smooth the capital flow cycle. This is indeed in contrast with IMF advice and program design in the 1990s when nations were uniformly required to open their capital accounts regardless of the strength of a nation’s institutions (Abdelal, 2007; Chwieroth, 2010). The IMF now recognizes that capital flows also bring risk, particularly in the form of capital inflow surges and sudden stops, that can cause a great deal of financial instability. Under such conditions, according to the new ‘institutional view,’ the IMF may recommend the use of capital controls to prevent or mitigate such instability in official country consultations or Article IV reports. In other words, the IMF now sanctions staff and management to recommend the use of capital controls to nations under certain circumstances (IMF, 2012b). Indeed, since the institutional view has been in place, the IMF has significantly advised countries to put in place regulations through their Article IV reports, and has even required countries to put in place regulations under Stand by Arrangements (see Grabel & Gallagher, 2015; Tian & Gallagher, 2017).

The governance conundrum is that an increasing number of trade and investment treaties make it difficult to regulate the inflow or outflow of capital to prevent and mitigate financial crises. The IMF articles of agreement give nations the full policy space to regulate cross-border finance, and the IMF institutional view gives guidance to the IMF regarding when to outright recommend or require such regulations (see Gallagher, 2015). Many papers have pointed toward the problems that trade and investment treaties create for domestic policy-making in general and capital flow management measures in particular (see, e.g., Siegel, 2004, 2013; Thrasher & Gallagher, 2010; Gallagher, 2015). Academics and practitioners alike acknowledge the role of these agreements in binding country hands from imposing capital controls. Commitments at the World Trade Organization (WTO) may proscribe certain capital account regulations through the national treatment and most-favored-nation rules, as well as rules on payments and transfers, market access, and domestic regulation all largely under the General Agreement on Trade in Services (Tucker, 2013). There are exceptions, of course, permitting capital flow measures for balance of payments crises and “prudential reasons,” the exact scope of which has yet to be determined. Moreover, disputes are settled in the WTO among nation states, and have to show significant damage to a party in order to be filed.

In addition to the WTO commitments, most countries are also members of free trade agreements, which further limit their use of capital controls, either through broader

commitments, more limited exceptions, or stronger enforcement mechanisms (Siegel, 2012). Legal scholars have demonstrated that U.S. trade and investment treaties explicitly deem regulations of cross-border financial transactions as actionable measures that can trigger investor-state claims (Viterbo, 2012; Siegel, 2004, 2013) The Transfers provisions in the investment chapters of trade treaties, or in stand-alone bilateral investment treaties (BITs), require that capital be allowed to flow between trading partners ‘freely and without delay.’ This is reinforced in trade treaties’ chapters on financial services that often state that nations are not permitted to pose ‘limitations on the total value of transactions or assets in the form of numerical quotas.’ Many other nations’ treaties are stringent with respect to regulating capital flows, but have broader exceptions. The Canada-Chile Free Trade Agreement (FTA), the EU-Korea FTA, the Japan-Peru BIT, and the Japan-Korea BIT (just to name a few) all grant greater flexibility for capital controls, and the World Trade Organization, while still restrictive to some extent, also leaves nations with more policy space (Hagan, 2000; Viterbo, 2012).

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In the financial services chapters of U.S. trade treaties, and in U.S. BITS, there is usually a section on “exceptions.” One exception, informally referred to as the “prudential exception,” usually has language similar to the following from the US-Peru trade treaty:

Financial Services chapter: Article 12.10: Exceptions

1. Notwithstanding any other provision of this Chapter or Chapter Ten (Investment),

Fourteen (Telecommunications), or Fifteen (Electronic Commerce), including specifically Articles 14.16 (Relationship to Other Chapters) and 11.1 (Scope and Coverage) with respect to the supply of financial services in the territory of a Party by a covered investment, a Party shall not be prevented from adopting or maintaining measures for prudential reasons, including for the protection of investors, depositors, policy holders, or persons to whom a fiduciary duty is owed by a financial institution or cross-border financial service supplier, or to ensure the integrity and stability of the financial system. Where such measures do not conform with the provisions of this Agreement referred to in this paragraph, they shall not be used as a means of avoiding the Party’s commitments or obligations under such provisions.

CFMs are not seen as permissible under this exception. This has been communicated by the United States Trade Representative and in 2003 testimony by the Under Secretary of Treasury for International Affairs to the U.S. Congress (Taylor, 2003). While the broader financial

community has generally understood ‘prudential’ to mean broad measures to prevent financial instability, the United States has adopted a much narrower definition of the term in its treaties, referring to “prudential reasons” as pertaining only to individual financial institutions. Concern has also been expressed that the last sentence is “self-canceling,” making many measures not permissible.

Nothing in this Chapter or Chapter 10 (Investment), 14 (Telecommunications), or Fifteen (Electronic-Commerce), including specifically Articles 14.16 (Relationship to Other Chapters) and 11.1 (Scope and Coverage) with respect to the supply of financial services in the territory of a Party by a covered investment, applies to non-discriminatory measures of general application taken by any public entity in pursuit of monetary and related credit or exchange rate policies. **This paragraph shall not affect a Party’s obligations under Article 10.9 (Performance Requirements) with respect to measures covered by Chapter Ten (Investment) or under Article 10.8 (Transfers) or 11.10 (Transfers and Payments).**

These provisions were very controversial with the US-Chile and US-Singapore trade treaties in the early 2000s. U.S. trading partners repeatedly asked for a safeguard that would include capital controls, but the United States has denied that request. In a few instances, U.S. negotiators granted special annexes that allowed U.S. trading partners to receive an extended grace period before investor-state claims can be filed with respect to capital controls, as well as limits on damages related to certain types of controls.

These annexes are still inadequate in the wake of the financial crisis for at least four reasons. First, the annexes still allow for investor-state claims related to capital controls—they just require investors to delay the claims for compensation. An investor has to wait one year to file a claim related to capital controls in order to prevent and mitigate crises, but that claim can be for a measure taken during the cooling off year. The prospect of such investor-state cases could discourage the use of controls that may be beneficial to financial stability. Second, many other nations’ treaties allow for capital controls. Indeed, the Canada-Chile FTA, the EU-Korea FTA, the Japan-Peru BIT, and the Japan-Korea BIT (just to name a few) all grant greater flexibility for capital controls .This gives incentives for nations to apply controls in a discriminatory manner (applying controls on EU investors but not on U.S. investors). Third, the IMF has expressed concerns that restrictions on capital controls in U.S. agreements, even those with the special annexes, may conflict with the IMF’s authority to recommend capital controls in certain country programs as they have done in Iceland and several other countries. Finally, the special dispute settlement procedure included in the U.S.-Chile and Singapore FTAs did not become a standard feature of U.S. agreements. It is not in CAFTA, any U.S. BIT, or the pending U.S.-Korea FTA.

The IMF became aware of the fact that they may recommend capital account regulations to nations that do not have the policy space to deploy such instruments because they would be deemed actionable under a trade agreement or investment treaty. In an Executive Board report before the institutional view was finalized, the IMF noted:

The limited flexibility afforded by some bilateral and regional agreements in respect to liberalization obligations may create challenges for the management of capital flows. These challenges should be weighed against the agreements' potential benefits. In particular, such agreements could be a step toward broader liberalization. However, **these agreements in many cases do not provide appropriate safeguards or proper sequencing of liberalization**, and could thus benefit from reform to include these protections. (IMF, 2012a, p. 8)

In the final report, the IMF says:

As noted, the Fund's proposed institutional view would not (and legally could not) alter members' rights and obligations under other international agreements. Rather, conformity with obligations under other agreements would continue to be determined solely by the existing provisions of those agreements. Thus, for example, even **where the proposed Fund institutional view recognizes the use of inflow or outflow [capital flow measures] CFMs as an appropriate policy response, these measures could still violate a member's obligations under other international agreements if those agreements do not have temporary safeguard provisions compatible with the Fund's approach.** (IMF, 2012b, p. 42)

Indeed, the IMF suggests that the new IMF institutional view could help guide future trade treaties and that the IMF could serve as a forum for such discussions.

In particular, the proposed institutional view could help foster a more consistent approach to the design of policy space for CFMs under bilateral and regional agreements. Recognizing the macroeconomic, [International Monetary System], and global stability goals that underpin the institutional view, **members drafting such agreements in the future, as well as the various international bodies that promote these agreements, could take into account this view in designing the circumstances under which both inflows and outflows CFMs may be imposed within the scope of their agreements.** Similarly—and depending on the stages of development of the relevant signatories—the sequenced approach to liberalization under the integrated approach could be taken into account to guide the pace and sequencing of liberalization obligations, and the re-imposition of CFMs due to institutional considerations. (IMF, 2012b, p. 33)

This paper builds on this previous literature in an attempt to identify and quantify the variation in trade and investment compatibility with new thinking and IMF policy on cross-border financial regulations, and quantify the magnitude and scope to which trade and investment treaties restrict the ability of nation states to properly regulate their financial systems. After this short introduction and literature review, Part II outlines the methodology we deploy for the exercise, Part III reports our results, and Part IV summarizes our conclusions and outlines direction for future policy and research.

Let us first define some key terms. First, we refer to ‘cross-border financial flows’ and ‘capital flows’ as the movement of finance and investment across borders. Consequently, we refer to ‘capital flow management measures’, ‘capital account regulations’, capital controls, and ‘regulation of cross-border financial flows’ interchangeably as they all synonymously pertain to the regulation of cross border flows of capital. Secondly, we refer to ‘policy space’ as the flexibility for a nation state to regulate their economy in order to maintain financial stability, human development, and environmental sustainability under their various international global economic governance commitments (Gallagher, 2005).

II. Methodology

This paper builds on previous work by quantifying the variation across trade and investment treaties with respect to their level of policy space for cross-border financial regulations. Previous work by Viterbo (2012) analyzes the variation of measures within and across various trade and investment treaties with respect to capital flows. Our contribution is to quantify the restrictiveness of treaties with respect to capital flows and create a composite index that measures the relative stringency of one treaty over another. Secondly, with the composite index in hand, we perform social network and legal analyses to examine the global reach of those treaties that most restrict the policy space for nations to regulate cross-border finance.

To create a composite index, we rely on data we created with Deborah Siegel, former senior council of the IMF, as part of a World Bank project on ‘deep integration’ in trade agreements. ‘The Content of Deep Trade Agreements’ project seeks to quantify the degree of liberalization measures across the global spectrum of trade and investment treaties (Siegel et al, 2018; Hofman, et al. 2017; World Bank 2019). Together with Siegel, we compiled a list of questions designed to illuminate how treaties interact with domestic capital flow regulation. We then read the capital account and transfers provisions, along with related treaty sections in nearly 300 treaties, coding them for inclusion in a database for the World Bank. We chose the treaties based on their notification to the World Trade Organization under Article XXIV and the Enabling Clause. The resulting database contained 93 fields of inquiry under 6 major headings: the scope of the rules on capital transfers, broad exclusions from those rules (for areas like bankruptcy and criminal law), safeguards for macroeconomic crises, flexibilities within financial services, general exceptions, and enforcement measures (for a full discussion of the coding process see Siegel et al, 2018)

For this paper, we construct a composite index that measures the stringency of treaties with respect to capital account regulation. Out of our 93 fields, five key questions captured the fundamental differences in policy space between treaties: (1) Is there a commitment to liberalize current and capital transfers? (2) What is the scope of that commitment (investment, services, and/or financial services)? (3) Is there some general or specific exception for macroeconomic measures as a safeguard against balance of payments and other crises? (4) Is there a footnote

limiting the scope of a “prudential measures” exception³ in financial services, and (5) is there investor-state dispute settlement available for violations of the free transfers article?

With these data we measure the level of stringency of a particular treaty by creating a composite score, and then examine the collective level of policy space across the global treaty system.

A. Measuring Treaty Policy Space with a Composite Score

In order to create our composite index and measure the overall stringency of a treaty, we gave a value for each of the five indicators above. The presence and scope of the free transfers commitment received a score between zero and three – zero for the treaties with no commitments to liberalize capital flows and a three where the commitment covers flows related to all three subject matter areas: investment, services, and financial services.

The second indicator measured the amount of policy flexibility present to address macroeconomic difficulties – including general safeguards and specific annexes with carve outs for capital control measures. Treaties which lack such safeguards are given a score of “1”, “2”, or “3.” A “1” is a treaty⁴ which has a very limited free transfers commitment – usually only for transfers related to direct investment. In those cases, there may be an exception for balance of payments or other difficulties, but it does not explicitly apply to restrictions on the capital account. A “2” is a treaty which has a broader scope of the free transfers commitment (usually covering (two of the three) services, financial services, and investment) and still does not mention a general exception for macroeconomic difficulty. These treaties will have, however, a specific carve out in an annex⁵ that makes space for particular laws enabling capital controls. A “3” is a broad treaty with neither general nor specific exceptions for macroeconomic safeguards.⁶

The third indicator tracks the presence of a specific footnote in financial services commitments designed to further restrict the scope of “prudential reasons.” Although the exact legal import of such a footnote has not been tested, negotiating history would suggest that the

³ We initially thought to include the presence of the “prudential measures” exception in these treaties. We found, however, that, in almost every instance where there is a free transfers commitment in financial services, that exception is included. In that case, we essentially capture the presence of the prudential measures exception with the “scope” question, asking whether free transfers applies to Financial Services. The two outliers were the *Republic of Korea-New Zealand FTA* and the *Japan-Thailand FTA*. In those cases, although the free transfers provision does not apply to financial services, the prudential measures exception still applies to free transfers commitments.

⁴ For example, EFTA-Morocco, Article 23 contains a balance of payments provisions for “restrictive measures,” but it does not explicitly refer to restrictions on current or capital transfers. EU-South Africa, Article 34 contains a balance of payments provision for current account transfers but does not mention capital account transfers.

⁵ More than half of these treaties are Chilean. Chile’s treaties usually make reference to the *Ley de Encaje*, permitting the government to impose reserve requirements on outgoing forward investments, and Law 18.657, permitting the government to prohibit certain transfers from the proceeds of an investment sale for up to five years from the capital inflow date.

⁶ Of these treaties, seven are treaties in which the U.S. is a party. The other three are *Canada-Peru*, *Canada-Panama*, and *MERCOSUR*, which suggests that such an approach is limited to the Americas.

United States, at least, is specifically attempting to narrow the exception so that it does not cover capital controls.⁷ Treaties with these footnotes receive a score of "1."⁸

The final indicator in our measurement of treaty stringency calculates the impact of investor-state dispute settlement (ISDS). This mechanism has been widely studied and criticized in recent years because of national sovereignty concerns and the financial burden it places on state-respondents in international investment arbitration (Ikenson 2014, Eckhard 2017, Tienhaara 2011).⁹ Since ISDS, when included, applies to commitments in investment liberalization, the rules against capital controls are given new "teeth" with this newer dispute settlement option. Treaties that contain ISDS, therefore, received a score of "2" to attempt to capture the potential and actual policy limitations imposed by investor-state disputes.

The result is a variable measuring the 'stringency' of the treaty in terms of the depth of the free transfers commitment, and its enforceability, which varies from "0-9" (See Table 1). We also identify the numerical scores with a five color scale to further simplify the results and improve visualization. Treaties that score a <0> (GREEN) are those with no free transfers commitments at all. Treaties that score <1> or <2> (YELLOW), have free transfers commitments with a narrow scope, usually an exception for restrictions of capital flows in a macroeconomic crisis, and no investor-state enforcement mechanism. Treaties that score <3> or <4> (ORANGE), have a broader free transfers commitment, but retain the right to impose restrictions for macroeconomic crisis. In a few cases, if they may have a more limited scope commitment (i.e., investment only) and investor-state enforcement for that scope only. Treaties with a <5>, <6>, or <7> (RED) usually have the broadest scope of a free transfers commitment, along with no exception for macroeconomic crisis, investor-state enforcement, or both. Our final category (BRIGHT RED, <8> or <9>) captures only a few of the treaties, but it includes those with the broadest scope commitment, no exceptions for macroeconomic crisis, investor-state enforcement, and a specific limitation on the prudential measures exception for financial services.

⁷ See, Taylor 2003 (stating that the US seeks "greater protection for US investors than the IMF Articles of Agreement and the GATS afford").

⁸ Commonly put, it states "The term 'prudential reasons' includes the maintenance of the safety, soundness, integrity or financial responsibility of individual financial institutions or cross-border service suppliers." See, e.g., KORUS Article 13.10, fn.5; Nicaragua-Chinese Taipei Article 12.10.1, fn.3; Australia-Chile Article 12.11.1, fn.25.

⁹ For empirical research into the outcomes of international investment arbitration and a discussion of the corresponding structural imbalances within the ISDS system, see Schultz and Dupont 2015, Wellhausen 2016, and Sweet, et al. 2017.

Table 1. Treaty Score and Color Scale Description (with examples)

Color Scale	Description	Score (0-9)	Examples
GREEN	Treaties with no commitments to liberalize capital flows.	0	Andean Community (CAN) (1988), Argentina-Brazil Partial Scope Agreement (2016)
YELLOW	Treaties with free transfers commitments with a very limited scope (usually only in the context of investment, sometimes services), which usually contain safeguards for capital controls in the event of macroeconomic crises, though they are not always listed, and no investor-state dispute settlement process.	1, 2	European Free Trade Area (2002), EU-Palestinian Authority (1997), WTO (1994)
ORANGE	Treaties with <i>either</i> broader free transfers commitments with safeguards for macroeconomic crises and no investor-state dispute settlement, <i>or</i> narrow free transfers commitments with investor-state dispute settlement	3, 4	ASEAN-China (2007), EU-Republic of Korea (2011), Japan-Viet Nam (2009), OECD Codes (2018) ¹⁰
RED	Treaties with broad free transfers (2-3) commitments, and lacks general safeguards for macroeconomic crises <i>or</i> contains investor-state dispute settlement. Some may contain specific annexes with carve-outs for capital controls, usually unilaterally. These may contain a limitation on the "prudential reasons" exception under Financial Services.	5, 6, 7	ASEAN-Australia-New Zealand (2010), Costa Rica-Colombia (2016), MERCOSUR (2005)
BRIGHT RED	Treaties with broad free transfers (2-3) commitments, and lacks general safeguards for macroeconomic crises <i>and</i> contains investor-state dispute settlement. Some may contain specific annexes with carve outs for capital controls, usually unilaterally. These may contain a limitation on the "prudential reasons" exception under Financial Services.	8, 9	Canada-Peru (2009), DR-CAFTA (2006)

¹⁰ The OECD Code of Liberalization of Capital Movements differs substantially from typical trade and investment treaty texts. Because of its multilateral character, countries have made extensive reservations to the commitments and there are several broad exceptions for financial stability. On the other hand, it covers a very broad scope of types of financial flows (OECD, 2018).

B. Measuring Collective Policy Space Across the Global Treaty System

After calculating the composite score for each country, we perform a large scale analysis of the extent to which there is policy space for regulating capital flows in the trade and investment regime globally. We do this in three ways.

We first simply quantify the number of treaties according to each level of stringency. This allows us to see how many treaties fall into each category of our five color scale.

Second, we categorize treaties based on whether the parties were in the global north or the global south. Here we use the World Bank's Development Level indicator and coded 'high income' countries as the 'north' and the rest as the 'south'. Treaties where all members are 'high income' qualify as "north-north" treaties; where no members are 'high income', we consider it a "south-south" treaty. Treaties with mixed membership count as "north-south." We then conduct an ANOVA test on south-south, north-south and north-north treaties, comparing their average stringency.

Thirdly, to better understand the true global impact of the most stringent treaties, we calculate the percent of global GDP and foreign direct investment (FDI) flows governed by each treaty, represented by the color on the scale. We follow that with some regressions using treaty stringency as the dependent variable with independent variables including, combined treaty participant GDP as a percent of global GDP, combined treaty FDI outflows as a percent of global FDI outflows, participant count, and treaty year. We predict that treaties making up a larger percentage of global GDP and FDI flows will tend to be more "stringent" on our scale. In order to avoid double counting, we count each country only once under its most restrictive treaty.

By categorizing each country by its most restrictive treaty, we also capture the potential multilateralizing effect of most-favored-nation (MFN) clauses in these treaties (Schill, 2009; Johnson, 2015). Since MFN clauses demand that treaty partners extend their best treatment to each other, a newly-signed stringent treaty may effectively ratchet up all their other treaty commitments with respect to capital flow liberalization. To test the MFN effect on the stringency of the network, we analyzed a country's reported FDI inflows from treaty partner countries based on that country's maximum treaty score.¹¹ In order to determine whether this ratcheting effect is possible in reality, we look to the legal literature to find whether courts and international tribunals have allowed claimants to import more stringent provisions from respondent countries' other treaties by way of a MFN clause.

Our final step in the analysis is to measure how treaty stringency has changed over time. To accomplish this we ran a regression analysis of treaty score by year, which will demonstrate

¹¹ Limitations to these estimates include the large amount of missing data on FDI flows, which may represent a lack of investment or simply a lack of data. However, given the participation rate of advanced industrialized economies in the CDIS survey and their domination of global financial flows, we can assume that missing data does not influence our data significantly.

whether and to what extent the treaty regime as a whole is becoming more restrictive with respect to CFMMs.

Data and Analysis

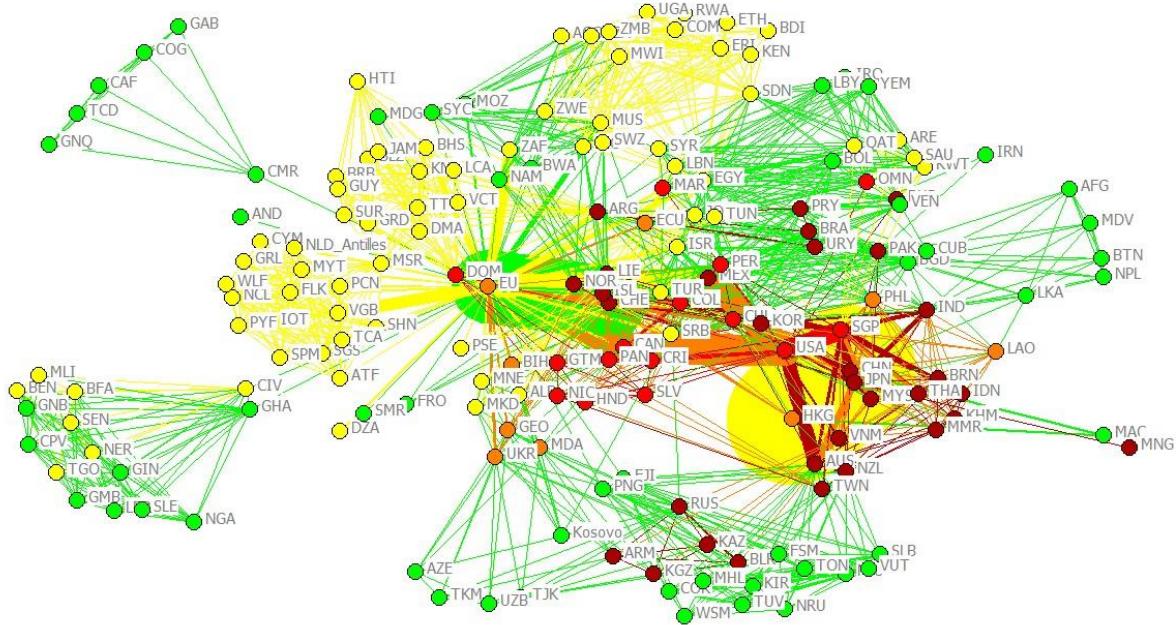
To perform these calculations and analyses, we collected additional attribute data for all countries who were a party to one or more treaty. All attribute data is from the World Bank's World Development Indicators dataset, except for GDP data, which is from the UN database as it was a more complete dataset. Data on bilateral FDI flows is from the IMF's Coordinated Direct Investment Survey (CDIS). We use reported investment inflows because inflow data are generally seen as more accurate than outflow. When inflow data was unavailable, but partner countries had outflow data reported, we pulled this in to reduce missing data. All FDI and attribute data is from 2015. Since CDIS reports all EU participants separately, this data was aggregated to find overall EU FDI flows. Statistics were run using UCINET and diagrams produced using NetDraw.

All of our statistics are run using social network analysis software. The advantage to using social network analysis is that we can relax the assumption of independence between countries or trade agreements. Given that similar trade agreements often contain near identical text, it is impossible to assume that they developed completely independently of one another. Instead, we look at them as participants in a network and study the relationships between them.

The social network analysis began as a two-mode network identifying both treaties and countries as nodes (dots) and ties (lines) as a country's participation in a treaty. Countries are only connected to treaties, not to one another, in this preliminary setup.¹² To get a better understanding of how FTAs influence bilateral relations, we convert the two mode network to one mode, such that only country nodes remain. Figure 1 shows the global network of FTAs that we coded. The nodes represent countries and nodes are connected by a tie if they are parties to the same trade agreement. The color of the tie represents the score (from Green to Bright Red) of the most restrictive trade agreement that both countries have signed together. The country node colors represent the most restrictive treaty that country has signed. The thickness of the line shows the volume of FDI flows between the two countries, to demonstrate global financial integration.

¹² The network has 180 countries and 281 treaties with 1005 ties. The color of the tie reflects the stringency of the treaty. For treaty nodes, degree signifies the number of countries participating and for country nodes it signifies the number of treaties that country has signed. For country nodes, degree ranged from 1 to 40 with an average of six. 84 percent of countries had fewer than 10 treaties and 22 percent of countries only participated in a single one. Treaty degree ranged from 2 to 18 countries participating (the EU is counted as a single entity) with two thirds of treaties being bilateral.

Figure 1. Global Network of FTAs (with Volumes of FDI flows)

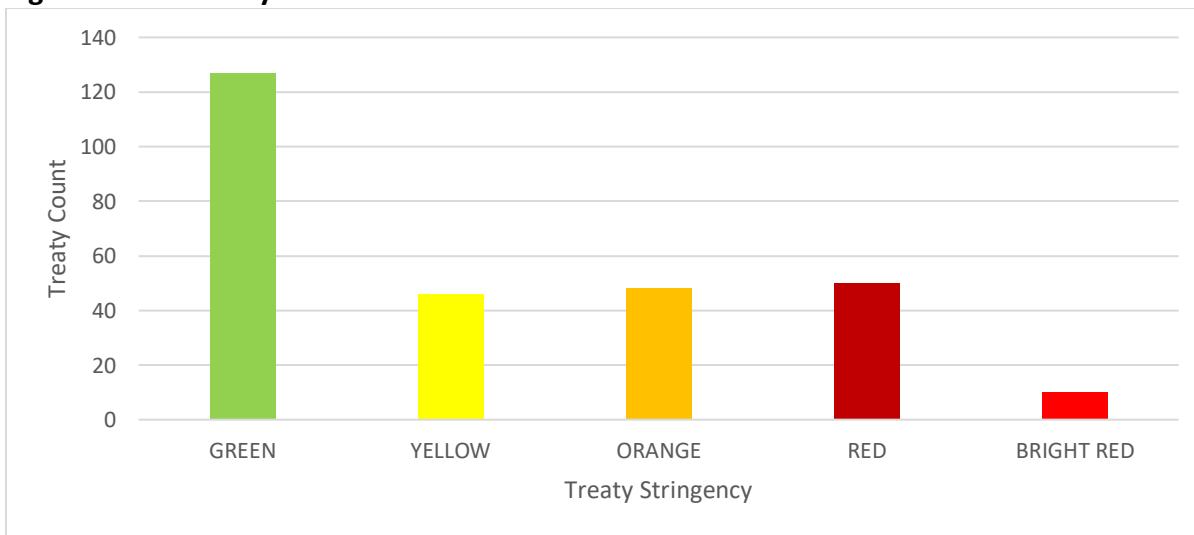


III. Results: The Direct and Indirect Impacts of Treaty “Stringency” in the Global Economy

We find that the majority of trade and investment treaties leave significant policy space for regulating cross border finance in the world economy—only 22 percent of all treaties in the world economy fall in the red to bright red category discussed above. However, when we divide treaties into three groups by development level, we find evidence of negotiating power imbalances due to the distribution of south-south, north-south, and north-north treaties over the color scale. Furthermore, and most importantly, when weighted by the percent of global GDP and foreign investment the treaty parties represent, we find that those treaties that are red or above represent 68 percent of world GDP and 76 percent of global FDI flows. That finding grows in importance when we see the consistent practice of international tribunals allowing more stringent treaty terms to be imported into flexible treaties through MFN clauses. What is more, we find that the trend over time is concerning, where newer treaties in the world economy are becoming more stringent.

Figure 2 exhibits the number of treaties by their relative level of stringency. Green have the most policy space; bright red the least. Here we see that more than half of the treaties have no capital transfer commitments at all, and the most restrictive treaties are quite rare. The average stringency score over all treaties was only just over “3” – a weak ‘orange’ treaty.

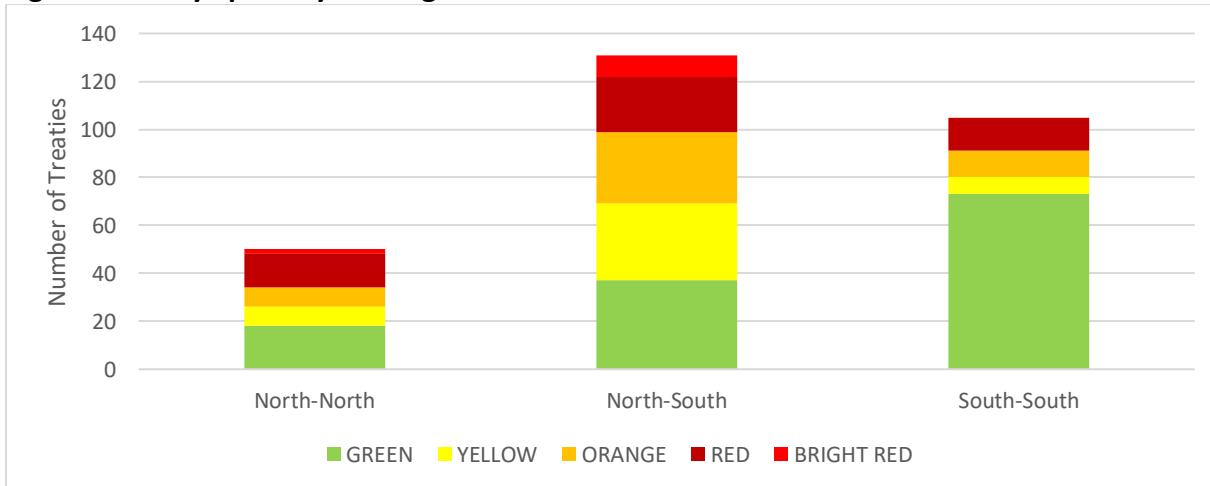
Figure 2. Treaties by Color Code



Treaty Trends, Income and Development Levels

When we divide treaties based on parties' development level, however, a new trend emerges. Figure 3 shows a much higher percentage of "green" treaties in south-south integration compared with north-south and north-north. North-south treaties, in particular, stand out because of the high percentage of red and bright red treaties, which contain the most liberalizing language with respect to capital flow regulation. We can see distinct differences in treaty composition among these groups, and in fact, an ANOVA test finds this difference highly significant with an F statistic of 16.8 and a p value of .0002. This demonstrates that while developing countries tend to reserve flexibilities with their fellow developing countries, they sign onto much more restrictive treaties with the global north. This reality hints at a darker truth: while developing countries prefer more policy-flexible treaties, it is the preferences of the developed world that more often take precedence in income-diverse agreements, highlighting the likelihood of negotiating power imbalances (see Siegel, 2018).

Figure 3. Policy Space by Trading Partner



This trend is also evident in the network structure (Figure 1). There are no isolates in this dataset (pairs or groups of nodes that only have ties with one another and are not connected to the main component of the graph), which is slightly surprising considering the large number of bilateral treaties. While 40 countries only participated in a single treaty and two thirds of treaties are bilateral, none of those 40 countries signed a treaty with one another, but always with a country more integrated into the FTA network. These characteristics also suggest an uneven power dynamic among treaty co-signers.

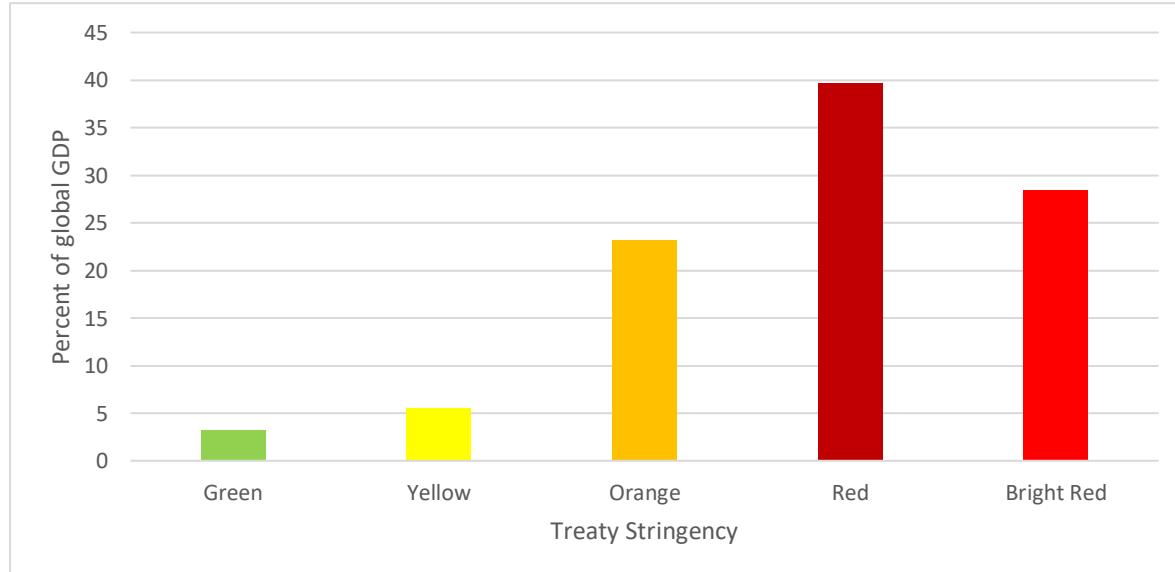
A final factor that hints at power imbalances in treaty negotiations is the correlation between the number of cosigners and the treaty stringency. Treaties with many cosigners had more policy space, while those with few participants, especially bilateral treaties with one large country with significant capital outflows, were much stronger ($R^2 = .02$, $p < .008$). When more countries are involved in the negotiations, treaties tend to be less stringent in terms of CFMMs. When we combine outward foreign direct investment (discussed below), participant count, and year (discussed below) into our regression we end up with a model that explains 30% of the fluctuation in treaty score.¹³ On the surface, this is not surprising. Multilateral treaty negotiations will almost always have weaker commitments because there are more parties to assert their interests and fewer points of commonality. On the other hand, when combined with the highly correlated relationship between income-diversity and treaty stringency, it seems that bilateral north-south trade negotiations are weighted heavily in favor of developed country interests.

Treaty Stringency, GDP and Foreign Investment

When we weigh treaties by their relative amount of coverage of global GDP and financial flows, the picture in Figure 2 reverses—such that more than two-thirds of the world economy is covered by restrictive trade and investment treaties. While only 21 percent of treaties score above a <5> (red or bright red), those treaty parties represent 68 percent of the global economy and 76 percent of global foreign direct investment inflows and 78 percent of outflows). In other words, foreign investment tends to flow to those countries with the most stringent treaty commitments.

¹³ OFDI and year are both significant at the $p < .000$ level and participant count at $p < .05$.

Figure 4. Treaty Stringency as a Percent of Global GDP



Furthermore, regression outcomes show that there is a statistically significant correlation between the combined GDP of the treaty as a percentage of global GDP and its “stringency” score ($R^2 = 0.19$, $p < .002$), and a similar correlation between the combined outward FDI of the treaty parties as a percentage of global OFDI ($R^2 = 0.191$, $p < .000$). Interestingly, when we combine these variables in one regression GDP loses its significance, while FDI remains equally significant. This suggests the GDP variable on its own correlates with the FDI fluctuation, but when taken together, it is really FDI volumes that matter. Treaties among participants with high FDI flows tend to have stronger scores. Likewise, countries that are strong FDI exporters and importers tend to sign stronger treaties ($R^2 = 0.06$, $p < .003$).

The MFN Effect

In theory, the role of MFN clauses suggests that, for countries who sign red and bright red treaties, *all* of their capital inflows from *all* treaty partners may be subject to the same stringent standard. We begin by examining the practice of international adjudication to determine if this ‘effect’ is real and has been used to multilateralize treaty commitments. MFN clauses, found in almost all modern treaties, demand that the treaty parties extend their best treatment to each other, including standards of treatment set in future treaties with third States.¹⁴ Case law demonstrates that, in practice, states *have* successfully used MFN provisions to attempt to import more favorable conditions from third-party treaties, in particular in the bilateral investment treaty (BIT) context (Schill 2009).¹⁵ There, the general rule holds that MFN clauses

¹⁴ See, Schill (2009). This issue reveals an active debate as to the appropriate role of MFN provisions for “drafting in by reference” the more favorable provisions of later treaties (Schill, 2009; Johnson, 2015).

¹⁵ In fact, the primary economic rationale articulated for these provisions was the multilateralizing aim to level the playing field and undermine attempts to extend different kinds of concessions to different trading partners. See, Schill (2009).

may incorporate more favorable substantive conditions from third-party BITs (see, e.g., *Pope & Talbot v. Canada*, *EDF v. Argentina* and *CME v. Czech Republic*) (Schill, 2009; Johnson 2015).¹⁶ In a few cases, the tribunal has allowed parties to use MFN clauses to import more favorable procedural provisions for dispute settlement as well (see, *Maffezini v. Spain* and *Gas Natural v. Argentina*).¹⁷

On the other hand, tribunals have been reluctant to import access to ISDS where the treaty limits such jurisdiction (*Salini v. Jordan*),¹⁸ and MFN may not be used to expand the scope of the treaty itself, either in time, subject matter or personal application (see, *ADF v. United States* and *CMS v. Argentina*).¹⁹ This final limitation on the reach of MFN clauses has particular importance for our case. The “green” treaties, which simply do not cover capital account flows, would not be subject to the same ratcheting effect.

In order to capture this effect empirically, we first create a subnetwork (Figure 5) containing only countries that have signed yellow treaties or higher and compared this to FDI flows among subnetwork participants, estimating the percentage of global capital flows governed by each treaty. This image demonstrates all financial flows that are subject to capital flow constraints and potential multilateralization.²⁰ This figure has two components, one a small group of seven African nations that share yellow ties and the other main component containing the other 119 countries. Based on our legal analysis, the MFN clauses require countries to give equal treatment to all foreign financial flows from trade agreement partners *if and only if* the trade agreement directly covers capital flows (all non-green treaties). This means the strictest treaty signed by a country is ultimately the one that will regulate *all* their incoming foreign financial flows from partners in the non-green FTA network.

¹⁶ In both *Pope & Talbot v. Canada* and *MTD v. Chile*, the tribunal relied on more expansive provisions on “fair and equitable treatment” from other Canadian and Chilean treaties to find a violation of the treaty terms (Shill, 2009, Johnson, 2015). See also, *EDF v. Argentina* (incorporating an umbrella clause from a third-party BIT to expand the subject matter jurisdiction of the BIT), *White Industries v. India* (adopting a more favorable “effective means” clause from another treaty), and *CME v. Czech Republic* (importing the standard of compensation from another treaty) (Johnson, 2015).

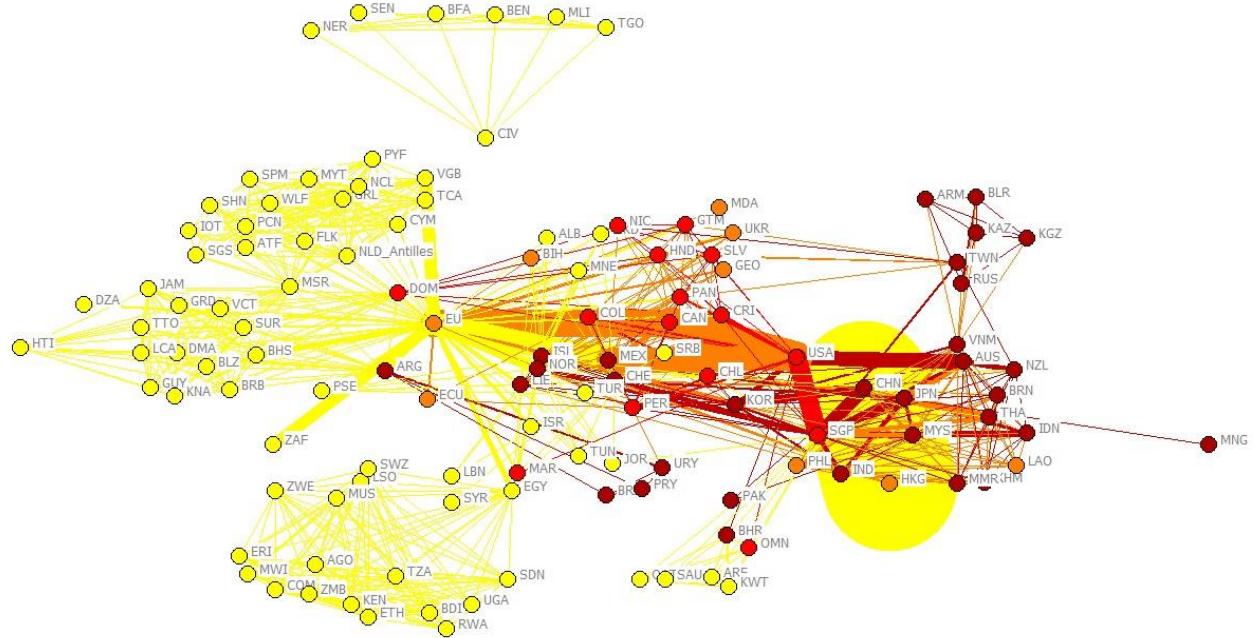
¹⁷ In *Maffezini v. Spain*, for example, the tribunal allowed the claimant “to rely on a shorter waiting period [from 18 months to 6 months] from a third-party BIT” in bringing a claim (Schill, 2009). See also, *Gas Natural v. Argentina* and *Siemens v. Argentina*. (Schill, 2009; Johnson, 2015).

¹⁸ *Salini v. Jordan*, in which the investor sought to expand the jurisdiction of the ISDS provision to cover contract claims by importing the broader consent to arbitration of the US-Jordan and UK-Jordan BITs (Schill 2009). But see, *RosInvestCo v. Russia*, in which the tribunal expanded the subject matter jurisdiction of the arbitration provisions by reference to another BIT with broader consent to jurisdiction.

¹⁹ Under NAFTA, the United States specifically excluded government procurement from MFN coverage and for that reason, one private investor was unable to import better procurement provisions from another United States treaty. *ADF v. US*. See also, *Maffezini v. Spain* (“the third-party treaty has to relate to the same subject matter as the basic treaty”) and *Tecmed v. Mexico* (the tribunal did not extend the temporal applicability of a treaty based on the MFN provision). MFN also may not be used to avoid access to general exceptions – such as those which permit treaty derogation for the protection of human, animal or plant life, or in the case of national emergencies. See, *CMS v. Argentina* (in which the investor sought to avoid application of an emergency provision (permitting derogation from the treaty provisions) because other Argentine treaties did not have such a clause protecting the host state in the case of emergencies (Schill, 2009)).

²⁰ This network contains 126 country nodes and 1632 ties.

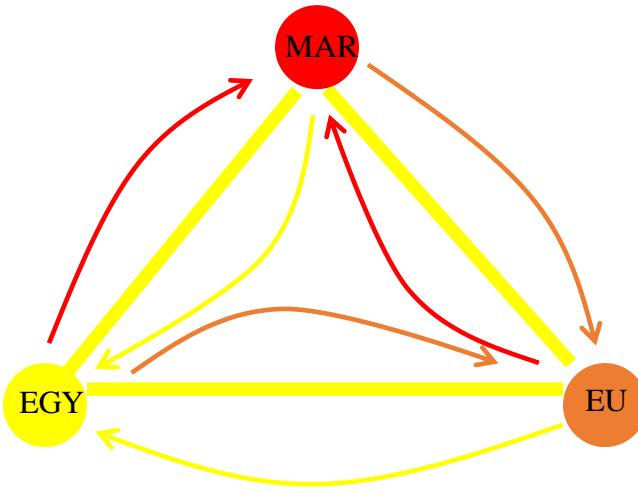
Figure 5. Subnetwork of Red and Bright Red Nodes



Node color represents the most restrictive treaty signed by a country and tie color represents the most restrictive treaty that both countries have cosigned. Line thickness represents the volume of FDI flow.

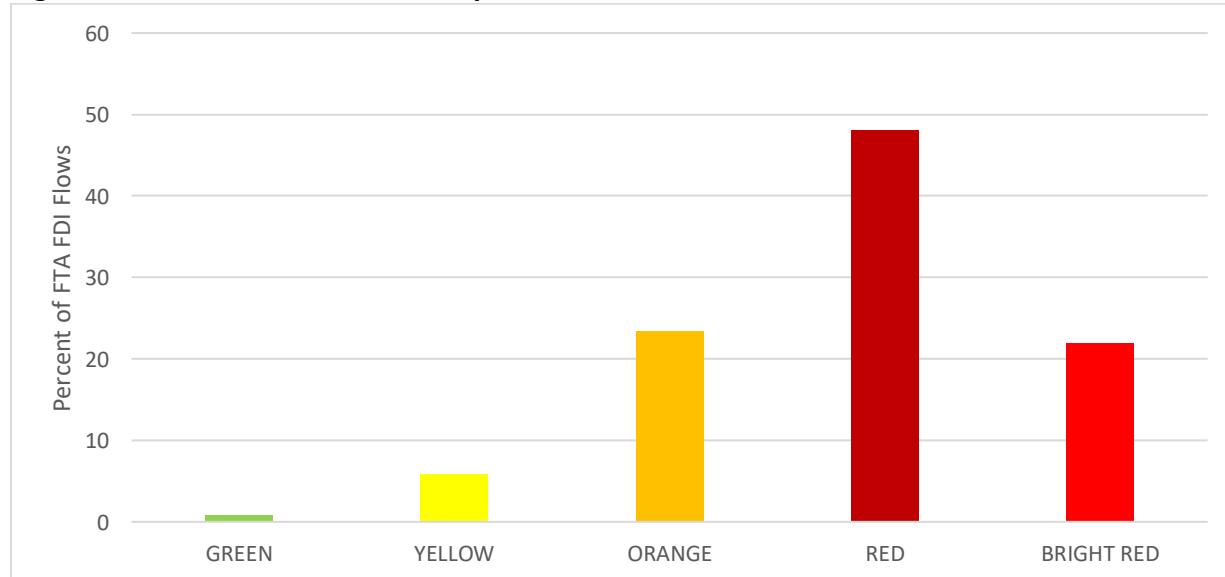
In order to better understand this effect, Figure 6 provides an up-close view of the MFN effect on FDI flows among three partner countries. Bilateral ties between the countries are all yellow, meaning the most stringent treaty both parties are a member to is yellow. However, the EU and Morocco (MAR) have both signed more restrictive treaties with other partners. The EU's most restrictive treaty is orange and Morocco's is red, as represented by node color. Once a country signs a restrictive treaty, they agree to refrain from discriminating against foreign capital flows relative to domestic capital flows. This prevents them from implementing restrictions on either the inflow or outflow of foreign capital. In this illustration, once Morocco signs a red treaty with any country, other nations that have treaties with Morocco may be able to use the MFN clause to extend those benefits to their own financial flows. Egypt and Morocco have only signed a yellow treaty together, however, if Morocco tries to place limitations on the flows of Egyptian capital, Egypt can sue for red-level protections based on the MFN clause. Moroccan flows to Egypt, however, are still yellow, giving Egypt more flexibility to implement restrictions.

Figure 6. The MFN Effect



Using our network of bilateral FDI flows, we can track exactly which flows are governed under each treaty ‘color’. Figure 7 shows exactly how much FDI is controlled by each level of restriction. Bilateral financial flows between FTA co-signers accounts for 40 percent of global FDI flows, 99 percent of which are governed by yellow or higher treaties.

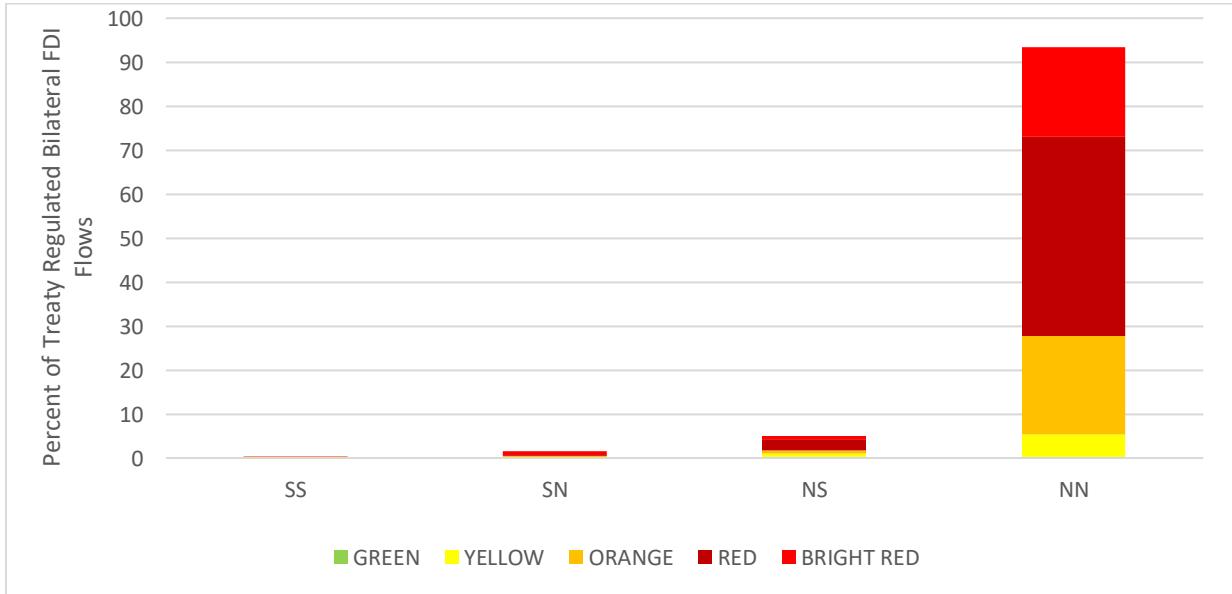
Figure 7. Overall FDI for FTA Participants



We can also break these flows down even further by development level. Global FDI flows are almost entirely among developed nations. North-north flows account for 93 percent of global FDI. Next are north-south flows with six percent and south-north with one percent. South-south

ties are negligible overall. FTA regulated FDI flows follow a similar pattern. Figure 8 shows the percent of treaty regulated bilateral FDI flows among and between the global north and global south. According to this chart, more than 90 percent of treaty-regulated FDI flows pass between developed countries and of those, a vast majority are governed by the most stringent treaties. Financial flows going from the global north to the global south are also heavily almost completely governed by red and bright red treaty commitments.

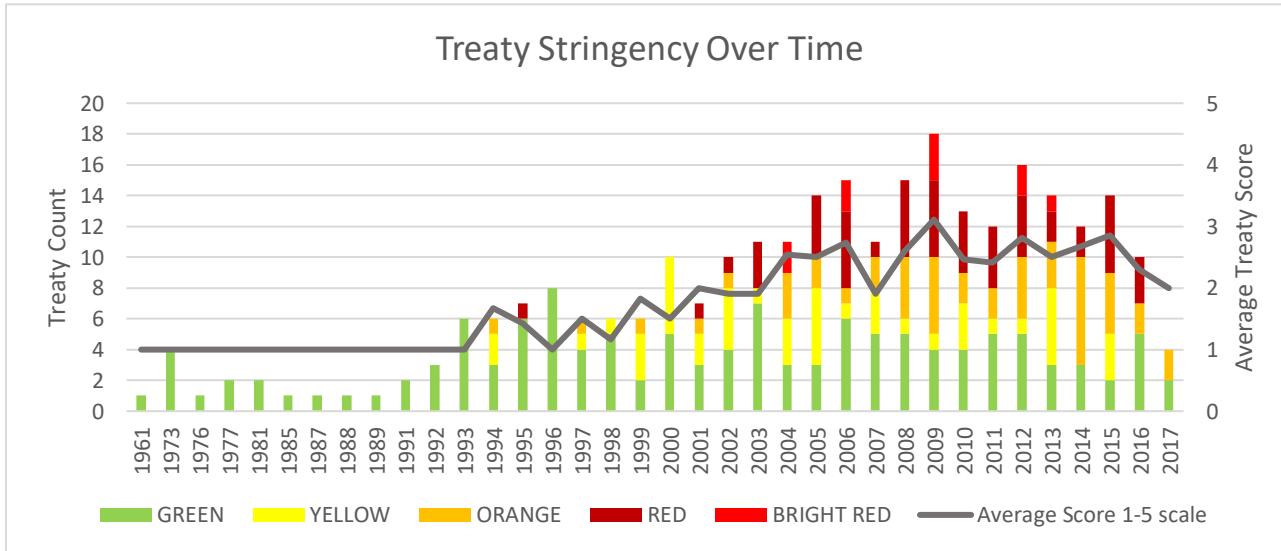
Figure 8. Bilateral Financial Flows by Treaty Stringency and Participant Region



Time Trends

Finally, we find that treaties in the world economy are increasingly providing fewer flexibilities. When we examine treaties over time, we see a clear trend toward more stringent treaties, mandating free capital flows along with other liberalizing commitments. Figure 9 shows the prevalence of orange, red and bright right treaties since 1961. If these trends continue into the future, the current low percentage of stringent treaties provides only time-limited policy flexibility for countries seeking to regulate their capital account.

Figure 9. The Shrinking of Policy Space over Time



A regression of treaty score by year found a strong statistical correlation, with treaty year explaining approximately 14 percent of score variation (Figure 10). This suggests that once more stringent treaties were introduced, they spread to other treaties throughout the network. Recent years has seen a slight slowdown in this trend, with Britain's exit from the EU and the U.S. withdrawal from the TPP. Despite this temporary slow-down, there is no evidence to suggest a substantial shift in trade treaty paradigm away from more stringent treaty standards. The Canada-EU Trade Agreement as well as the on-going ratification of the TPP by non-U.S. parties point toward a continuing trend toward broader and deeper economic integration in the rest of the world.

Figure 10. Time Trend Regression

Nobs	281
R-Square	0.139
Adj R-square	0.136
F(279,1)	45.12
Prob > F	0

	Coef	SE	T	c.Sig	p.sig
Intercept	193.465	29.258	-6.612	0.000	0.000
Year	0.098	0.015	6.717	0.000	0.000

IV. Conclusion

The international trade and investment treaty regime is increasingly restricting the policy space for regulating cross-border financial flows that is granted under the IMF Articles of Agreement and that have been recommitted to by the IMF and the scholarly community. Drawing on a new database that codes the different measures within trade and investment treaties, we created a composite index that measures the relative amount of policy space with for regulating capital flows within a treaty. We then examined the extent to which the international treaty system has relatively more or less policy space to prevent and mitigate financial crises.

While the vast majority of trade and investment treaties leave ample space to regulate capital flows, those tend to be older treaties and/or treaties among and between developing countries. Over time, treaties have become more and more stringent and, when weighted by their coverage of the world economy and capital flows, the most stringent treaties now effectively govern more than 68 percent of the world economy and 76 percent of FDI flows. MFN provisions allow countries with weaker protections for their exported capital to import higher standards under other treaties, further undermine much needed policy space for financial stability.

These new data provide ample means for further research as well. While we now know from this paper the depth and breadth of the lack of policy space in the world economy, this study in many ways can be a basis for others. The composite scores can be used as independent variables in a number of regression frameworks—to examine the extent to which treaty stringency has on a number of outcomes with respect to financial stability and beyond. Moreover, these data could be used as a dependent variable to determine what political and economic variables might explain the shrinking of policy space for cross-border financial regulations in the world economy.

This study has real implications for policy and future research. From a policy perspective, we have identified a major inconsistency across the global economic governance system. Whereas the IMF board, the G20, and the Bank for International Settlements have all reiterated the need for policy space to regulate capital flows within the space provided under the IMF Articles of Agreement, the international trade and investment system is increasingly taking away that policy space. The world economy lacks a global body to address inconsistencies across global treaty regimes. Whereas the IMF has recommended that new treaties have the proper policy space, even if such a recommendation was carried out, the world economy would still have hundreds of treaties (not including thousands of bilateral investment treaties) that do not permit trade and investment treaties. These inconsistencies could be addressed at the IMF, G20, and in the United Nations system.

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