

## The most-favored nation rule in principle and practice: Discrimination in the GATT

Joanne Gowa · Raymond Hicks

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**Abstract** The conflicts of interest that prevailed between the great powers in the wake of the First World War eviscerated their ability to respond collectively to the advent of the Great Depression. Instead, each turned to discriminatory trade barriers and trade blocs to try to revive domestic output. Persuaded that trade discrimination exacerbated the political tensions that erupted in World War II, policy makers constructed a postwar economic order that institutionalized nondiscrimination. Thus, Article 1 of the charter of the General Agreement on Tariffs and Trade (GATT) mandates most-favored nation (MFN) treatment. We argue here that the MFN clause itself encouraged the adoption of practices and policies that actually recreated discrimination. In particular, we argue, developing countries, long regarded as victims of discrimination, institutionalized it in their negotiations with each other. We examine two developing country PTAs that included about 80 percent of all developing-country GATT members by output (the Global System of Trade Preferences and the Protocol Relating to Trade Negotiations). We show that as in the GATT writ large, their patterns of tariff cuts and trade expansion were highly skewed toward a small number of their largest members. In trying to avoid discrimination, policy makers actually encouraged its *de facto* adoption.

**Keywords** GATT · PTAs · Developing countries · Most favored nation · Principal supplier

In the aftermath of the Second World War, U.S. officials set out to create an institution that would consign to the dustbin of history the rampant trade discrimination that had existed

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J. Gowa · R. Hicks (✉)  
Bendheim Hall, Princeton University, Princeton, NJ 08540, USA  
e-mail: rhicks@princeton.edu

J. Gowa  
e-mail: jgowa@princeton.edu

between the wars. In the wake of the Versailles Treaty, conflicts of interests among the great powers impeded their efforts to organize a collective response to the Great Depression. Instead, the global economic order disintegrated into a series of discriminatory blocs, each of them anchored by a single great power. As they adopted “beggar-thy-neighbor” policies in efforts to shift demand and raise domestic income, the blocs are widely believed to have contributed to the fall in world trade and real income and the exacerbation of great-power tensions that followed the onset of the Great Depression.

It is not surprising, then, that Article 1 of the General Agreement on Tariffs and Trade (GATT) mandates most-favored nation (MFN) treatment—that is, it requires the extension to all members of any “advantage, favour, privilege or immunity” one contracting party offers another. The 1948 Havana draft agreement itself, however, sanctions several important derogations from MFN treatment, exempting from it free-trade agreements (FTAs), customs unions, and existing preference systems (Irwin et al. 2008: 167). It also allows the use of trade controls if a signatory deems them necessary to protect its national security. Yet, historical accounts of the creation of the postwar economic order regard the MFN clause as “probably the most important single concept” informing the General Agreement (Curzon 1965: 68).

Discrimination would nonetheless become the modus operandi of the postwar regime. Over time, a steady stream of *de jure* and *de facto* exceptions to MFN treatment eroded the lessons of history that had motivated its adoption. Among the earliest and most consequential was the principal-supplier rule that members adopted to govern their tariff bargaining. Because it allowed only the state that was the major supplier of a good to the market of another country to request a tariff cut on that product, the series of negotiating rounds held under GATT auspices produced a highly skewed distribution of tariff concessions and trade expansion. As several recent papers show, only a relatively small subset of its members witnessed a significant increase in their trade (Gowa and Kim 2005; Subramanian and Wei 2007; Kim 2010).

*De jure*, the principal-supplier rule does not violate the MFN clause. In practice, however, it discriminates in favor of expanding trade in the goods large countries produce and exchange among themselves. Ironically, the rule, despite its *de facto* inconsistency with MFN treatment, is actually endogenous to it. Because it enables states to internalize the gains from trade that their tariff cuts produce, it is an optimal response to the free riding that an MFN clause induces in multilateral bargaining (Ludema and Mayda 2009: 138). This implies that a principal-supplier rule and the trade discrimination it creates are also likely to emerge whenever members of relatively large and diverse subsets of contracting parties engage each other in tariff bargaining.

In this paper, we examine whether the largest states in the subsets that have arisen during the postwar era do in fact dominate both the trade talks and the trade expansion they produce. More specifically, we ask whether developing-country (DC) regime members, conventionally regarded as targets of discrimination, became practitioners of it when they joined GATT-sanctioned preferential trade agreements (PTAs). Exempt from the various restrictions Article XXIV of the charter imposes on trade agreements, members of DC PTAs could opt to cut their tariffs selectively using the same bargaining protocol that governed GATT tariff rounds. Here, we examine whether they did, analyzing the two largest PTAs that opened their doors only to DCs: the Protocol Relating to Trade Negotiations (PRTN) and the Global System of Trade Preferences (GSTP). About one-third of all DC GATT signatories, accounting for

nearly 80 percent of the aggregate output of all of its DC members, joined one of these two PTAs.<sup>1</sup>

Using archival documents, we find that both groups did indeed adopt the same practices that governed tariff bargaining in the GATT as a whole. Their members based their trade talks on a principal-supplier rule—that is, they negotiated with each other on the basis of the same item-by-item request-and-offer protocol that governed successive GATT rounds. Estimating a gravity model with dyadic and year fixed effects, we find that the trade expansion they produced also resembles that of the regime as a whole—that is, it is markedly skewed in favor of their largest members. We also find that a principal-supplier rule did not govern tariff bargaining among members of smaller and less heterogeneous PTAs.

Together with other studies, the results we present here show that the postwar economic regime only nominally institutionalized MFN treatment. In practice, it substituted one type of discrimination for another: between the wars, the bloc system privileged trade between great powers and satellite states; after 1945, the international economic order privileged trade between large countries in both North and South. That it did so was an unintended consequence of a deliberate attempt to render discrimination anachronistic.

We begin by explaining the decision to mandate MFN treatment. As the relevant history is well known, we discuss it very briefly here. Next, we explain the adoption of the principal-supplier rule and its impact on tariff bargaining and trade expansion. We show that the rule is a natural extension of the *raison d'être* that the existing literature assigns to trade agreements and institutions (e.g., Bagwell and Staiger 2002). Then, complementing existing analyses of developed-country trade in the GATT/WTO, we examine negotiations among developing-nation regime members. After explaining the bargaining protocols the GSTP and the PRTN adopted, we examine the trade they created. In summing up, we note the close fit between the organization of trade between and after the wars and the great-power politics in play during each period.

## 1 Most-Favored Nation Treatment: Principle and Practice

U.S. and British officials, the principal parties to the negotiations about the international economic system that began during and continued after 1945, intended to create an institution that would regulate a wide range of policies and practices. They agreed upon an International Trade Organization (ITO) that, *inter alia*, set the rules that would govern tariff bargaining (Irwin et al. 2008: 74). Congressional refusal to ratify the ITO transformed these rules into the foundation of the postwar regime. The 1948 Havana charter of the GATT superseded the draft agreements that emerged from the 1946 London conference and the subsequent October 1947 Geneva meeting.

In explaining the origins of the postwar system, historians rarely fail to cite one or more of Secretary of State Cordell Hull's comments about the insidious effects of trade discrimination on peace and security. Despite the fact that his view reversed the causal chain that operated after 1918, it garnered widespread support among his contemporaries. Yet, the Russian revolution, German antipathy toward the Versailles Treaty, the inability of France to secure guarantees of its territorial integrity, war debts and reparations, and

<sup>1</sup> This figure dropped to about 60 percent after China joined the WTO in 2001.

U.S. isolationism had made great-power cooperation a distant memory even before the advent of the Great Depression. That the great powers failed to agree upon a collective response to it is not surprising. A system of discriminatory trade blocs arose instead, including the Imperial Preference System (IPS), the gold bloc, and the Reichsmark bloc.

The Roosevelt administration reserved its strongest enmity for the IPS, attributing to it the sharp decline in U.S. exports to Britain and its dominions. Intent on eliminating it and the system of institutionalized discrimination more generally, the United States campaigned to make MFN treatment the cornerstone of the ITO. That an MFN clause could preempt the “after you Alphonse” dynamic that might arise in its absence reinforced its appeal: the clause eliminated the reluctance of states to cut their tariffs because each feared that its partner would subsequently offer another state better access to its market. Robert Hudec dates demands for MFN treatment at least to medieval times, when the city of Mantua asked the Holy Roman Emperor to extend to it any concessions he later offered “whatsoever other town” (cited in Horn and Mavroidis 2009: 839). Pre-World War I trade accords, League of Nations practices, and agreements concluded pursuant to the Reciprocal Trade Agreements Act (RTAA) all incorporated MFN clauses.

Despite these precedents, a postwar consensus about preserving the integrity of the MFN principle proved elusive. Even the 1946 State Department ITO draft exempted customs unions, because historically states that had eliminated barriers to trade among them and agreed to impose a common external tariff had proceeded to political union (Chase 2006: 4). At British insistence, the London charter also grandfathered existing preferences. The Havana conference exempted FTAs provided that they conformed to Article XXIV provisions requiring their members to maintain tariffs that were no higher than those they had maintained *ex ante*; to eliminate barriers to “substantially all” trade among them; and to notify the contracting parties of their agreement to allow them to determine its GATT-consistency.<sup>2</sup>

Another early breach of the MFN principle involved the bargaining protocol that would govern postwar trade negotiations. London conditioned its willingness to dissolve the IPS on the adoption of a linear tariff-cutting approach, as its officials believed that British exports could be sustained absent preferences only if postwar bargaining proceeded on the basis of across-the-board cuts in trade barriers. U.S. officials preferred a principal-supplier rule, however: it maximized their ability to satisfy congressional demands to protect import-competing industries, increasing the chances of congressional approval of future RTAA extensions (Beckett 1941: 21).

A principal-supplier rule also promised to minimize the free riding that an MFN clause induces. Free riding is an unintended consequence of the tariff cuts of large countries—that is, of countries that wield market power. When a large country cuts its tariffs, it reduces its terms of trade—that is, the price of its exports in terms of its imports. The subsequent rise in world prices increases the returns to producers of the relevant goods whether or not all of the countries that export them have cut their own tariffs. Absent market power, tariffs have no price effects: the tariffs of small countries, bereft of market power by definition, only reduce their own real income. Thus, as Rodney Ludema and Anna Maria Mayda note, unless some countries wield market power, “free riders can get no free ride” (2006: 2).

<sup>2</sup> The text of Article 24 is at [http://www.wto.org/english/docs\\_e/legal\\_e/gatt47\\_02\\_e.htm](http://www.wto.org/english/docs_e/legal_e/gatt47_02_e.htm), last accessed November 29, 2011. “Substantially all” trade has never been precisely defined.

The existing literature attributes the existence of trade agreements and institutions to the incentives of large countries to use tariffs, because their market power enables them to shift some of the costs of their tariffs to other countries (e.g., Bagwell and Staiger 2002). If more than one large country exists, however, the incentives of each to use tariffs entraps them all in a Prisoner's Dilemma game, making them worse off than if they engaged in free trade. An agreement or institution can enable them to escape the Pareto-inferior outcome of a one-shot PD game by transforming it into a repeated game in which monitoring and punishment deter cheating. Empirical studies are consistent with this argument: they show that terms-of-trade effects explain the magnitude of the tariff cuts of recent entrants into the WTO (Bagwell and Staiger 2011), the tariffs that nonmembers of the regime maintain (Broda et al. 2008), and the increases in trade flows of states acceding to the WTO that are above the “85th percentile in imports relative to world trade” (Eicher and Henn 2011: 151).

When an MFN clause governs the tariff bargaining that agreements and institutions encourage, however, large states can internalize the gains from trade that their tariff cuts make possible only if their cuts exclusively target the goods that they produce and exchange. A principal-supplier rule makes this feasible: it enables large states to target their tariff cuts as precisely as possible on the goods they import exclusively from each other, minimizing free-riding opportunities. As such, the same logic that explains the formation of trade institutions explains the bargaining protocol that governs negotiations among member states that vary widely with respect to their ability to affect prices. Thus, it is not surprising that the GATT institutionalized the principal-supplier rule favored by its most powerful member state.

Along with the exclusion of agriculture and subsequently of textiles from the purview of the regime, the principal-supplier rule ensured that successive tariff rounds would lower trade barriers and expand trade almost exclusively among a small number of the largest member states—the United States, France, Britain, Germany and Canada (Gowa and Kim 2005; Kim 2010). Developing nations, rarely the “principal suppliers of anything,” were locked out of GATT bargaining and its associated benefits (Wilkinson and Scott 2008: 486; Ismail 2008: 58).<sup>3</sup> The GATT became a de facto industrial-country club despite and indeed partly because of the MFN clause in Article 1 of its charter.

The realization that the regime had become a “largely technical instrument” to manage industrial-country trade helps to explain the campaign for exemptions from its rules that DCs initiated early in the history of the GATT (Kessie 2007: 17). Their drive to obtain “special-and-differential” treatment succeeded partly because their tariffs typically do not affect the world prices of industrial-country exports, as well as because of the competition for Third-World allegiance that the Cold War precipitated. Thus, for example, the emergence of the Group of 77 (G77) and the advent of the first United Nations Conference on Trade and Development (UNCTAD) led National Security Adviser McGeorge Bundy to warn Kennedy administration

<sup>3</sup> GATT members did agree that states that together were a principal supplier could act as one. As this required DC agreement on the tariffs they would cut, it proved useless (Enders 2002: 97).

officials of rising Soviet influence over world trade.<sup>4</sup> Indeed, it was with the strong support of the Soviet bloc that UNCTAD became a permanent UN organization in 1964.

Special-and-differential treatment exempted DCs from the obligation of reciprocity, enabled them to create PTAs free of Article XXIV restrictions, and extended formal approval to the Generalized System of Preferences (GSP). The GSP breached Article 1 because it allowed developed nations to offer DCs of their choosing preferential access to their markets (Finger 2008: 890–91; Brown 2003: 108).<sup>5</sup> As J. Michael Finger and L. Alan Winters observe, the 1979 adoption of the Enabling Clause gave DCs “virtual carte blanche” to organize their trade (1998: 383). Exempting them from the requirement to abide by MFN treatment, it enabled them to cut tariffs exclusively among themselves. As a result, developing nations could create PTAs that cut tariffs selectively rather than on “substantially” all of their trade and that applied higher taxes to nonmember products than they had maintained *ex ante*.<sup>6</sup>

As such, PTAs with large numbers of developing countries that ranged widely in size had incentives to adopt a principal-supplier rule of their own. They were free to operate as did the GATT/WTO itself—that is, adhering *de jure* but not *de facto* to the MFN clause that governed their trade with each other. While the size of many of these states implies that their market power was limited relative to that wielded by the largest industrial states, existing research shows that some small countries can affect the prices of some of their imports (Broda et al. 2008; see also Bagwell and Staiger 2011). They can do so because the high cost of trade across long distances means that sometimes goods enter only into regional trade. If DC PTA members are large enough to realize the scale economies that enable them to produce differentiated goods for each other’s markets, in addition, they acquire market power because, by definition, no close substitutes exist for these goods (Broda et al. 2008).

Of the many PTAs that DCs created, two among them include large numbers of states that range widely in size. Figure 1 displays the distribution across the set of DC agreements with respect to the number of their signatories; Fig. 2 displays the distribution of gross domestic product (GDP) among their members.<sup>7</sup> We use GDP to measure the ability of states to affect their terms of trade, as “textbook treatments of optimal tariffs attribute market power to large countries” and the data confirm that output and elasticities are inversely related on average (Ludema and Mayda 2010: 18).

<sup>4</sup> McGeorge Bundy and Under Secretary of State George Ball discuss the UN conference 3/64 on trade relations. Miscellaneous. White House confidential. October 20, 1963. Declassified Documents Reference System. Farmington Hills, Mich.: Gale, 2009.

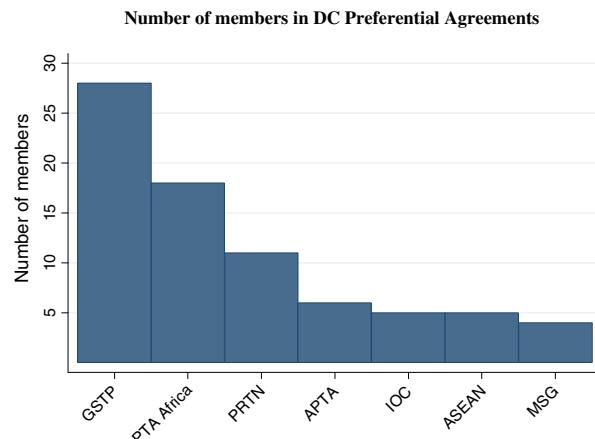
<sup>5</sup> Various explanations exist for the small impact of GSP agreements—e.g., preferences went only to goods in which DCs had no comparative advantage (Hoekman and Özden 2005: 5); rules of origin could be satisfied only at high cost; and the exclusion of exports as their prices dropped.

<sup>6</sup> This might seem to exaggerate Article XXIV’s importance as no FTA was declared GATT-inconsistent. Though often attributed to politics, some argue that deviation was rare in fact. Antoni Estevadeordal and Kati Suominen find that FTAs freed substantially all trade in a “reasonable” time period, reduced “90 percent of tariff lines and about the same amount of trade by year ten,” and did so on a “rather homogeneous” and “uniformly encompassing” basis (2009: 163–64). In their view, compliance outliers involved states exploiting the Enabling Clause.

<sup>7</sup> We omit the eight with three members, as our analysis specifies three dyad types.

**Fig. 1** Number of members in DC preferential agreements.

Note: GSTP = Global System of Trade Preferences; PTA Africa = PTA for Southern and Eastern Africa; PRTN = Protocol Relating to Trade Negotiations; APTA = Asia Pacific Trade Agreement; IOC = Indian Ocean Commission; ASEAN = ASEAN Preferential agreements; MSG = Melanesian Spearhead Group



The figures show that only the PRTN and the GSTP have large numbers of signatories with markedly disparate outputs. The number of states acceding to them is related to the fact that both had institutional sponsors that regarded low entry barriers as integral to their mission. The GATT's Trade Negotiations Committee of Developing Countries created the PRTN on February 16, 1970. It extended access to all DCs irrespective of their GATT status, and it also mandated MFN treatment among them.<sup>8</sup> Entering into force in 1973, it had 10 participants (Brazil, Egypt, India, Israel, Pakistan, South Korea, Spain, Tunisia, Turkey, and Yugoslavia). Five other of the original signatories ratified the agreement shortly thereafter: Mexico (1974), Greece (1974), Chile (1974), Peru (1976), and Uruguay (1975).<sup>9</sup> Although neither the Philippines, acceding in 1973, nor Paraguay, which did so 2 years later, ratified the treaty,<sup>10</sup> both received participant status because they were viewed as likely “to implement the concessions in the Protocol on a *de facto* basis.”<sup>11</sup> Finally, Bangladesh joined in 1976 and Romania in 1978.<sup>12</sup>

The GSTP was an offspring of UNCTAD and the G77. A series of ministerial meetings of the G77—Mexico City in 1976, Arusha in 1979, Caracas in 1981, and New Delhi in 1985—produced a consensus on the need for an organization that would contribute “to a balanced and equitable process of global economic development and a New International Economic Order.” A “global system of preferences” among developing nations, UNCTAD ministers agreed, would accelerate their growth. They stipulated that unless otherwise specified any concession one state offered another would “be extended to all participants...on a most-favored-nation (MFN) basis.” Exempted were concessions offered to “least developed” nations,

<sup>8</sup> PRTN members could opt to apply tariff cuts only to new members they had negotiated with, akin to GATT Article 35. PRTN, Note by the Secretariat. GATT/doc CPC/W/35 (June 25, 1976).

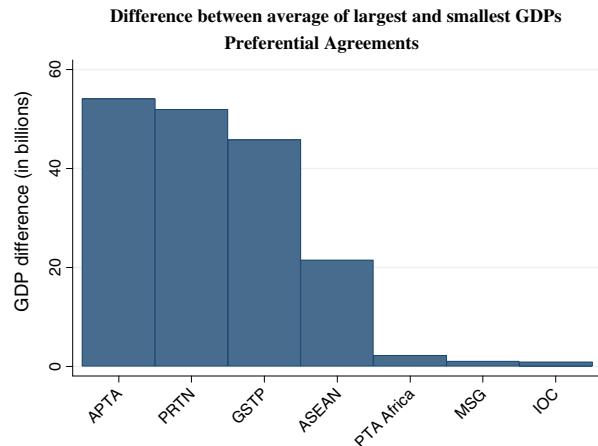
<sup>9</sup> Summary of Discussion at First Special Meeting. GATT/ document CPC/S/2 (November 16, 1973), 2. GATT/ doc L/3643 (14 December 1971) contains the text of the PRTN.

<sup>10</sup> GATT/ doc CPC/S/4 (26 January 1983), p. 3.

<sup>11</sup> GATT/ document CPC/8 (8 May 1974), p. 4.

<sup>12</sup> Paraguay, the Philippines, and Mexico had not acceded to the GATT when the PRTN came into effect. The Philippines acceded in 1979, Mexico in 1986, and Paraguay in 1994.

**Fig. 2** Difference between average of largest and smallest GDPs preferential agreements. Note: GSTP = Global System of Trade Preferences; PTA Africa = PTA for Southern and Eastern Africa; PRTN = Protocol Relating to Trade Negotiations; APTA = Asia Pacific Trade Agreement; IOC = Indian Ocean Commission; ASEAN = ASEAN Preferential agreements; MSG = Melanesian Spearhead Group



analogous to the GSP.<sup>13</sup> The first round of tariff cuts agreed to by the GSTP, open to G77 members and China, entered into force in 1989. A second bargaining round concluded in December 1998, and a third began in 2004 at UNCTAD XI.<sup>14</sup>

As predicted, both PTAs adopted a principal-supplier rule. In the PRTN, negotiations occurred “product-by-product” on the basis of “specific lists of requests and of offers” exchanged between two states. As in the GATT/WTO, states also could opt to lower their tariffs “on one or more sectors of goods on a linear basis.”<sup>15</sup> There is no evidence that they did so, however. GSTP members also relied on a product-by-product bargaining protocol and “GATT-type reciprocity.” It engaged its members in a series of bilateral negotiations on the basis of “specific lists of requests and of offers” (Trebilcock and Howse 2005: 484).<sup>16</sup> While across-the-board tariff cuts were possible,<sup>17</sup> GSTP documents show that product-by-product cuts dominated bargaining within it.<sup>18</sup> Not surprisingly, trade among its members expanded most rapidly in differentiated goods (Endoh 2005: 491). As the Journal of the Group of 77 reported in 1998,

negotiations have been intensive in the area of product-by-product negotiations. Participating countries have submitted their request lists relating to tariff, para-tariff and non-tariff concessions to the countries to which requests were addressed. After a number of bilateral consultations, participating countries moved to the negotiation phase and held five sessions of bilateral negotiations. Trade concessions were exchanged and some...participating countries made progress in their bilateral negotiations.

<sup>13</sup> The quotations in this paragraph are from the Agreement on the Global System of Trade Preferences among Developing Countries, GSTP/MM/Belgrade 10 (April 12 1988) ([http://www.unctadxi.org/Secured/GSTP/LegalInstruments/gstp\\_en.pdf](http://www.unctadxi.org/Secured/GSTP/LegalInstruments/gstp_en.pdf), last accessed November 29, 2011).

<sup>14</sup> This paragraph is based upon “UNCTAD: A Brief Historical Overview,” UNCTAD/GDS/2006/1.

<sup>15</sup> Procedures for Accession to the Protocol Relating to Trade Negotiations among Developing Countries. GATT/ document CPS/S/1 (December 3, 1973), 3.

<sup>16</sup> GATT/ document CPC/W/68 (14 May 1979), p. 6.

<sup>17</sup> [http://www.unctadxi.org/Secured/GSTP/LegalInstruments/gstp\\_en.pdf](http://www.unctadxi.org/Secured/GSTP/LegalInstruments/gstp_en.pdf), p. 5, last accessed November 29, 2011.

<sup>18</sup> UNCTAD/ITCD/TAB/1, 27 April 1998, p. 4.

Interestingly, GSTP members implemented linear tariff cuts only after they decided to abandon MFN treatment. The rule change took effect at the São Paulo round, which began in 2004 and ended in 2010. The agreement it produced imposed a linear cut of at least 20 percent on 70 percent of the tariff lines of each of its member state. Countries that acceded to the GSTP in the wake of the São Paulo round were required to submit a “proposed schedule of tariff concessions” that reflected “an across-the-board, line-by-line, linear cut of at least 20 per cent on at least 70 per cent of their dutiable tariff lines.”<sup>19</sup>

## 2 Data

We turn now to the data, examining trade expansion within the GATT/WTO as a whole and within DC subsets. As we noted above, several recent papers find that the postwar trade regime has been a “two-tier” institution, disproportionately benefiting the trade of industrialized-country members (Subramanian and Wei 2007: 153). Among them is a study by Arvind Subramanian and Shang-Jin Wei showing that only the imports of industrial-country member states rose.<sup>20</sup> They argue that this finding is a product of the fact that “developed member countries engaged actively in reciprocal liberalization under GATT while developing members were largely exempted from these obligations” (Subramanian and Wei 2007: 152). Other studies disaggregate the industrial-country group to test whether the principal-supplier rule privileged trade expansion between the states in this group presumed to wield the most market power (e.g., Gowa and Kim 2005; Kim 2010). They find that the most marked trade expansion occurred between members of GATT/WTO country pairs composed of the largest industrialized states—Britain, Canada, France, West Germany, and the United States.

We first examine if this pattern of trade emerged prior to demands for special-and-differential treatment, making it feasible that demands for special treatment responded to evidence that the GATT had become a developed-country club. Next, we analyze trade expansion within the PRTN and the GSTP. In both cases, as is the industry standard, we use a gravity model to analyze bilateral trade flows. Each analysis includes controls for dyadic and year fixed effects, as recent theoretical analyses of the gravity model and concerns about unobserved heterogeneity recommend (Egger and Pfaffermayr 2003: 572).<sup>21</sup> Dyadic fixed effects control for the endogeneity that exists when countries that trade more with each other are also more likely to sign PTAs. The year fixed effects control for any aggregate global shock in a given year. The dependent variable is the logged value in constant 1967 U.S. dollars of the annual imports of each state in a country pair from the other. There are about 372,000 observations in the entire sample covering the years 1946 to 2004.

<sup>19</sup> Conclusion of the São Paulo Round of the GSTP. Briefing Notes. The UNCTAD Unit on Economic Cooperation and Integration among Developing Countries. No. 1, January 2011. [http://www.unctad.org/en/docs/webecidc2011d1\\_en.pdf](http://www.unctad.org/en/docs/webecidc2011d1_en.pdf), last accessed November 29, 2011.

<sup>20</sup> The Subramanian and Wei paper is distinctive in treating membership in different groups—e.g., the GATT/WTO, PTAs, and GSPs—as mutually exclusive (2007: 158). Thus, the WTO control excludes countries that were both WTO members and PTA members, assigning them only to the PTA group.

<sup>21</sup> Thus, we do not include time invariant controls (e.g., distance, contiguity, landlocked, island). Recent work suggests including time-varying importer and exporter fixed effects; the computer memory required to do so for our sample makes this infeasible. Dyadic fixed effects control for the time-invariant component of multilateral trade resistance (Felbermayr and Kohler 2010: 67).

Using the Goldstein et al. GATT/WTO membership roster (2007a, b), we create three dichotomous membership variables. The first takes on a value of one when dyads include two of the five largest industrialized member states—Britain, France, Germany, Japan, and the United States (*core-state pairs*); it is zero otherwise.<sup>22</sup> The second assigns a value of one to pairs which include one of these countries and a smaller industrial country as well as smaller industrial countries paired with each other (*core-industrial pairs*). The third group includes all other member dyads—that is, those that include at least one developing nation GATT/WTO member (*other GATT dyads*).<sup>23</sup> We also include a control for country pairs in which one state is a regime member and the other is not (*GATT/PO*).

We rely on Goldstein et al. (2007a, b) for information about several variables.<sup>24</sup> Using their data, we create several dummy variables that take on a value of one when both states in a dyad are members of a currency union, a reciprocal or unilateral trade agreement, an existing colonial empire, or a GSP.<sup>25</sup> We also rely on their data for information about GDP. Using the Penn World Tables, we create a variable that records the logged product of the annual population of two countries in a dyad between 1950 and 2004 (Heston et al. 2006). For the years between 1946 and 1949, we rely on Angus Maddison's data.<sup>26</sup> Population data exist for all but about 8000 observations in the sample.

The first column of Table 1 displays the results of an analysis that examines the impact of regime membership on trade between 1946 and 1970. It confirms that the GATT did indeed operate as a de facto industrial-country club earlier in its history than the existing literature shows.<sup>27</sup> Trade between core-group members almost doubles relative to their pre-GATT levels. Trade between core states and smaller industrial nations or between smaller industrial states rises by almost 45 percent. The corresponding statistic for other GATT members is about 10 percent. It is worth noting that no difference exists between the trade of dyads which include at least one developing country and the trade of member pairs that include one GATT member state and one nonmember country ( $p$ -value=0.08). As in previous work, GSPs do not have a significant impact on trade.

We also examine whether these results hold if we extend the period we analyze through 2004. The results in column 2 of Table 1 evidence an even stronger developed-country effect than did the analysis that extended only until 1970. Trade between core-group states increases between 1946 and 2004 by about 260 percent, while trade between other industrial countries increases by about 92 percent. In

<sup>22</sup> Gowa and Kim (2005) include Canada rather than Japan but Japan's output exceeds that of Canada throughout the postwar period. As in other studies, we code an industrial state here as any nation to which the IMF assigns a country code less than or equal to 200.

<sup>23</sup> Spain and Greece belonged both to the PRTN and to the informal group of DCs within the GATT. The IMF, however, codes both as industrial states. Because we could not find any archival data about when either left the DC group, we test whether our results are robust to coding them as: 1) industrial states, 2) DCs, and 3) DCs until each joined the EU. (We use the third category in the analyses we report on below). The results are not sensitive to their coding.

<sup>24</sup> The data set (Tomz\_IO\_2007.zip) is posted at: <http://www.stanford.edu/~tomz>, downloaded July 16, 2007.

<sup>25</sup> Unilateral PTAs are agreements other than GSPs providing one-way market access (e.g., the Lomé Convention) (Goldstein et al. 2007b: 46).

<sup>26</sup> <http://www.ggdc.net/maddison>, downloaded December 16, 2008.

<sup>27</sup> For all dichotomous variables, the magnitude of the coefficient is expressed relative to the base group, unless otherwise specified. We use the formula ( $e^\beta - 1$ ) to calculate the size of the effects.

**Table 1** Trade expansion: the GATT/WTO

	(1) 1946–1970	(2) 1946–2004
Core-state pairs	0.68*** (0.18)	1.28*** (0.20)
Core-industrial pairs	0.36*** (0.06)	0.65*** (0.07)
Other GATT dyads	0.09** (0.04)	0.35*** (0.03)
GATT/PO	0.14*** (0.03)	0.20*** (0.03)
Reciprocal PTA	0.26*** (0.05)	0.31*** (0.02)
Nonreciprocal PTA	–	-0.06** (0.03)
GSP	0.09 (0.09)	-0.07*** (0.02)
Currency union	0.54*** (0.13)	0.52*** (0.09)
Current colony	0.37*** (0.07)	0.79*** (0.15)
Log product GDP	0.66*** (0.03)	0.65*** (0.01)
Log product population	-0.38*** (0.08)	0.03 (0.03)
Constant	-7.70*** (1.85)	-15.10*** (0.73)
N	103545	373728
Clusters	8562	16519
F-test	140.11***	260.73***

Dependent variable is the log of bilateral imports. Models include dyadic fixed effects and year fixed effects. Nonreciprocal PTAs only coded from 1976. Robust standard errors clustered on dyads in parentheses

\*\*\*significant at the 0.01 level; \*\* significant at the 0.05 level

contrast, GATT member dyads that include at least one DC realize only about a 42 percent rise in their trade.<sup>28</sup>

Finally, we test our hypothesis about the pattern of trade expansion among states in the PRTN and the GSTP, using Goldstein, Rivers, and Tomz data for membership information, though with some changes. In the case of the PRTN, we add India, Spain, and Greece to the list of original signatories. Because EC membership is incompatible with membership in other PTAs, we remove Spain and Greece from the PRTN when each accedes to the EC. We recode accession dates for nine states that documents in the GATT archives indicate were not actually original signatories (Bangladesh, Chile, Egypt, Greece, Mexico, Peru, Romania, Tunisia, and Uruguay).<sup>29</sup> For reasons we noted above, we code the Philippines as an original signatory and Paraguay as a member as of 1975.<sup>30</sup> Table 2 lists the members of each PTA, their accession dates, and, where applicable, their withdrawal dates.

To create our economic size variables, we calculate the mean annual GDP of all of their members for the PRTN and the GSTP separately. We code a country as large if its GDP in a given year is at least 120 percent of the average GDP in either agreement. We code states as small if their annual output is 80 percent or less of average GDP. These measures enjoy considerable face validity. For example, they assign large-country status to PRTN members Brazil, India, and Mexico and small-country status to Peru, Paraguay, and Pakistan, among others. We use these measures to create three dyad types: large/large

<sup>28</sup> We group dyads with one and two DCs together, as their individual effects are the same.

<sup>29</sup> GATT/docs CPC/W/40; CPC/W/42; CPC/W/63.

<sup>30</sup> The results are robust to omitting the Philippines and Paraguay from the PRTN.

**Table 2** PRTN and GSTP members\*

Country	Dates	Country	Dates
PRTN			
Bangladesh	3/77	Peru	5/76
Brazil	2/73	Philippines	2/73
Chile	5/74	Romania	9/78
Egypt	8/73	South Korea	2/73
Greece	11/74-6/80	Spain	2/73-2/87
India	2/73	Tunisia	3/73
Israel	2/73	Turkey	2/73
Mexico	8/74	Uruguay	9/75
Pakistan	2/73	Yugoslavia	2/73
Paraguay	11/75		
GSTP			
Algeria	9/89	Morocco	3/97
Argentina	3/90	Mozambique	7/90
Bangladesh	4/89	Myanmar	6/97
Benin	10/91	Nicaragua	5/89
Bolivia	8/89	Nigeria	4/89
Brazil	5/91	North Korea	4/89
Cameroon	5/92	Pakistan	7/89
Chile	10/89	Peru	4/89
Colombia	8/97	Philippines	3/92
Cuba	4/89	Romania	4/89
Ecuador	5/90	Singapore	4/89
Egypt	7/89	South Korea	1989
Ghana	4/89	Sri Lanka	4/89
Guinea	1/90	Sudan	4/91
Guyana	5/89	Tanzania	4/89
India	4/89	Thailand	3/90
Indonesia	10/89	Trinidad and Tobago	12/89
Iran	5/92	Tunisia	8/89
Iraq	4/89	Venezuela	1/99
Libya	7/89	Vietnam	4/89
Malaysia	8/89	Yugoslavia	4/89
Mexico	5/89	Zimbabwe	4/89

\*all countries remain members as of 2009, unless otherwise noted

pairs—that is, two large countries in the GSTP or PRTN; asymmetrical dyads—that is, pairs including only one large state; and all other pairs. These three dyad types exhaust all possible dyad types; thus, the interpretation of each coefficient is the same as that of any other dummy variable.<sup>31</sup>

<sup>31</sup> We report below on the sensitivity of our results to changing the way we define large states.

**Table 3** Effect of size in the PRTN and GSTP, 1946–2004

	Baseline
Core-state pairs	1.29*** (0.20)
Core-industrial pairs	0.66*** (0.07)
Other GATT dyads	0.35*** (0.03)
GATT/PO	0.21*** (0.03)
Large/large PRTN	0.97*** (0.19)
Asymmetric PRTN	0.35*** (0.09)
Other PRTN	0.05 (0.09)
Large/large GSTP	1.03*** (0.11)
Asymmetric GSTP	0.50*** (0.05)
Other GSTP	0.03 (0.05)
Reciprocal PTA	0.31*** (0.02)
Nonreciprocal PTA	-0.06 (0.03)
Constant	-14.70*** (0.73)
N	373728
Clusters	16519
F-test	247.60***

Dependent variable is the log of bilateral imports. Model includes dyadic fixed effects and year fixed effects. GSP, currency union, colony, product of GDP, and population included but coefficients not shown. Robust standard errors clustered on dyads in parentheses

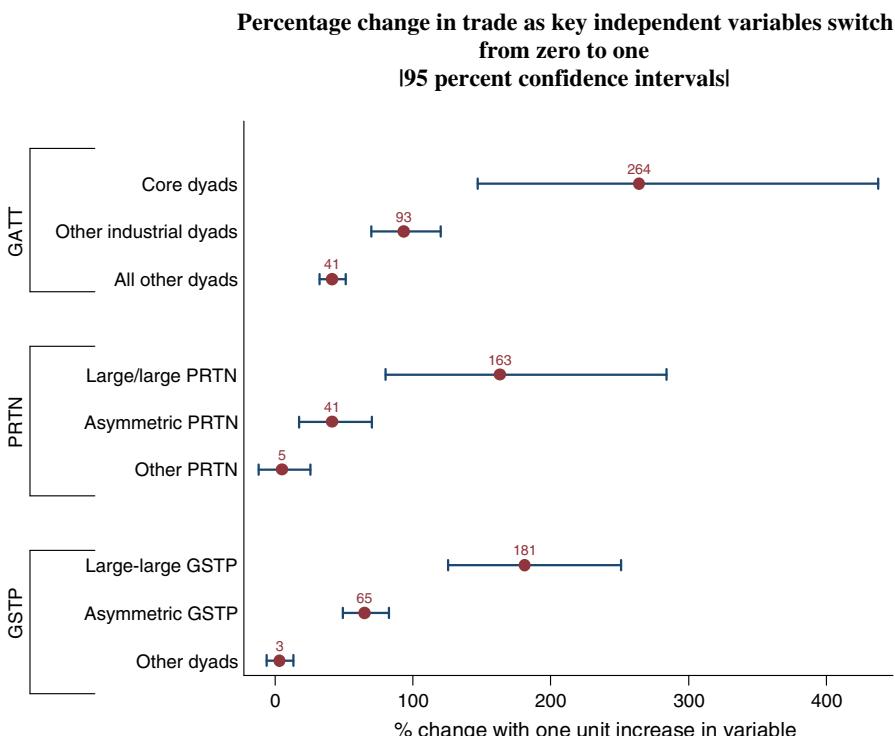
\*\*\*significant at the 0.01 level; \*\* significant at the 0.05 level

Table 3 presents the results of this analysis. In both groups, large states trading with each other witness the most dramatic increases in their bilateral trade. Trade expands between them by a factor of between 2.5 and 3. Other dyads realize distinctly smaller gains. Trade between members of asymmetrical PRTN dyads increases by about 25 percent (0.41/1.63) relative to the expansion pairs of large countries achieve. The corresponding statistic for GSTP dyads is about 33 percent (0.65/1.81). As predicted, trade between small states does not rise significantly in either case (5 percent in the PRTN; just over 3 percent in the GSTP).

To display these effects more clearly, Fig. 3 shows the percentage change in trade for GATT/WTO, PRTN, and GSTP members. As predicted, it is trade between large pairs in each group that expands the most dramatically. While asymmetric dyads witness some increase in their trade, there is little change in trade between relatively small member states. The 95 percent confidence interval overlaps only in the two cases involving a small PRTN member.

It is important to keep in mind that these results do not simply reflect the tendency of trade to expand disproportionately between large states in PTAs (Baier and Bergstrand 2004). In each analysis we report here, we control separately for annual dyadic income. Moreover, as we show below, the patterns that emerge in smaller and less diverse DC PTAs differ. The results are, therefore, consistent with the hypothesis that adherence to the principal-supplier rule in each group produced the desired pattern of trade expansion, privileging trade between the largest of their members and reducing the impact of the *de jure* MFN rule.

As such, the results we present here are consistent with the idea that discrimination is no less pervasive among many DCs engaged in trade liberalization than it is in the GATT/WTO writ large. Despite the intent of its founders to substitute a multilateral



**Fig. 3** Percentage change in trade as key independent variables switch from zero to one [95 percent confidence intervals]. Note: Percent change in trade using results from Table 3, calculated by the formula  $\exp(\beta)-1$ . Confidence intervals based on the standard errors

nondiscriminatory regime for the discrimination that pervaded the interwar era, they actually institutionalized discrimination, albeit of a different type and for a different reason. In the postwar world, the logic of the terms-of-trade argument and the free-riding options that tariff cuts among large states create dictated the adoption of a bargaining protocol that instantiated discrimination. In contrast, the politics and economics triggered by the Great Depression explain the discrimination that prevailed between the wars.

### 3 Robustness Checks

We first test whether our results are sensitive to the 1995 replacement of the GATT by the WTO. We do so because the transition to the WTO imposed restrictions on DCs that might affect our findings. Thus, we create a dummy variable that takes on the value of one for all years beginning in 1995, and we interact this term with the key explanatory variables. The results we present in the first column of Table 4 show that our results are robust to this change. Summing the relevant coefficients shows that trade involving DCs declines when the WTO is in effect ( $0.379-0.206-0.400$ ). However, PRTN trade continues to increase after 1994 and GSTP trade declines by a smaller amount than in the case of other DCs in the postwar regime.<sup>32</sup> Thus, membership in the PRTN or the GSTP attenuates the negative effects on DC trade of the WTO.

<sup>32</sup> PRTN:  $0.203+0.372-0.400$ ; GSTP:  $0.250+0.05-0.400$ .

**Table 4** DCs in the GATT/WTO, PRTN, and GSTP: robustness tests

	(1)	(2)	(3)
Core-state pairs	1.25*** (0.19)		1.41*** (0.30)
Core-state pairs*WTO	0.03 (0.09)		
Core-industrial pairs	0.67*** (0.06)	0.59*** (0.09)	0.85*** (0.07)
Core-industrial pairs*WTO	-0.20*** (0.06)		
Other-GATT dyads	0.38*** (0.04)	0.39*** (0.06)	0.54*** (0.04)
Other-GATT dyads* WTO	-0.21*** (0.05)		
PRTN	0.20*** (0.07)	0.21*** (0.08)	0.62*** (0.09)
PRTN * WTO	0.37*** (0.08)		
GSTP	0.25*** (0.04)	0.34*** (0.05)	0.48*** (0.04)
GSTP * WTO	0.05 (0.03)		
GATT/PO	0.21*** (0.03)	0.26*** (0.05)	0.33*** (0.03)
GATT/PO * WTO	-0.13** (0.05)		
WTO	-0.40*** (0.11)		
Reciprocal PTA	0.31*** (0.02)	0.21*** (0.03)	0.35*** (0.03)
Nonreciprocal PTA	-0.05 (0.03)	-0.05 (0.04)	-0.01 (0.03)
Gravity residuals		-0.02*** (0.00)	
Constant	-14.87*** (0.74)	-11.03*** (1.20)	-18.51*** (0.70)
N	373728	191536	717766
Clusters	16519	8645	33112
F-test	237.76***	183.60***	236.95***

Dependent variable is the log of bilateral imports. Models include dyadic fixed effects and year fixed effects. GSP, currency union, colony, product of GDP, and population included but coefficients not shown. Robust standard errors clustered on dyads in parentheses

\*\*\*significant at the 0.01 level; \*\* significant at the 0.05 level

Next, we examine whether unilateral changes in trade policy might explain our results. If states with more liberal trade policies were disproportionately likely to join either or both the GATT/WTO and a PTA, the coefficients on the trade institutions we estimate will exaggerate their effects. Rose (2004) uses several different measures to examine whether regime members have more liberal trading policies than other states. Because almost all of the indices he employs are very limited with respect to both the time period covered and the countries included, they are of little use here. The one exception is the Hiscox-Kastner measure, which provides information for about 76 countries between 1960 and 2000.

To generate this measure, Michael J. Hiscox and Scott L. Kastner (2008) estimate a gravity model that includes importer year fixed effects. They use the deviation between the intercepts of each importing country year and the sample maximum intercept (i.e., Belgium in 1980) to measure trade policy, scaled by predicted trade when the independent variables are set at their sample means and the intercept is set to its maximum value.<sup>33</sup> Thus, large positive values reflect more protectionist trade policies. We add these values to our analyses, lagging them by one year. The second

<sup>33</sup> The assumption of the Hiscox-Kastner paper is that the gravity model accurately explains most trade and that the residuals reflect trade-distorting policies such as tariffs.

column of Table 4 displays the results. The gravity residuals are negative and significant, indicating that more restrictive trade policies have the expected effect on trade. Including them, however, does not change our results.

Next, we examine whether our results depend on the particular definition of size that we use. We recode a state as large relative to other PTA members if its output is just above the mean GDP for the group, and we then raise the cutoff point by increments of one-tenth of a percentage point. The maximum is set at 1.9 times the average GDP. We test the robustness of the PRTN and GSTP separately, holding the other at the baseline definition of 1.2 times the mean. Because of the number of coefficients involved in the 20 additional models, we present our findings in two figures.<sup>34</sup>

Figure 4 plots the coefficients of large, asymmetrical, and other PRTN member dyads as the definition of size varies. Figure 5 does the same for the GSTP. Both figures show that the coefficients previously estimated are robust to this change. That the coefficient on large-large dyads does not change very much in the case of either PTA confirms our findings that the trade expansion they generate, as in the case of the GATT as a whole, is skewed toward their largest members. Moreover, the 95 percent confidence interval of the large-large dyad coefficient does not overlap the confidence interval for either other categorical variable.

We also subject the hypothesis about size to another robustness test designed to examine more precisely the importance of institutional rules and regulations. As we note above, Baier and Bergstrand (2004) argue that PTAs exert their strongest effects on their largest member countries because of the relative size of their internal markets and irrespective of the governing bargaining protocol. If this were true, all other PTAs notified to the GATT would display the same pattern of trade expansion that the PRTN and GSTP produced. This would undermine our choice to examine the predictive power of the bargaining protocol itself.

To examine this issue, we construct the same size measures we use above for each multilateral PTA notified to the GATT/WTO. The Goldstein, Rivers, and Tomz data set records 220 PTAs in the postwar period. Of these, 174 are bilateral agreements. Six of the other 46 lack data on trade or GDP, so they drop out of the analysis. We drop another 13 from the table because they consist of only three states, making it impossible to create three dyad types.<sup>35</sup> Thus, the table records information about 25 agreements as well as the GSTP and PRTN.<sup>36</sup>

Because of the large number of variables that result, we create a table that rank orders the size of the coefficients on each dyad type in each PTA. We set bold significant coefficients and italicize those with a negative coefficient. We shade in gray PTAs that conform to the ranking we report in the case of the PRTN and GSTP. As Table 5 shows, none of the 25 multilateral agreements conforms to the pattern of the two PTAs we examine here.<sup>37</sup>

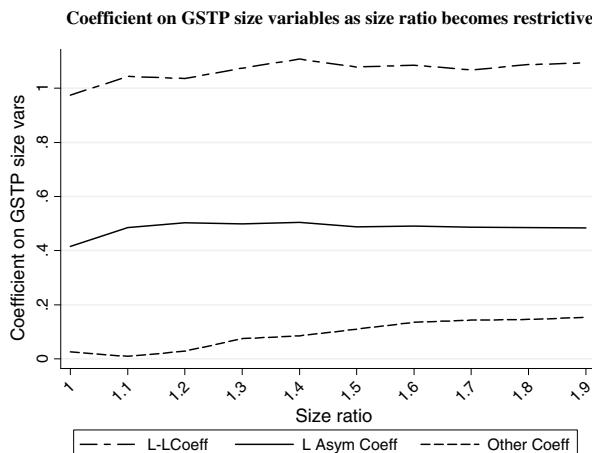
<sup>34</sup> We also check whether our results depend on the fact that we compare the GSTP and PRTN with a group of countries that include both least-developed countries and other DCs. To do so, we create a group of DC/DC dyads that do not include PRTN or GSTP members or any least-developing countries. The results do not change. Complete results are available from the authors.

<sup>35</sup> There are also some cases in which another country joined a preexisting PTA or signed an agreement with a preexisting PTA. We include these in the analysis but not in the table. None of them match the pattern of trade expansion that the GSTP and PRTN generated.

<sup>36</sup> By comparison, only 33 of the 177 agreements in force are multilateral.

<sup>37</sup> We also analyzed the data including all PTAs at one time. While the magnitude of the size coefficients changes, their rank ordering does so only rarely.

**Fig. 4** Coefficient on GSTP size variables as size ratio becomes restrictive. Note: Using the model in Table 3, as a baseline, the definition of a large country in the GSTP was varied from just over the mean (size ratio equal to 1) to 1.9 times the mean. All of the other variables from the model in Table 3 were also included in the model



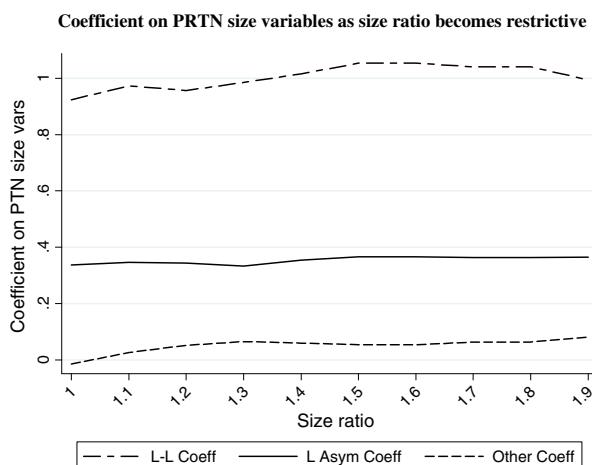
While the EU and ECOWAS come closest, the trade increases between asymmetric and small dyads are both significant and, for the EU, are of the same magnitude (coefficient of 0.49 for asymmetric dyads and 0.48 for small dyads).

Finally, we also examine whether the results we report above are robust to expanding the sample to include observations with zero or missing values of trade. Adding these cases allows us to capture any effects the variables of interest might exert on both the intensive and extensive margins of trade—that is, it allows us to examine whether GATT/WTO or PTA membership not only increases trade between existing trade partners but also creates new trading relationships. Although the new sample size is nearly double that of the original, the change does not affect our results. The coefficients of interest retain their significance, while their magnitude actually increases (column 3 of Table 4).

#### 4 Conclusion

The argument and evidence we present in this paper make clear that the postwar system conformed only nominally to the most-favored nation clause that was intended to

**Fig. 5** Coefficient on PRTN size variables as size ratio becomes restrictive. Note: Using the model in Table 3, as a baseline, the definition of a large country in the GSTP was varied from just over the mean (size ratio equal to 1) to 1.9 times the mean. All of the other variables from the model in Table 3 were also included in the model



**Table 5** Ordering of size coefficients for all PTAs

	LL	LS	Other
PRTN	<b>1</b>	<b>2</b>	3
GSTP	<b>1</b>	<b>2</b>	3
ASEAN FTA	<b>3</b>	<b>1</b>	<b>2</b>
Arab Maghreb Union (AMU)	3	<b>2</b>	<b>1</b>
Andean Community	<b>1</b>	<b>3</b>	2
Arab Common Market	<b>1</b>	2	3
Asia-Pacific Trade Agreement (Bangkok Agreement)	<b>1</b>	2	3
Central American CM (CACM)	<b>3</b>	<b>2</b>	<b>1</b>
Communaute Econ. de l'Afrique de l'Ouest (CEAO)	<b>3</b>	<b>2</b>	<i>1</i>
Central European FTA (CEFTA)	2	<b>3</b>	1
Central Afr. Econ. & Monetary Community (CEMAC)	<b>3</b>	2	<b>1</b>
Central Asian Econ Area	3	2	<b>1</b>
Commonwealth of Independent States (CIS)	<i>1</i>	2	<b>3</b>
CM for Eastern & Southern Africa (COMESA)	3	2	<b>1</b>
Economic Cooperation Organization (ECO)	<b>1</b>	2	<b>3</b>
Econ. Community of Central African States (ECCAS)	2	1	<b>3</b>
Econ. Community of West African States (ECOWAS)	<b>1</b>	<b>2</b>	<b>3</b>
European Economic Area (EEA)	1	<b>3</b>	2
European FTA (EFTA)	<b>3</b>	<b>2</b>	<b>1</b>
European Union	<b>1</b>	<b>2</b>	<b>3</b>
Gulf Co-operation Council (GCC)	<b>2</b>	<b>1</b>	3
Latin American FTA (LAFTA)	1	<b>2</b>	3
Latin American Integration Association (LAIA)	3	<b>1</b>	<b>2</b>
Mercosur	3	<b>1</b>	2
PTA for Eastern & Southern Africa	3	2	1
Union Douaniere et Econ. de l'Afr. Centrale (UDEAC)	3	<b>1</b>	2
West African Econ. & Monetary Union (WAEMU)	<b>3</b>	2	1

Dependent variable is the log of bilateral imports. The numbers represent the ranking of the size coefficients for each PTA. The model includes dyadic fixed effects and year fixed effects and separate size variables for each PTA. Bilateral PTAs, trilateral PTAs, GSP, currency union, colony, product of GDP, and population also included but not shown

A number in bold represents significance at the 0.05 level and an italicized number that the coefficient has a negative sign

eliminate the trade discrimination that had made the interwar system a pariah among policy makers. The evidence shows that the system institutionalized nondiscrimination only *de jure*. In practice, breaches of the MFN clause occurred repeatedly irrespective of the development status of the states involved. Indeed, the MFN clause itself encouraged the adoption of a bargaining protocol that produced discrimination as a by-product of efforts to reduce free riding.

As it turned out, the principal-supplier rule also generated positive political externalities, as the advent of the Cold War endowed upon the United States an interest in increasing not

only its own real income but that of its closest allies as well. That the GATT excluded the Soviet Union and members of its sphere of influence only cemented its political appeal. East-West competition also encouraged the adoption of special and differential treatment despite the fact that it too encouraged discrimination. Thus, the discrimination that characterized the postwar economic order, albeit endogenous to the MFN clause, also conferred political benefits on the Western bloc in the ongoing Cold War.

A very different pattern of trade discrimination existed between the wars. Then, the absence of any effective intergovernmental institution and the marked political tensions that existed among the prevailing great powers meant that each of them could rely only on its own efforts to achieve economic salvation. The blocs created in the wake of the Great Depression reflected political divisions among the great powers and the interest of several in pulling smaller countries into their political orbits. Thus, the British offered tariff preferences to Commonwealth members, and Germany created tight links among the small central and eastern European states that joined the Reichsmark bloc. The system had little to commend it on economic grounds, as the great-power hubs stood to gain very little from a reciprocal exchange of tariff cuts with their spokes. It is because the postwar system responds to both the political and economic interests of its strongest members that the contemporary international economic order has already endured more than five times longer than did its interwar counterpart.

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