

What Do We Know About Preferential Trade Agreements and Temporary Trade Barriers?

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Abstract

Two of the most important trade policy developments to take place since the 1980s are the expansion of preferential trade agreements and temporary trade barriers, such as antidumping, safeguards, and countervailing duties. Despite the empirical importance of preferential trade agreements and temporary trade barriers and the common feature that each can independently have quite discriminatory elements, relatively little is known about the nature of any relationships between them. This paper surveys the literature on some of the political-economic issues that can arise at the intersection of preferential trade agreements and temporary trade barriers and uses four

case studies to illustrate variation in how countries apply the World Trade Organization's global safeguards policy instrument. The four examples include recent policies applied by a variety of types of countries and under different agreements: large and small countries, high-income and emerging economies, and free trade areas and customs unions. The analysis reveals important measurement and identification challenges for research that seeks to find evidence of systematic relationships between the formation of preferential trade agreements, the political-economic implications of their implementation, and the use of subsequent temporary trade barriers.

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What Do We Know About Preferential Trade Agreements and Temporary Trade Barriers?

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A. Introduction

Two of the most important trade policy developments to take place since the 1980s are the proliferation of preferential trade agreements and the ebb and flow of national use of temporary trade barriers such as antidumping, safeguards, and countervailing duties.¹ Nearly 600 preferential trade agreements (PTAs) have now been notified to the World Trade Organization (WTO), with nearly 400 of these in force as of 2013 (WTO 2013). With respect to temporary trade barrier (TTB) policies, major economies such as Brazil, China, India, Mexico, and Turkey went from being TTB non-users in the late 1980s to outcomes whereby a substantial share of their import product lines at some point over the next 20 years became covered by these additional forms of non-tariff protection (Bown 2011a, 2013a). Furthermore, some of these countries as well as a number of other major TTB-users such as Argentina, Australia, Canada, the European Union, Peru, and the United States also became involved in significant *new* PTAs during this period.²

Despite the empirical importance of PTAs and TTBs and the common feature that each can independently have quite discriminatory elements, relatively little is known about the nature of any relationships between them. For example, do PTAs lead to more or less use of TTBs overall? Does the trading partner composition of who is targeted by TTBs change after the implementation of a PTA? I.e., after PTAs are implemented, do countries tend to impose TTBs on PTA non-partners, further reinforcing the preferences already inherent in the PTA? Or do forces conspire to shift TTB use toward PTA partners, in an implicit attempt to restore more nondiscriminatory, most-favored-nation (MFN)-like treatment that the implementation of the PTA would have disrupted? Does the use of TTBs depend on the existence and type of PTA rules concerning such use, and does this differ for free-trade agreements versus customs

¹ The European tradition is to refer to these trade policies collectively as ‘trade defense instruments,’ and the American tradition is to refer to them as ‘trade remedies.’ The research literature sometimes also refers to them as instruments of ‘administered protection’ or ‘contingent protection.’ We choose to refer to them as ‘temporary trade barriers’ so as to reflect the fact that they impede trade flows and they are legally defined so as to only be imposed temporarily.

² We refer to the ‘European Union’ for reasons of consistency, even though in some time periods or in certain instances (e.g., WTO dispute settlement) the correct legal entity was technically the ‘European Communities’.

unions? Furthermore, do PTA partners tend to coordinate TTB activity against third countries in response to common shocks? Finally, what are the political-economic channels that would explain any patterns in the data that emerge?

This paper analyzes a number of political-economic issues that arise as research sheds further light on the intersection of the discriminatory policies of TTBs and PTAs. Our approach is not to attempt to fully address these important questions; instead, we review prior research and we use the legal-political-economic details from four case studies to reveal some of the challenges facing any research that seeks to provide insight into these relationships.

Section B provides a brief introduction to the legal and institutional aspects linking PTAs and TTBs when viewed from the perspective of the multilateral trading system's rules under the GATT/WTO. The WTO system in particular has established some important implications that shape how WTO members use TTBs against PTA partners and non-partners, both through the text of its original Agreements and through the evolving case law and dispute settlement jurisprudence that may increasingly affect how members are to interpret certain elements of the Agreements.

Section C reviews the existing literature and recent empirical evidence on dynamic aspects of the political-economy of trade policy, including the general set of factors that determine trade policy formation after countries have signed and implemented a PTA. Section D then reviews the formal empirical work done to date on the relationships between PTAs and country-specific TTBs such as antidumping. We conclude that a body of nascent – though promising – work provides suggestive evidence that merits substantial additional scholarly attention.

Section E contains the main analytical contribution of the paper, which is to provide a contributing explanation as to why, as yet, so little is known about the relationship between the implementation of a PTA, the political-economic shocks that result from the PTA, the subsequent evolution of industry-level demands for TTBs, and a government's decision of how to structure its applied TTBs. We use four case studies to illustrate the divergent forces that arise at the intersection of PTAs and TTBs and the range of discriminatory ways that PTA member countries apply TTB measures.

The case studies derive from how countries use the WTO's global safeguards policy instrument; our four examples include recent policies applied by a variety of different countries involved in distinct regional trade agreements, including Argentina (MERCOSUR), United States (NAFTA), Turkey (customs union with the European Union), and the Dominican Republic (CAFTA-DR).

While expectations may be that global safeguards are to be applied on a nondiscriminatory – or MFN – basis, we show that WTO members actually apply this policy in ways that lead to a range of discriminatory outcomes. Sometimes governments seek to simply reinforce a pro-PTA bias via how they subsequently apply their TTB policies. In other instances, they impose TTBs with an anti-PTA bias as if seeking to restore the MFN-like treatment that had been disrupted due to implementation of the PTA.

One implication of our detailed, case study analysis is that there are important measurement and identification challenges for research that seeks to more cleanly find evidence of systematic relationships between PTA formation, the political-economic implications of PTA implementation, and subsequent TTB use. We conclude that future research is more likely to bear fruit not only if it examines the full range of TTB policy instruments that are being applied, but also if it considers many of the subtle details regarding *how* these TTBs are being applied.

B. Legal and Institutional Aspects of the GATT/WTO, PTAs and TTBs

The 1947 GATT's Article XXIV allowed preferential trade agreements to arise between Contracting Parties in the form of both free trade areas and customs unions. However, one crucial caveat to Article XXIV is that countries involved in the PTA are not permitted to increase levels of protection on imports from third (non-partner) countries above their pre-PTA levels. Specifically, Article XXIV: 5(b) states for the case of free trade areas,³

“...the duties and other regulations of commerce maintained in each of the constituent territories and applicable at the formation of such free-trade area...shall not be higher or more restrictive

³ Similar language arises for the case of customs unions through the GATT's Article XXIV:5(a).

than the corresponding duties and other regulations of commerce existing in the same constituent territories prior to the formation of the free-trade area[.]”

The 1947 GATT also set out broad conditions under which countries could implement temporary trade barriers under Article VI (antidumping and countervailing duties) and Article XIX (safeguards). In its simplest form, these provisions permit governments to implement temporary new (higher) trade restrictions after the conduct of an investigation in which the government determines that imports are causing injury to a domestic industry and that those imports are priced too low (antidumping), are subsidized (countervailing duties), or are simply growing too quickly (safeguards). Article VI is frequently referred to as containing the ‘unfair trade’ provisions; thus, any TTB imposed under its auspices is supposed to be trading partner-specific and is a permitted exception to the GATT’s general most-favored-nation (MFN) treatment provisions of Article I. On the other hand, because there is no allegation of ‘unfairness’ when countries resort to safeguards under Article XIX, any TTB imposed under its auspices is supposed to continue to provide MFN treatment, even if that treatment is a higher level of import protection for all trading partners.

The Uruguay Round Agreements establishing the WTO provided additional elaboration on the conditions and procedures by which countries are permitted to use such TTBs via the WTO Agreements on Antidumping, Subsidies and Countervailing Measures, and Safeguards.⁴ Nevertheless, the GATT and WTO Agreements provide little additional explicit guidance as to how governments are to treat imports from PTA partners relative to non-partners in their conduct of TTB investigations. As we describe in Section E, there have been WTO dispute settlement challenges to specific TTB investigations and applied measures that has led to some additional guidance through resulting case law and jurisprudence. Nevertheless, some of the main economic questions and concerns that arise when contemplating the

⁴ China’s 2001 Accession Protocol also permitted existing WTO members to implement a bilateral, China-specific transitional safeguard that could be used until 2014 (Bown and Crowley, 2010). While our analysis lumps the four policies together, we do not claim that the four TTBs are completely substitutable, as there are important legal distinctions between when and how they can be used; see, for example, Mavroidis, Messerlin, and Wauters (2008). On the GATT/WTO more generally, see Hoekman and Kostecki (2009).

coexistence of permissible TTBs and the GATT's Article XXIV: 5 have gone unaddressed, like most areas of potential conflict between the GATT/WTO and PTAs.

Many preferential trade agreements contain specific provisions that articulate ways through which a PTA member's use of TTBs is to be impacted by PTA implementation. Our discussion here draws from a series of research spearheaded by Thomas Prusa, Robert Teh, and co-authors that provides a mapping of the text of PTA provisions to the TTB policies of antidumping, countervailing duties, and safeguards.⁵ Their research suggests PTAs include provisions on TTBs that fall into three categories. PTA provisions may: 1) affect how members use existing TTB policies against each other, 2) introduce new TTB policies that are PTA-partner specific, such as bilateral safeguards, or 3) coordinate use of existing TTB policies across more than one PTA member for those TTB investigations and TTB applications affecting third (PTA non-partner) countries.⁶

We focus primarily on the first category of PTA provisions that affect how members use existing TTBs against each other, as that is most relevant for our subsequent analysis.⁷ A few PTAs eliminate the application of all TTBs between members – the most high profile example is the European Union, where member states cannot use antidumping, countervailing duties, or safeguards against imports from another member state. Many agreements contain provisions spelling out different criteria for the imposition of a particular TTB against partners relative to non-partners; this, of course, can result in the discouragement

⁵ See in particular Teh, Prusa, and Budetta (2009), Prusa and Teh (2011), and Prusa (2011)

⁶ Like many areas of scholarship on PTAs and the WTO, sometimes these provisions are mapped into “WTO plus” (additional obligations beyond those established by the WTO) or “WTO minus” (fewer obligations relative to those established by the WTO) categories based on the threshold necessary to trigger permissible use. We will not characterize TTB provisions into such categories here.

⁷ Teh, Prusa, and Budetta (2009) also report information from their mapping exercise on the PTAs that contain provisions that permit PTA members to implement (temporary) bilateral safeguards against other PTA partners, typically during the phase-in transition of the PTA. Nevertheless, to our knowledge there are not yet comprehensive databases of countries' resort to such bilateral safeguards that can be used to examine the extent to which these are empirically relevant. Furthermore, they also report on instances in which some PTA partners establish joint institutions to administer TTBs against third parties. The European Union is one such example as it administers single antidumping, countervailing duty, and global safeguard regimes on behalf of all members against imports deriving from non-EU member states. Note that while such arrangements may be more likely to occur in customs unions (that have a common external applied MFN tariff) than in free trade areas, the specific example of the Turkey-EU customs union that we describe below does not contain provisions that result in the mandatory coordination of TTB policies toward third countries.

of one particular TTB policy instrument from being imposed on members (e.g., global safeguards) relative to another TTB instrument (e.g., antidumping). A common provision covering global safeguards is that imports from PTA partners can be excluded from the safeguard application if they were not a ‘substantial share’ of total imports and if they are not a contributor to the injury to the domestic industry.⁸ Examples from PTA provisions on antidumping include higher *de minimus* dumping margins or import volumes for partners relative to non-partners, introduction of a ‘lesser duty rule’ for partners, or a differential duration rule for the time that an imposed measure is in effect. Examples from provisions covering countervailing duties and antidumping include regional bodies or committees that may be able to influence, modify, or even overturn measures to be imposed on PTA partners.

One important implication of the Prusa and Teh line of research is that, to the extent that PTA provisions affect how members use existing TTB provisions against other PTA partners, the provisions appear mostly designed to raise the cost of imposing TTBs against partners relative to non-partners. Put differently, there are few (if any) provisions in PTAs that would establish more stringent conditions for imposition of a TTB against a non-partner relative to a PTA partner. Thus, the provisions would appear generally consistent with attempts to discourage TTBs on intra-PTA trade.

The main concern is that the PTAs that contain provisions that explicitly (or implicitly) discourage TTB use against PTA partners do not typically also discourage the *overall* use of TTBs, and thus they do not discourage TTB use against non-partners. Given the evidence that political-economic shocks spur industry demands for the imposition of a new TTB, any binding PTA provision that discourages use against partners may end up partially pushing TTB demands for additional protection onto imports from PTA non-partners, *ceteris paribus*. If left unchecked, a country’s overall use of TTBs may end up being both somewhat dubiously motivated and it may result in a pattern of TTB protection arising after PTA implementation that disproportionately targets PTA non-partners. From this

⁸ Nevertheless, for the most part the meaning of ‘substantial share’ and what defines a contributor to injury are frequently not well-specified in PTA texts.

perspective, the country may be seen as violating the spirit of GATT Article XXIV: 5(b), even if it is not necessarily violating the law itself.

C. How Do Countries Change Their Trade Policies After PTA Implementation?

There is an extensive body of research examining the political-economic forces that shape how countries change their trade policies after they have implemented a PTA. Before turning to the more specific and directed question of any relationships between PTAs and temporary trade barriers, we begin with a review of more general insights stemming from this literature.

Economic theorists have constructed a range of models to examine the impact of preferential liberalization on subsequent trade policy choices of PTA member countries. Such contributions explore the implications of different assumptions on, *inter alia*, country sizes, endowments, underlying market structures and conditions of competition, whether governments are politically and/or economically motivated, the timing of policy decisions, the depth of the PTA in terms of whether it is a free trade agreement versus customs union (Panagariya 2000). This research has led to the ‘building blocks’ versus ‘stumbling blocks’ debate regarding the long-run impact of PTAs on multilateral efforts toward liberalizing trade – e.g., preferential liberalization could spur subsequent multilateral liberalization and MFN tariff cutting, or it could make more difficult the ability of governments to further cut MFN tariffs or to sustain relatively low applied MFN tariffs. A reasonable conclusion from this body of theoretical economic research is that it could go either way.

Perhaps then not surprisingly, the empirical evidence on the relationship between preferential liberalization and subsequent determination of *multilateral*, or *nondiscriminatory*, trade policy is also somewhat mixed. Evidence from the United States (Limão 2006), European Union (Karacaovali and Limão 2008) the Central American Free Trade Agreement – Dominican Republic (CAFTA-DR) members (Tovar 2012), and Colombia (Karacaovali 2013) shows that countries raise MFN tariffs or face downward rigidities to further lowering their MFN tariffs after they have cut their tariffs preferentially. On the other hand, evidence from countries in Latin America (Estevadeordal, Freund, and Ornelas 2008) and

Association of Southeast Asian Nations (ASEAN) members (Calvo-Pardo et al 2011) suggests that preferential tariff cuts can lead to further multilateral tariff cuts.

Freund and Ornelas (2010) have posited one intuitively appealing potential explanation for the seemingly conflicting results. Preferential tariff cuts in Latin America would have otherwise resulted in substantial ‘preference margins’ – defined as the difference between a product’s applied MFN tariff (facing PTA non-partners) and a product’s applied preferential tariff (facing PTA partners). Because this could have led to costly trade diversion in the form of increased imports from relatively inefficient industries in PTA partners at the expense of those in more efficient PTA non-partners (Viner 1950), policymakers may have felt economic pressure to also lower their MFN tariffs. On the other hand, because preference margins resulting from the US and EU PTAs were not as large, trade diversion may have been of insufficient concern to put pressure on policymakers with respect to their MFN tariffs relative to other (non-economic) considerations highlighted by Limão (2007) in particular.

A potential complementary explanation for the divergent results that has yet to be explored rigorously is whether the relatively short-run analysis and examination of a limited set of policy instruments (preferential tariffs and multilateral tariffs) is not the entire story. For instance, there may be additional policy instruments – such as temporary trade barriers or other non-tariff forms of protection – that arise to either complement or substitute for the changes in preferential and multilateral tariffs. Furthermore, it may take additional time for preferential and/or multilateral tariff changes to induce political-economic shocks, and thus take more time for the long run (total) impact on trade policy – through consideration of all policy instruments – to be fully revealed. Finally, future research may also benefit from consideration of recent innovations in the more general economic literature on the determinants of trade policy formation in light of countries’ trade agreement commitments under the WTO that may impose constraints on the various trade policy instruments at their disposal.⁹

⁹ Important recent empirical contributions to this literature include Broda, Limão and Weinstein (2008), Bagwell and Staiger (2011), Limão and Tovar (2011), and Ludema and Mayda (2013). Bown and Crowley (2013a) is perhaps most relevant to the context described here as it examines the incentives for the United States to apply temporary

D. Antidumping and Country-Specific TTB Use by PTA Member Countries

The results of recent empirical research described in the last section suggest that, in some circumstances PTAs may lead members to offer MFN tariff reductions, whereas in others it may lead them to face upward pressure and/or downward rigidities on their MFN tariffs. Furthermore, the work by Prusa and Teh described in Section B identifies a number of institutional aspects of PTAs that could affect how TTBs are used against partners versus non-partners. This section examines trends in the data and existing research that has begun to improve understanding of the relationships between preferential tariffs, multilateral tariffs, and use of TTBs such as antidumping, countervailing duties, global safeguards, and the China-specific transitional safeguard introduced as part of China's WTO accession in 2001.

Table 1 summarizes the prevalence of TTB instruments of protection in effect as of 2011, in terms of their import coverage across policy-imposing economies (Bown 2011a, 2013a). Column (1) presents information on the import coverage of the antidumping policy alone, the most 'popular' TTB policy instrument in use as of 2011.¹⁰ Economies like Argentina, Brazil, China, European Union, India, Turkey and the United States were each estimated to have antidumping measures in effect in 2011 that covered more than 1.7 percent of their imports. For each of these economies, there has also been at least one period over the previous fifteen years in which their imposed antidumping measures covered at least 2 percent of their imports in any given year, peaking as high as 3.2 percent for China in 2011, 3.7 percent

trade barriers in the context of self-enforcing trade agreement such as the WTO; however, even this analysis does not take into consideration the impact of or constraints related to PTAs.

¹⁰ Bown (2011a) find that most use to date of the second-most prevalent country-specific TTB – the countervailing duty (CVD) policy instrument – has been when CVDs are imposed simultaneously alongside a country's application of antidumping. I.e., governments typically have imposed a CVD in addition to an imposed antidumping barrier against imports of the same product from the same trading partner at the same time. Hence we focus on antidumping (and ignore CVDs) in most of the discussion above, as measurement of these policies typically occurs through import coverage ratios, in which case applied CVDs can be seen as redundant. (Note, however, that focusing instead on CVDs alone and ignoring antidumping would lead to quite different results since most antidumping measures are not accompanied by a simultaneous CVD.)

for the EU in 1997, 5.5 percent for the US in 1998, and 5.8 percent for India in 2011 (Bown 2013a, Figure 1a).¹¹

Interestingly, Table 1 also indicates that many of the significant users of TTBs by 2011 had been non-users of these particular policy instruments as of the late 1980s. For many emerging economies in particular, only since their periods of unilateral, preferential, and/or multilateral liberalization of the 1990s has there been a significant increase in the use of the TTB instruments. One important question, of course, is the nature of the relationship between these forms of liberalization – not only with respect to each other (as highlighted by research described in the previous section), but also through changes to other time-varying protection policies, and in particular through non-tariff instruments such as TTBs.

An additional way to motivate the importance of how applied TTBs relate to PTAs is to consider case studies of individual countries. Turkey, for example, went from being a non-user of TTBs as of the late 1980s to becoming, by some measures, the trading system's second most active user of TTBs by 2011, trailing only India – e.g., see Table 1, columns (2) and (6). Furthermore, during this same period, Turkey went from having control over its entire set of trade policy instruments, to an outcome whereby many of its trade policy instruments were constrained via a voluntary preferential trade agreement (Karacaovali 2011). In particular, Turkey formed a customs union with the European Union in the mid-1990s; as such, Turkey then implemented bilateral free trade with EU member countries over most goods imports (applied preferential tariffs of zero toward imports from EU members), and it adopted and implemented the European Union's applied MFN tariff toward most goods that it imports from third countries. The TTB policies of antidumping, safeguards, and countervailing duties became the few remaining trade policy instruments at the Turkish government's disposal and discretion.

Figure 1 provides information on the share of Turkey's imports each year that are subject to some imposed TTB, split into whether the imports derive from its PTA partners versus PTA non-partners for Turkey's PTAs in effect that year. Turkey's PTA partners include members of the European Union, of

¹¹ The economy-specific chapters provided in Bown (2011b) provide additional detail on these and other major Group of 20 economies through the period ending in 2009.

course, a set of countries which make up the source of more than 50 percent of its goods imports in some years.¹² The figure reveals that by 2011, more than 6 percent of Turkey's imports from PTA non-partners were subject to a Turkish TTB, whereas less than 1 percent of Turkey's imports from PTA partners were subject to a TTB. While the differential pre-dates the implementation of the customs union, the fact that this differential has grown since PTA implementation raises the concern that Turkey's TTBs may be being used to further deepen the already existing preferences found within its PTAs.

Given the increased prevalence of both PTAs and country-specific TTB use through instruments such as antidumping in particular, what does existing empirical research suggest is the relationship between the two? Prusa and Teh (2010) provide a cross-country study using data since the 1980s which contains the most systematic empirical work to date. Their first compelling piece of evidence comes from the raw data, which is aggregated and normalized across all PTAs. They reveal that in the ten years prior to implementation of PTAs, the aggregate count of antidumping filings between (eventual) PTA partners is nearly six cases higher per year than in the years after PTA implementation. I.e., antidumping activity between (eventual PTA) partners falls substantially after PTA implementation. In subsequent econometric analysis they estimate a negative binomial regression model of determinants of the counts of bilateral antidumping filings, paying particular attention to potential differential treatment between PTA partners and non-partners, both before and after the implementation of the PTA. Their research is conducted at the relatively aggregate level, and thus also includes a number of macroeconomic control variables (domestic and foreign real GDP growth, real exchange rates, bilateral trade flows) that the associated literature examining the impact of business cycles on import protection has found to affect antidumping filing behavior.

Prusa and Teh (2010) find that the overall (net) effect of PTA implementation on antidumping activity is small. Nevertheless, they also present strong evidence of a compositional impact across the

¹² As explored in more detail in Bown (forthcoming) and Karacaovali (2011), there are few legal constraints in the Turkey-EU customs union that affect the imposition by one side of TTBs on imports deriving from the other. This is quite different, of course, from intra-European Union trade in which EU rules prevent one EU member country from imposing a TTB on imports from another.

trading partners that are targeted by antidumping activity as a result of implemented PTAs. They report that PTAs decrease the incidence of bilateral antidumping filings between members by 33-55 percent, and PTAs increase the incidence of bilateral antidumping filings against non-members by 10-30 percent. The results are more sizable for PTAs that also contain specific antidumping provisions.

These results are somewhat different from an earlier and more narrowly defined empirical analysis by Blonigen (2005) that was designed to examine whether NAFTA was reining in United States antidumping and countervailing duty activity against Canada and Mexico. That research examined data from 1980-2000 and found little evidence that NAFTA increased import volumes or that the new provisions in the PTA – i.e., NAFTA’s Chapter 19, in which partners could use a special dispute settlement process to challenge each other’s use of antidumping and countervailing duties – affected the frequency of US antidumping initiations or US government decisions in cases against Canada and Mexico.

Despite empirical progress in this line of research, there are still a number of unsettled issues regarding the potential role of other non-PTA factors, which may be confounded with the rise of PTAs. One example can be inferred from the results described earlier; the Estevadeordal, Freund, and Ornelas (2008) results remind us that much of the liberalization taking place during the 1990s was not only through the implementation of PTAs but also through cuts to applied MFN tariffs. Distinguishing the impact on TTBs arising from PTA liberalization from the impact arising from multilateral liberalization is likely to be an important, albeit difficult task for future informative research.

A second and related example of the last twenty years that has also undoubtedly given rise to a substantial amount of TTB use has been China’s export growth and increasing competitiveness in global markets. Even before its WTO accession in 2001, China had become the top foreign target of many high-income and emerging economy TTB users (Messerlin 2004; Bown 2010).¹³ Indeed, a comparison of

¹³ A similar phenomenon took place during 1955-1970 for Japan, a major economy that undertook a similar, export-led growth country strategy during the period that it was newly acceding to the GATT. During that period, a number of existing GATT Contracting Parties invoked Article XXXV to not apply the agreement to Japan.

column (3) with column (2) of Table 1 for 2011 indicates that, for most policy-imposing economies, a much larger share of their imports from China have been targeted with TTBs than their overall share of imports. Yet, because China is not a member of most countries' PTAs, simple correlations would attribute the fact that countries are increasing TTB use against China with the trend that countries are increasing TTB use against PTA non-partners relative to partners. An open question is whether this is more of a China-specific effect than a PTA-specific effect.

Finally, one additional limiting concern with the previous rigorous empirical work conducted to date is that much of it is focused on only the antidumping policy instrument. While antidumping is the most prevalent of the TTBs in use across the trading system, a number of countries have used policies with quite similar attributes – e.g., global safeguards – to respond to certain political-economic shocks. Thus a focus on antidumping alone, especially when considering more recent data on TTB policy application since 1995, could be missing an important element to the story.¹⁴ The difference between columns (2) and (1) in Table 1 reveals that policies aside from antidumping made up an important share of overall TTB use for countries like India and Turkey in 2011. Policies such as global safeguards have also experienced episodes of importance for economies like Argentina, Brazil, the European Union and the United States since the mid-1990s (Bown 2011a, 2013a). Furthermore, Bown and Crowley (2013a, b; Forthcoming) and Bown and Tovar (2011) find *stronger* evidence for the relationships between a variety of political-economic shocks and implementation of TTBs when the measures of TTBs are defined to include safeguards and antidumping relative to when the measures of TTBs are limited to antidumping.

Nevertheless, while safeguards are supposed to be applied on a nondiscriminatory basis, the next section reveals that the reality of how countries apply safeguards is much more complex. For example, many countries impose safeguards in a way that frequently replicates the outcomes of antidumping application in that it discriminates substantially across different types of export sources. The next set of

¹⁴ There is also the possibility that PTA member countries are using special PTA-specific TTBs – such as the PTA safeguard that a number of PTAs have introduced, as discussed in Section B. Much less is known about the actual use of such PTA provisions in practice as data on their systematic use is as yet unavailable.

questions include whether this discrimination occurs across export sources depending on PTA partner and non-partner status, and if so, the political-economic channels that give rise to such patterns.

E. Safeguards Application – Insights from Four Case Studies

The WTO's Agreement on Safeguards sets out expectations that members that impose an import-restricting safeguard are supposed to apply it on a relatively nondiscriminatory (MFN) basis. Nevertheless, countries have discretion as to how they apply their global safeguards, and thus how they ultimately treat imports deriving from PTA partners.¹⁵ We use four examples of actual safeguard applications to reveal that WTO members that are also members of PTAs apply their safeguards toward PTA partners and non-partners in quite different ways.¹⁶

Table 2 summarizes the range of discriminatory uses of safeguards found in the four case studies introduced below: Argentina's 1997 safeguard on footwear, the United States 2002 safeguard on steel, Turkey's 2006 safeguard on footwear, and the Dominican Republic's 2009 safeguard on polypropylene bags and tubular fabric. The categorization addresses a number of different questions for each safeguard. For example, did the safeguard investigation consider the differential foreign sources that caused the potential injury to the domestic industry and how those sources may have been influenced by PTA implementation? Did the application of that particular safeguard contain discriminatory elements regarding PTA partners versus non-partners? Finally, was there a likely discriminatory effect of the applied safeguard on resulting trade flows? The last row of Table 2 provides an overall summary assessment of whether the safeguard reinforced the existing discrimination already inherent in the PTA ('pro-PTA' discrimination) or pushed against the existing discrimination in the PTA in order to make the outcome more MFN-like ('anti-PTA' discrimination).

¹⁵ Bown and McCulloch (2003, 2004) provide a cross-country empirical analysis on a sample of early safeguards use (1995-2000) in order to examine the impact of discriminatory treatment – such as exemptions for PTA partners from safeguard application – on trade flows and import market shares. Bown (2007) examines related issues in a case study of Canada, including discriminatory elements across PTA and non-PTA partners inherent in its safeguard investigations.

¹⁶ Three of the four safeguard applications described below resulted in extensive treatment in WTO jurisprudence through formal dispute settlement challenges.

These case studies have been chosen in order to draw specific attention to the relationship between discriminatory elements of PTAs and TTBs. We examine details of the policies derived from the World Bank's *Temporary Trade Barriers Database* (Bown 2013c) and data matched to trade flows at the 6-digit Harmonized System (HS) level from UN Comtrade. Because even use of the *same* policy instrument can result in an entire range of discriminatory motivations and outcomes, these case studies reveal that policy details matter.

I. *Argentina - Safeguard on Footwear in 1997*

One extreme possibility resulting from PTA formation is that the PTA leads to an import surge from PTA partners that triggers demands for initiation of a TTB investigation, resulting in the policy-imposing country creating additional preference margins by imposing an additional import-restricting TTB on PTA *non-partners* only. Argentina's application of a safeguard on footwear products in 1997 arguably illustrates such an example.

In 1992, Argentina started implementing scheduled MERCOSUR tariff cuts toward PTA partners like Brazil. For imported products such as footwear, Figure 2 illustrates that the expectation under MERCOSUR was that Argentina would apply a zero tariff against imports from MERCOSUR partners by December 31, 1994. Meanwhile, Argentina's most-favored-nation (MFN) import tariff applied toward footwear imports supplied by MERCOSUR non-partners was 22 percent in 1992. The average MFN applied tariff was reduced to 20 percent in 1993, before increasing to nearly 27 percent in 1995 and then to 33 percent in 1998.¹⁷ At the end of the Uruguay Round, Argentina had committed to a 35 percent WTO legal binding tariff rate for imported footwear products over which it promised not to raise its MFN applied tariffs.

Prior to 1997, Argentina's total imports of footwear had increased considerably – Figure 3 reveals an almost 25 percent increase in the value of total imports taking place between 1993 and 1997. Major

¹⁷ Argentina had also imposed a policy of minimum specific duties on imports of footwear (in addition to textiles and apparel) in 1993; these remained in place until 1997. The specific duties were subject to a separate WTO dispute brought by the United States – one concern was that the ad valorem equivalent of the minimum specific duties applied during certain periods could end up being higher than 35 percent rate that was Argentina's legal binding commitment for these products made at the end of the Uruguay Round.

foreign suppliers of these products at the time included MERCOSUR partner countries like Brazil, as well as MERCOSUR non-partners such as China, Indonesia, South Korea, and to a lesser extent Thailand, Vietnam, and the European Union. While Argentina's total imports of footwear were increasing during this period, Figure 3 also reveals that there was a substantial compositional change in the foreign sources of those imports. Between 1993 and 1997, Argentina's imports of footwear from Brazil increased by roughly 500 percent – from less than \$10 million to nearly \$56 million. On the other hand, Argentina's footwear imports from the rest of the world actually declined by 15 percent –from \$118 million in 1993 to \$100 million in 1997.

The compositional change to Argentina's footwear imports is suggestive evidence that a major source of any injury in Argentina taking place because of a surge in footwear imports was most likely due to increased trade from Brazil, rather than increased imports from some other (MERCOSUR non-partner) country. Moreover, the timing of the MERCOSUR scheduled tariff reductions, and even the slight increases in the MFN applied rates against MERCOSUR non-partners, also suggests that the increase in imports from Brazil was at least partially related to the new preferential tariff treatment that the MERCOSUR agreement afforded to imports from Brazil.

In 1997, Argentina initiated a safeguard investigation covering footwear product categories in which total imports were worth more than \$150 million. Argentina ended up imposing the safeguard import restriction in 1997 in the form of a specific duty that ranged from \$0.84 to \$16.90 per pair of shoes, depending on the particular HS product code.

However, Argentina's application of the safeguard in 1997 included the decision to exempt from the application the imports that arrived from MERCOSUR partners such as Brazil. This implied that during the period that the safeguard would be in effect, Argentina's imports from foreign suppliers such as China, Indonesia, Vietnam and the EU would face the specific duties of the applied safeguard in addition to the MFN applied tariff rate, whereas imports from Brazil and other MERCOSUR countries would continue to enjoy the lower PTA tariff rate and would not face the additional specific duties spelled out in the applied safeguard measure.

Not surprisingly, Argentina's footwear imports from Brazil continued to increase after application of the safeguard in 1997. Indeed, Brazil more than doubled its import market share in Argentina between 1997 and 2001 from 36 percent to 78 percent, in response to this additional preference margin, as Argentina's imports from non-MERCOSUR partners continued to decline under the applied safeguard. (Argentina's "peso crisis" in 2001-2 and the devaluation of the currency led to a collapse in imports across the board in 2002, thus the reduction in footwear imports in 2002 shown in Figure 3 is due to this separate phenomenon distinct from the impact of the applied safeguard.)

Argentina's decision to apply a safeguard in this manner was challenged under the rules of the WTO. In 1998, the EU initiated a WTO dispute (*Argentina – Footwear*) which resulted in Panel and Appellate Body rulings that established precedent-setting case law on the issue of 'parallelism'; i.e., the WTO decision that a policy-imposing economy must apply a safeguard against imports from the *same* set of countries as those that it had considered in the safeguard investigation.¹⁸ In this instance, Argentina had considered imports from Brazil in the investigation determining the cause of injury to Argentina's domestic footwear industry, but it had exempted imports from Brazil in the application of the safeguard. In response to the WTO's ruling, in 2000 Argentina terminated the safeguard and initiated a new safeguard investigation, at the end of which it applied a tariff rate quota on imports of a subset of the products considered under the original investigation.

This particular case study identifies the sort of outcome that economists, ever mindful of the inefficient allocation of resources, worry would become prevalent after countries implemented their PTAs. I.e., the formation of the PTA leads to a surge in imports from PTA partners, and while this leads to injury in one country and triggers a TTB investigation, the TTB ends up being applied only against PTA non-partners, thus further increasing the preference margin and the economic efficiency concerns associated with trade diversion. And while such outcomes may be even more prevalent for country-

¹⁸ Pauwelyn (2004) provides a discussion of this and subsequent WTO legal decisions and jurisprudence on the issue of parallelism.

specific TTB policies such as antidumping, it is important to identify that similar discriminatory outcomes can also arise under application of the global safeguard policy.

II. *United States – Safeguard on Steel in 2002*

The next two examples illustrate how WTO members have (and have not) responded to the WTO's parallelism mandate, as well as some of the continuing concerns left unsolved by the parallelism ruling.

In 2001, the United States initiated a safeguard investigation on imports of steel products. The US ended up exempting its PTA partner countries from application of the safeguard when it imposed import restricting duties in early 2002 of up to 30 percent. In a later WTO dispute settlement challenge to the US safeguard that followed the *Argentina – Footwear* dispute, the US argued that its safeguard investigation had attempted to follow the 'parallelism' principle by not including imports from NAFTA partner countries like Mexico and Canada, as well as other PTA partners, in the injury analysis and determination. Nevertheless, the complainants in the case – including the European Union, Japan, Brazil, China, South Korea, Switzerland, and New Zealand – disagreed that the US had implemented the parallelism mandate properly in the conduct of its investigation (WTO 2003).

Bown (2013b) provides evidence that US PTA partners responded to the additional preference provided by the exemption to the applied safeguard on other exporters by significantly increasing their exports of steel products relative to those other countries.¹⁹ Indeed, US imports from PTA partners in affected product categories increased by more than 50 percent in the 12 months following the imposition of the safeguard, while imports of products from suppliers that were not exempted faced a decline of 30 percent. Nevertheless, unlike the *Argentina – Footwear* case described earlier, Bown (2013b, Table 3) reports that US imports of the steel products from these PTA partners was relatively small both before (less than 0.5 percent of imports of steel products ultimately subject to the safeguard) and after (less than 1.0 percent) the application of the safeguard.

¹⁹ This particular safeguard application was actually associated with the US offering preferences to other countries by also excluding them from the safeguard – including *de minimis* developing country suppliers and suppliers granted firm-product-specific exclusions through an appeals process (Bown 2013b).

One lesson learned from examination of these data on the US safeguard application on steel is that even countries that follow the guidance of the parallelism mandate do not insulate themselves from the economic concerns associated with trade diversion. I.e., even if imports from PTA partners were not the cause of injury, the granting of additional preferences to PTA partners by exempting them from a safeguard that has been applied against imports from PTA non-partners will not prevent subsequent import surges from relatively less efficient export industries in PTA partners.

III. Turkey – Safeguard on Footwear in 2006

Next consider Turkey, which has become one of the most frequent users of safeguards in the WTO system. While Turkey's applied safeguards are interesting for a number of reasons (Bown, 2014), here we focus on how its safeguard applications treat imports from the European Union. Turkey and the EU have a free trade agreement governing bilateral trade and they also share a common external MFN applied tariff through a customs union arrangement. Nevertheless, despite the customs union that coordinates MFN applied tariffs, each economy administers separately and independently its temporary trade barrier policies such as safeguards.

Turkey has attempted to adhere to the WTO's 'parallelism' principle in its safeguard cases in a manner quite different from the approach chosen by the United States in the steel safeguard case. Instead, Turkey typically *includes* imports from the EU in the injury determination in the safeguard investigation and then subsequently also applies any resulting safeguard measure to imports from the EU. On its face, this approach appears less likely to result in additional preferences and discrimination toward the trading partners that already receive one layer of preferences and discrimination through the PTA.

Nevertheless, while Turkey applies its safeguards to imports deriving from the European Union, in a number of instances it has chosen to structure the applied policy so as to minimize the incidence of the imposed trade restriction on EU exporters.²⁰ Turkey typically does not apply its safeguards as an ad

²⁰ While we do not attempt to provide a full accounting of possible motives, it is worth pointing out that during this time period Turkey has also been negotiating with the European Union over possible accession and thus deeper integration beyond the customs union.

valorem duty, which is relatively nondiscriminatory across trading partners. Instead, Turkey structures its applied safeguards as either *specific duties* or *price undertakings* (based on minimum price thresholds, above which no additional duties are imposed); these policies can have much more discriminatory effects across foreign sources.²¹

One telling example began in 2006 when Turkey initiated a safeguard investigation on imports of almost \$500 million in footwear. Figure 4 reveals that more than half of these imports derived from China, though other major foreign suppliers included the European Union (nearly \$100 million), Vietnam (\$42 million), and Indonesia (\$20 million). Figure 4 and Figure 5 indicate that imports of footwear from both China and the EU had been increasing in the years leading up to the initiation of Turkey's safeguard investigation. Finally, of the nearly \$100 million in Turkey's annual footwear imports deriving from the European Union, roughly 70 percent was from Italy, with much smaller shares of the Turkish import market arriving from Spain, Portugal and Romania (Figure 5).

Turkey applied a safeguard in the form of a \$2 - \$3 specific duty per pair of footwear, depending on the category of investigated product. However, the applied specific duty did not depend on the trading partner; i.e., Turkey also applied the duties to imports from customs union partner countries in the EU. Figure 6 provides additional information on Turkish import prices for footwear across different foreign sources. The unit value data on Turkish import prices revealed by Figure 6 suggests that the \$2 to \$3 specific duty would have had much less of an effect on imports of European-produced footwear than on imports from other foreign sources. The average imported price of footwear in 2006 was \$41 per pair from EU countries, whereas it was \$11 per pair from China, \$18 per pair from Indonesia, and \$21 per pair from Vietnam. Thus, to the extent that footwear imports from some EU members were higher

²¹ Turkey has recently applied safeguards as price undertakings on vacuums, motorcycles, electrical appliances, and matches; in these cases it has established price cutoffs (under which duties would be applied) that were well below the average price of imports from the EU of the goods under investigation. Turkey has also recently applied safeguards as specific duties on steam irons, spectacle frames, and travel goods and handbags. Data on average Turkish import prices across foreign sources frequently suggest that significant imports from the EU in these particular products derived from countries such as Italy and France and may have been in higher-end varieties for which a safeguard applied as a specific duty would be expected to have less of an impact.

quality/higher price models, the application in the form of a specific duty, in terms of its ad valorem equivalent based on those average unit values, was less onerous for the EU exporters (5-7 percent), relative to China (15-21 percent), Indonesia (10-14 percent), or Vietnam (9-13 percent) than it would have been had Turkey applied a safeguard as an ad valorem duty that was common to all sources of imports.

Furthermore, this example points out that the application of a safeguard as a specific duty may also have important differential effects even within the PTA partner economy. Figure 6 shows that the average unit value on footwear imports from Italy in 2006 was \$60 per pair, whereas from all other EU member countries (mainly Spain, Portugal, and Romania) the average unit value on footwear imports was only \$26 per pair. Thus the applied safeguard of \$2-\$3 per pair was likely to have the least impact on the high-end Italian footwear (ad valorem equivalent of an additional 3-5 percent tariff) and the greatest impact on EU-produced footwear imported from Spain, Portugal, and Romania (additional 7-10 percent).

IV. Dominican Republic – Safeguard on Polypropylene Bags and Tubular Fabric in 2009

A final example of how countries apply safeguards so as to impact PTA partners is taken from the other extreme and involves a policy-imposing country that has arguably used the safeguard so as to *restore* MFN treatment between PTA partners and non-partners that had been disrupted because of the PTA.

Consider the Dominican Republic's 2009 safeguard on imports of polypropylene bags and tubular fabric. This safeguard was at least partially structured to address an increase in imports from PTA partners arising around the time of implementation of the Central America Free Trade Agreement – Dominican Republic (CAFTA-DR), which entered into force for the United States, El Salvador, Guatemala, Honduras, and Nicaragua in 2006 and for the Dominican Republic in 2007.²²

Before the CAFTA-DR was implemented in 2007, the Dominican Republic applied a MFN tariff of 14 percent on all foreign imports of tubular fabric and 20 percent on all imports of polypropylene bags.

²² This section draws heavily on the analysis in Bown and Wu (2014), which provides a legal-economic analysis of the formal WTO dispute in which CAFTA-DR partners Costa Rica, Guatemala, Honduras, and El Salvador challenged how the Dominican Republic applied this safeguard.

The tariff on tubular fabric was cut to zero for CAFTA-DR trading partners in 2007. For polypropylene bags, the Dominican Republic was required to cut this tariff rate preferentially as of 2007 by 2 percentage points annually on a ten-year harmonized schedule. The MFN applied tariff would remain at 14 percent for tubular fabric and 20 percent for polypropylene bags for all other (CAFTA-DR non-partner) countries. The Dominican Republic's WTO tariff binding commitment was 40 percent for both products.

Figure 7 illustrates the Dominican Republic's import market for polypropylene bags and tubular fabric in the years prior to and following the implementation of CAFTA-DR. The value of Dominican Republic imports of these two products from all sources had nearly doubled from \$4.9 million to \$9.1 million between 2006 (the year prior to CAFTA-DR's entry into force) and 2008 (the first full year following the reduction of tariffs as required by CAFTA-DR).

In 2009, the Dominican Republic initiated a safeguard investigation on imports of these two products. In late 2010, the Dominican Republic applied a safeguard measure on polypropylene bags and tubular fabric from all countries – both CAFTA-DR partners and non-partners alike.²³ Similar to the case of Turkey described above, the Dominican Republic followed the 'parallelism' principle by including its CAFTA-DR partner partners in the investigation and subjecting CAFTA-DR partners to the applied safeguard.

However, the distinctive economic element to this particular safeguard application is how the Dominican Republic treated its CAFTA-DR partners. In this case, the Dominican Republic imposed a safeguard that resulted in an *overall* level of ad valorem import duty protection of 38 percent for tubular fabrics and polypropylene bags. I.e., the Dominican Republic did not differentiate this new level of total protection based on either the foreign source or the (non-safeguard) tariff rate that it would have otherwise applied to these products in the absence of an applied safeguard measure.

²³ This is not strictly true as the Dominican Republic did follow the Agreement on Safeguards Article 9.1 which requires the exemption from the application of the safeguard imports arising from *de minimus* developing country suppliers, thereby exempting imports from Colombia, Indonesia, Mexico, and Panama. We will not address those issues here. Furthermore, while the final safeguard was applied in October 2010, Dominican Republic imposed a preliminary safeguard in April 2010.

Note the distinction here relative to how WTO members traditionally apply a safeguard measure, which is most typically applied as an *additional* duty that is imposed ‘on top of’ the current duty that foreign exporters already faced. In this particular case, exporters from CAFTA-DR partners would otherwise have paid a 0 percent tariff on tubular fabric due to the PTA, whereas CAFTA-DR non-partners such as China would have paid a 14 percent applied MFN tariff on tubular fabric. Put differently, in this instance the Dominican Republic was attempting to implement a safeguard measure that would impose a higher *additional* ad valorem tariff on tubular fabric imports from CAFTA-DR partners (38 percent, since the initial rate was 0 percent due to the PTA) than it was imposing on tubular fabric imports from CAFTA-DR non-partners, such as China (24 percent, since the initial rate was the MFN applied rate of 14 percent).²⁴

Are there apparent trends in the data that would explain the Dominican Republic’s attempt, in this instance, to structure an applied safeguard so as to restore the MFN treatment that otherwise had been dismantled following implementation of the CAFTA-DR PTA? Figure 7 indicates that imports of polypropylene bags and tubular fabric did increase from CAFTA partners following CAFTA-DR implementation; however, imports from these countries were also increasing before the implementation of the PTA. (Figure 8 suggests that the increase of imports stemming from CAFTA-DR was also the result of an increase in imports from a number of different partners *within* the CAFTA-DR.)

Nevertheless, Figure 7 reveals that imports also increased substantially (coincidentally) after CAFTA-DR implementation from CAFTA-DR *non-partners*, especially imports from China. Recall that China continued to face the Dominican Republic’s MFN applied tariff rate until the application of the safeguard, at which point imports from China fell off precipitously.

Thus one final curiosity from this case is the Dominican Republic’s differential treatment toward China, which was the Dominican Republic’s largest single foreign source of these imports by 2008, and

²⁴ The logic of discrimination in the form of a higher applied safeguard for CAFTA-DR partners for polypropylene bags is the same, though the numbers were different given that for polypropylene bags the MFN applied tariff was different (20 percent) and the preferential tariff had not been fully phased in to zero by the timing of the application of the safeguard.

from which a substantial share of the import growth and new competition for Dominican Republic producers had arisen. Given how safeguards have been applied historically, the attempt by the Dominican Republic to apply an overall import restriction of 38 percent can be interpreted as actually applying a more favorable rate toward imports from China (since it was starting at a 14 percent tariff) compared to its CAFTA-DR partners (since they were starting at a 0 percent tariff rate). This is somewhat surprising, especially in light of the data described in Table 1, column (3) on TTB use across countries which otherwise disproportionately tends to target imports from China with more protection.

F. Conclusion

Two of the most important trade policy phenomena of the last three decades include the proliferation of preferential trade agreements and of national use of temporary trade barriers such as antidumping, safeguards, and countervailing duties. This paper analyzes some of the interaction and relationships between PTAs and TTBs by reviewing recent data on the increased import coverage of TTBs and the research literature on how countries conduct their trade policy after the implementation of PTAs.

Our main analytical contribution is to use four case studies of how PTA members have applied the global safeguard policy in order to provide a clearer systemic understanding of the intersection between these potentially discriminatory trade policies. The case studies reveal that sometimes governments seek to reinforce a pro-PTA bias in their applied TTB policies, while in others they may seek to reverse the incentives created by PTA implementation and restore more MFN-like treatment by imposing policies with an anti-PTA bias. Sometimes more protection gets imposed on PTA non-partners, even when the import surge leading to the injury to the domestic industry came primarily from PTA partners (*Argentina – Safeguard on Footwear*). In other instances, more protection gets imposed on PTA partners, even when the import surge leading to the injury to the domestic industry also derived from PTA non-partners (*Dominican Republic - Safeguard on Polypropylene Bags and Tubular Fabric*). Discerning the nature of the discrimination requires careful examination of both the form of the applied measures – e.g., specific duties or price undertakings, in lieu of ad valorem duties – as well as the potential differences in the additional level of protection imposed across PTA partners versus non-partners.

To conclude, it is worth describing some of the political-economic channels that may explain why governments seek to differentiate between PTA partners and non-partners in how they apply TTBs after implementation of a PTA. In some instances, perhaps the economic efficiency concerns of trade diversion resulting from the PTA, coupled with the inability to further cut applied MFN tariffs (a la Freund and Ornelas, 2010) create the incentive for countries to restore more MFN-like treatment by imposing TTBs on PTA partners. Or it could be that because of political-economy influences, industries may switch from lobbying for protection from applied tariffs toward TTBs. On the other hand, political-economic shocks may arise after implementation of a PTA based on a newfound coalescence of shared political-economic interests across PTA partners that trigger more TTB use against non-partners. An economic motive could be the larger block to take advantage of new opportunities to exercise market power vis-à-vis third countries. A political or redistributive motive could be made possible if the PTA changes lobbying incentives by firms or even unions whose influence may be newly able to cross national borders. There is a substantial need for additional research clarifying both the trends in the underlying data on PTAs and TTBs and these potential underlying political-economic channels through which such relationships may arise.

References

- Bagwell, Kyle and Staiger, Robert W. 2011. 'What do trade negotiators negotiate about? Empirical evidence from the World Trade Organization', *American Economic Review* 101(4): 1238-73.
- Blonigen, Bruce A. 2005. 'The effects of NAFTA on antidumping and countervailing duty activity', *World Bank Economic Review* 19(3): 407-424.
- Bown, Chad P. 2007. 'Canada's anti-dumping and safeguard policies: overt and subtle forms of discrimination', *The World Economy* 30(9): 1457-1476.
- Bown, Chad P. 2010. 'China's WTO entry: antidumping, safeguards, and dispute settlement', in Robert C. Feenstra and Shang-Jin Wei (eds.), *China's Growing Role in World Trade*. Chicago: University of Chicago Press, pp. 281-337.
- Bown, Chad P. 2011a. 'Taking stock of antidumping, safeguards and countervailing duties, 1990-2009', *The World Economy* 34 (12): 1955-98.
- Bown, Chad P. 2011b. *The Great Recession and Import Protection: The Role of Temporary Trade Barriers*. London, UK: CEPR and World Bank.
- Bown, Chad P. 2013a. 'Emerging economies and the emergence of south-south protectionism', *Journal of World Trade* 47(1): 1-44.
- Bown, Chad P. 2013b. 'How different are safeguards from antidumping? Evidence from U.S. trade policies toward steel', *Review of Industrial Organization* 42(4): 449-81.
- Bown, Chad P. 2013c. *Temporary Trade Barriers Database*. The World Bank. Available on line at <http://econ.worldbank.org/ttbd/> , May. Last accessed June 15.
- Bown, Chad P. 2014. 'Trade policy flexibilities and Turkey: tariffs, antidumping, safeguards, and WTO dispute settlement', *The World Economy* 37(2): 193-218.
- Bown, Chad P. and Crowley, Meredith A. 2010. 'China's export growth and the China safeguard: threats to the world trading system?' *Canadian Journal of Economics* 43(4): 1353-1388.
- Bown, Chad P. and Crowley, Meredith A. 2013a. 'Self-enforcing trade agreements: evidence from time-varying trade policy', *American Economic Review* 103(2): 1071-90.

- Bown, Chad P. and Crowley, Meredith A. 2013b. 'Import protection, business cycles, and exchange rates: evidence from the Great Recession', *Journal of International Economics* 90(1): 50-64.
- Bown, Chad P. and Crowley, Meredith A. Forthcoming. 'Emerging economies, trade policy, and macroeconomic shocks', *Journal of Development Economics*.
- Bown, Chad P. and McCulloch, Rachel. 2003. 'Nondiscrimination and the WTO Agreement on Safeguards', *World Trade Review* 2(3): 327-48.
- Bown, Chad P. and McCulloch, Rachel. 2004. 'The WTO Agreement on Safeguards: an empirical analysis of discriminatory impact', in Michael G. Plummer (ed.), *Empirical Methods in International Trade: Essays in Honor of Mordechai Kreinin*. Cheltenham, UK: Edward Elgar, pp. 145-168.
- Bown, Chad P. and Tovar, Patricia. 2011. 'Trade liberalization, antidumping, and safeguards: evidence from India's tariff reform', *Journal of Development Economics* 96 (1): 115-25.
- Bown, Chad P. and Wu, Mark. 2014. 'Safeguards and the perils of preferential trade agreements: Dominican Republic – Safeguard Measures', *World Trade Review* 13(2): 179-227.
- Broda, Christian, Limão, Nuno, and Weinstein, David E. 2008. 'Optimal tariffs and market power: the evidence', *American Economic Review* 98(5): 2032-65.
- Calvo-Pardo, Hector, Freund, Caroline and Ornelas, Emanuel. 2011. 'The ASEAN free trade agreement: impact on trade flows and external trade barriers', in Robert J. Barro and Jong-Wha Lee (eds.), *Costs and Benefits of Economic Integration in Asia*, Oxford: Oxford University Press, pp. 157-186.
- Estevadeordal, Antoni, Freund, Caroline and Ornelas, Emanuel. 2008. 'Does regionalism affect trade liberalization toward non-members?', *Quarterly Journal of Economics* 123(4): 1531-75.
- Freund, Caroline and Ornelas, Emanuel. 2010. 'Regional trade agreements', *Annual Review of Economics* 2(1): 139-66.
- Hoekman, B.M. and M.M. Kostecki. 2009. *The Political Economy of the World Trading System: The WTO and Beyond*. (Third edition.) New York: Oxford University Press.

- Karacaovali, Baybars. 2011. 'Turkey: temporary trade barriers as resistance to trade liberalisation with the European Union?', in Chad P. Bown (ed.), *The Great Recession and Import Protection: The Role of Temporary Trade Barriers*. London: CEPR and World Bank, pp. 367–410.
- Karacaovali, Baybars. 2013. 'Trade policy determinants and trade reform in a developing country: the case of Colombia', University of Hawaii at Manoa working paper, January.
- Karacaovali, Baybars and Limão, Nuno. 2008. 'The clash of liberalizations: preferential vs. multilateral trade liberalization in the European Union', *Journal of International Economics* 74(2): 299-327.
- Limão, Nuno. 2006. 'Preferential trade agreements as stumbling blocks for multilateral trade liberalization: evidence for the U.S.', *American Economic Review* 96(3): 896-914.
- Limão, Nuno. 2007. 'Are preferential trade agreements with non-trade objectives a stumbling block for multilateral liberalization?', *Review of Economic Studies* 74(3): 821-55.
- Limão, Nuno and Tovar, Patricia. 2011. 'Policy choice: theory and evidence from commitment via international trade agreements', *Journal of International Economics* 85(2): 186-205.
- Ludema, R. and A.M. Mayda. 2013. 'Do terms-of-trade effects matter for trade agreements? Theory and evidence from WTO countries', *Quarterly Journal of Economics* 128(4): 1837-1893.
- Mavroidis, Petros C., Messerlin, Patrick A. and Wauters, Jasper M. 2008. *The Law and Economics of Contingent Protection in the WTO*. Cheltenham, UK: Edward Elgar.
- Messerlin, Patrick A. 2004. 'China in the World Trade Organization: antidumping and safeguards', *World Bank Economic Review* 18(1): 105-130.
- Panagariya, Arvind. 2000. 'Preferential trade liberalization: the traditional theory and new developments', *Journal of Economic Literature* 38(2): 287–331.
- Pauwelyn, Joost. 2004. 'The puzzle of WTO safeguards and regional trade agreements', *Journal of International Economic Law* 7(1): 109-142.
- Prusa, Thomas J. and Teh, Robert. 2010. 'Protection reduction and diversion: PTAs and the incidence of antidumping disputes', *NBER Working Paper* No. 16276.

- Prusa, Thomas J. and Teh, Robert. 2011. 'Contingent protection rules in regional trade agreements', in Kyle Bagwell and Petros C. Mavroidis (eds.), *Preferential Trade Agreements*. Cambridge: Cambridge University Press, pp. 60-114.
- Prusa, Thomas J. 2011. 'Trade remedy provisions', in Jean-Pierre Chauffour and Jean-Christophe Maur (eds.), *Preferential Trade Agreement Policies for Development*. Washington, DC: The World Bank, pp. 179-196.
- Teh, Robert, Prusa, Thomas J. and Budetta, Michele. 2009. 'Trade remedy provisions in regional trade agreements', in Antoni Estevadeordal, Kati Suominen, and Robert Teh (eds.), *Regional Rules in the Global Trading System*. Cambridge: Cambridge University Press, pp. 166-249.
- Tovar, Patricia. 2012. 'Preferential trade agreements and unilateral liberalization: evidence from CAFTA', *World Trade Review* 11(4): 591-619.
- Vandenbussche, Hylke and Zanardi, Maurizio. 2008. 'What explains the proliferation of antidumping laws?' *Economic Policy* 23(1): 98-103.
- Viner, Jacob. 1950. *The Customs Union Issue*. New York: Carnegie Endowment for International Peace.
- WTO. 2003. *United States – Definitive Safeguard Measures on Imports of Certain Steel Products: Final Reports of the Panel*. WT/DS248/R.
- WTO. 2013. 'Regional Trade Agreements', Available on line at http://wto.org/english/tratop_e/region_e/region_e.htm, last accessed 19 September 2013.

Table 1. TTB Policy-Imposing Economies and Affected Imports in 2011

Economy (year of economy's first AD initiation)	2011 Trade-weighted share of imports...					Product line share of imports...	
	...subject to AD only (1)	...subject to all TTBs (2)	...from China subject to all TTBs (3)	...from other emerging economies subject to all TTBs (4)	...from high-income economies subject to all TTBs (5)	...subject to all TTBs in 2011 (6)	...subject to all TTBs in 2001 (7)
G20 emerging economies	3.0*	3.3*	10.8†	2.3†	1.7†	3.2*	1.5*
1. India (1992)	5.8	6.3	21.9	3.0	2.7	6.9	2.8
2. Turkey (1989)	2.6	4.3	16.0	4.2	2.1	6.9	1.5
3. China (1997)	3.2	3.2	.	1.1	3.9	1.4	0.3
4. Argentina (NA)	2.5	2.5	6.8	1.9	1.2	3.3	2.4
5. Brazil (1988)	1.7	1.7	4.4	1.0	1.2	1.9	1.2
6. Indonesia (1996)	0.8	1.2	2.4	1.5	0.8	1.8	0.9
7. South Africa (NA)	0.3	0.3	0.4	0.3	0.3	0.6	1.3
8. Mexico (1987)	0.3	0.3	0.5	0.7	0.2	1.1	23.4
Other emerging economies							
1. Pakistan (2002)	1.4	1.4	2.5	2.0	0.7	0.3	.
2. Peru (1992)	1.3	1.3	3.6	1.3	0.3	2.5	0.8
3. Thailand (1994)	1.2	1.2	1.2	0.8	1.3	0.6	<0.1
4. Colombia (1991)	0.5	0.5	3.4	0.1	<0.1	0.9	0.4
5. Malaysia (NA)	0.2	0.2	<0.1	0.4	0.1	<0.1	<0.1
6. Philippines (1994)	<0.1	<0.1	0.1	<0.1	<0.1	0.1	0.3
7. Chile (1994)	<0.1	<0.1	0.0	<0.1	<0.1	<0.1	0.8
G20 high-income economies	2.1	2.2	4.7	1.9	1.0	1.9	1.8
1. United States (1922)	3.9	4.0	8.3	3.6	2.1	5.8	4.6
2. European Union (1968)	1.7	1.8	4.2	1.2	0.8	3.1	2.3
3. Canada (NA)	0.7	0.7	2.1	0.5	0.4	1.1	2.2
4. Australia (1950s)	0.4	0.5	1.2	0.1	0.3	0.7	0.6
5. South Korea (NA)	0.4	0.4	0.6	0.9	0.1	0.6	0.6
6. Japan (1982)	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.1
Other high-income economies							
1. New Zealand (NA)	1.1	1.1	0.4	0.3	1.4	0.4	0.1
2. Israel (1991)	0.3	0.3	1.7	0.1	0.1	0.3	0.1
3. Taiwan, China (1984)	0.2	0.2	0.8	<0.1	<0.1	0.4	0.1

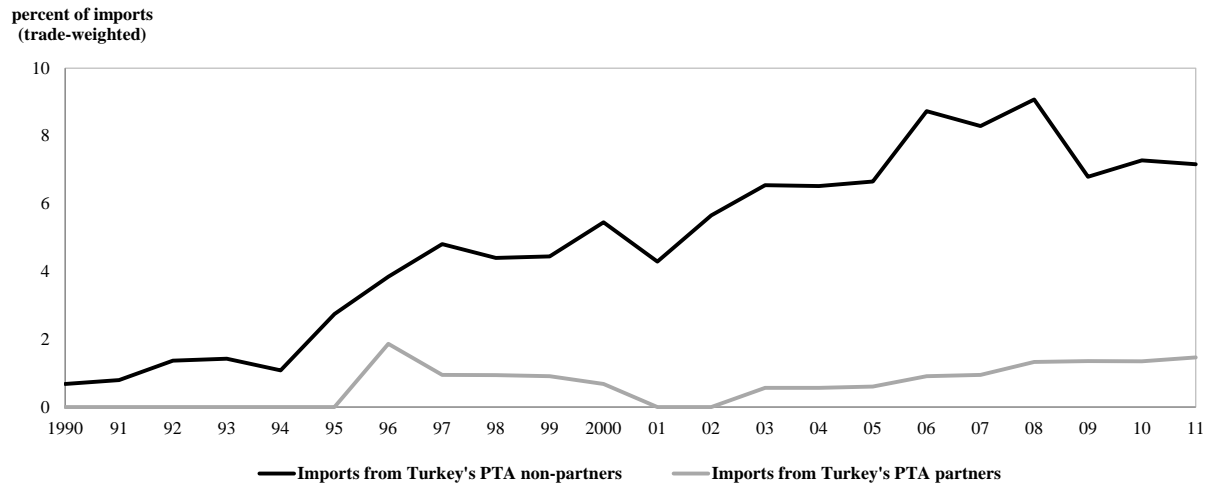
Source: derived from Bown (2013a, Table 1), Bown (2013c), and Vandenbussche and Zanardi (2008).

Notes: Shares of nonoil imports. Ranked by column (2) within each category of policy-imposing economy. NA=Not Available. TTB = temporary trade barrier and includes antidumping (AD), countervailing duties, global safeguards and China-specific transitional safeguards. *Aggregation does not include Mexico as policy-imposing economy. †Aggregation does not include China or Mexico as policy-imposing economies.

Table 2. The Discriminatory Nature of Safeguards in the Four Case Studies

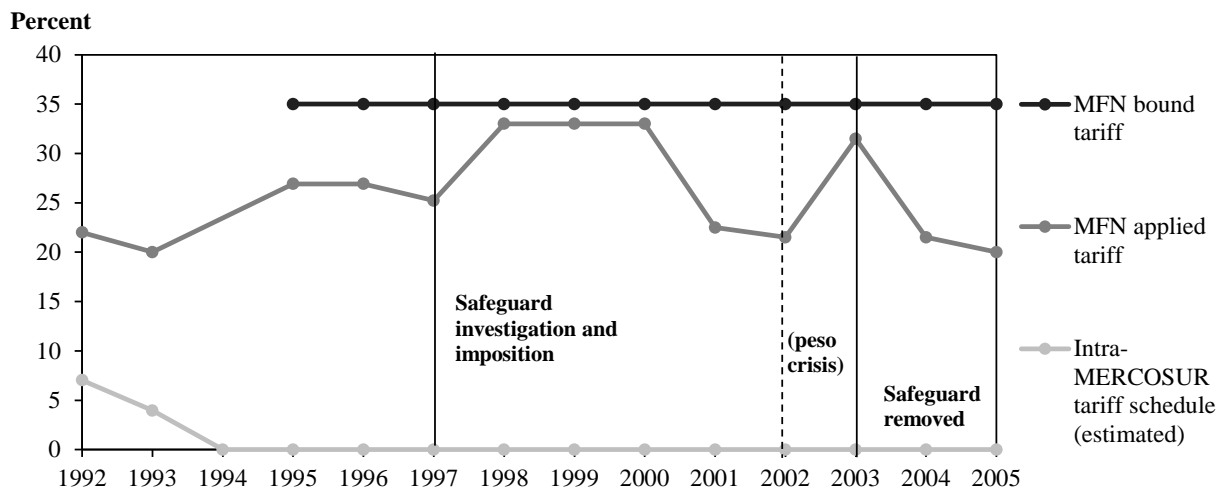
<i>Question:</i>	<i>Argentina – Footwear in 1997</i>	<i>US – Steel in 2002</i>	<i>Turkey – Footwear in 2006</i>	<i>Dominican Republic – Tubular Fabrics and Polypropylene Bags in 2009</i>
<i>How discriminatory was the safeguard investigation, in terms of considering the foreign cause of injury?</i>	<ul style="list-style-type: none"> Disregarded that injury likely caused by increase in imports from PTA partner alone, these imports stemming from PTA implementation 	<ul style="list-style-type: none"> Injury likely caused by increase in imports from PTA non-partners, unrelated to PTA implementation 	<ul style="list-style-type: none"> Injury likely caused by increase in imports from PTA non-partners and PTA partners 	<ul style="list-style-type: none"> Injury likely caused by increase in imports from PTA non-partners and PTA partners
<i>How discriminatory was the applied safeguard?</i>	<ul style="list-style-type: none"> Safeguard applied only on PTA non-partners 	<ul style="list-style-type: none"> Safeguard applied only on PTA non-partners 	<ul style="list-style-type: none"> Safeguard applied on both PTA non-partners and PTA partners However, safeguard applied as specific duties; this resulted in de facto higher ad valorem equivalent tariff imposed on PTA non-partners than PTA partners 	<ul style="list-style-type: none"> Safeguard applied on both PTA non-partners and PTA partners However, safeguard applied by denoting final overall rate of protection; this resulted in de facto higher safeguard tariff imposed on imports from PTA partners than PTA non-partners
<i>How discriminatory was the trade flow impact of the applied safeguard?</i>	<ul style="list-style-type: none"> Substantial additional imports from PTA partners and sharp decline in imports from PTA non-partners 	<ul style="list-style-type: none"> Additional imports from PTA partners and sharp decline in imports from PTA non-partners 	<ul style="list-style-type: none"> Slowed import growth from both PTA partners and non-partners 	<ul style="list-style-type: none"> Drastic reduction in import levels from both PTA partners and non-partners
<i>Overall conclusion?</i>	<p>Additional Pro-PTA Discrimination</p>		<p>Additional Anti-PTA Discrimination</p>	

Figure 1. Turkey's Imports Subject to Imposed Temporary Trade Barriers, by PTA Partner Status



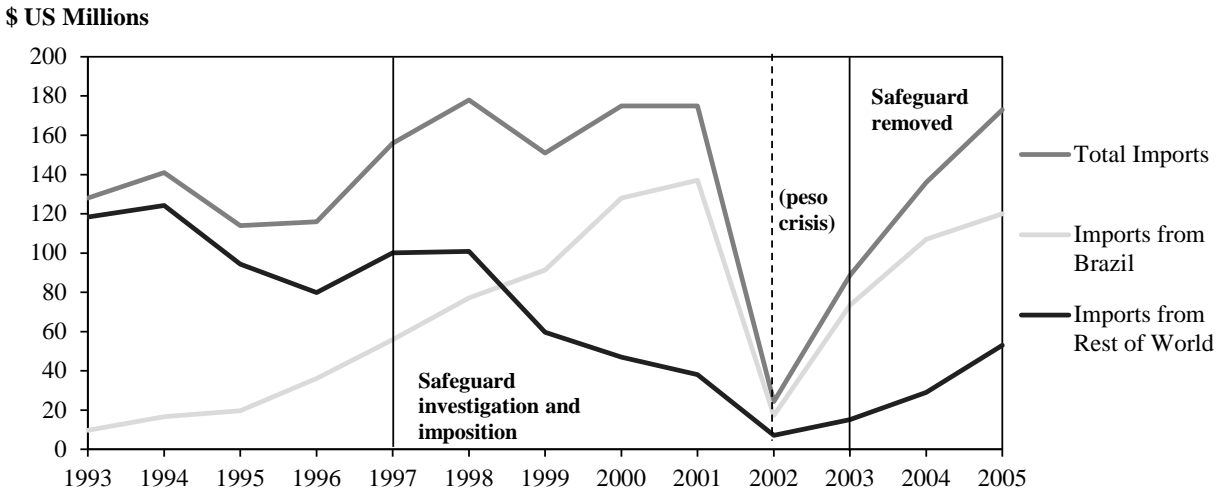
Source: derived from Bown (2014, Figure 4). Temporary Trade Barriers include antidumping, global safeguards, countervailing duties, and the China-specific transitional safeguard. PTA=preferential trade agreement.

Figure 2. Argentina's Average Tariffs on Imports of Footwear in Categories Subject to the 1997 Safeguard



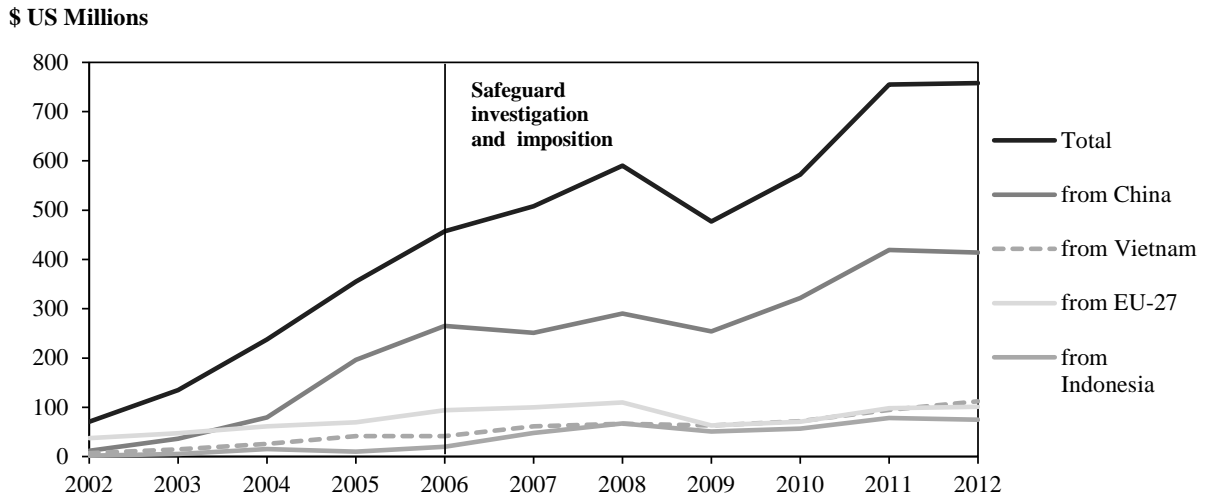
Source: constructed by the authors with 6-digit HS import data from UN Comtrade via WITS and Bown (2013).

Figure 3: Argentina's Imports of Footwear in Categories Subject to the 1997 Safeguard



Source: constructed by the authors with 6-digit HS import data from UN Comtrade via WITS and Bown (2013).

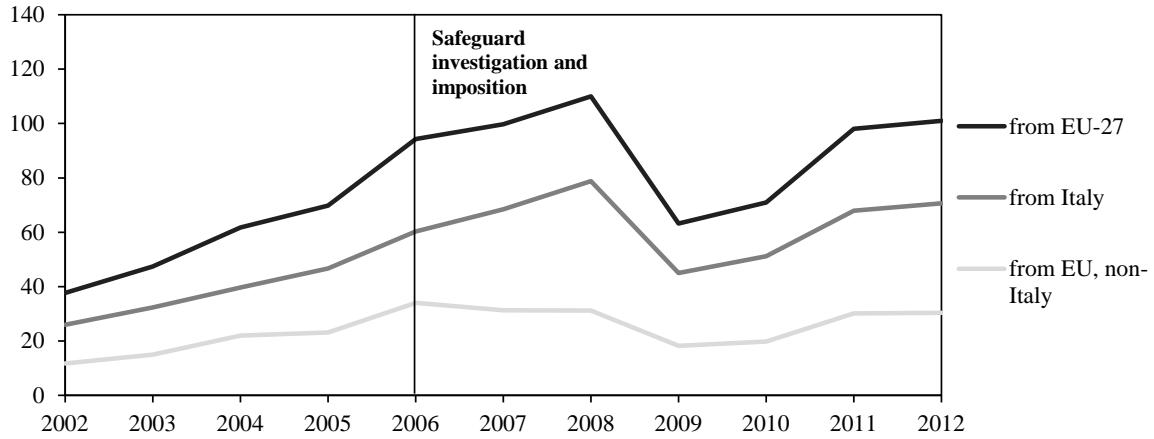
Figure 4. Turkey's Imports of Footwear from Selected Source Countries



Source: constructed by the authors with 6-digit HS import data from UN Comtrade via WITS and Bown (2013).

Figure 5. Turkey's Imports of Footwear from Selected EU Source Countries

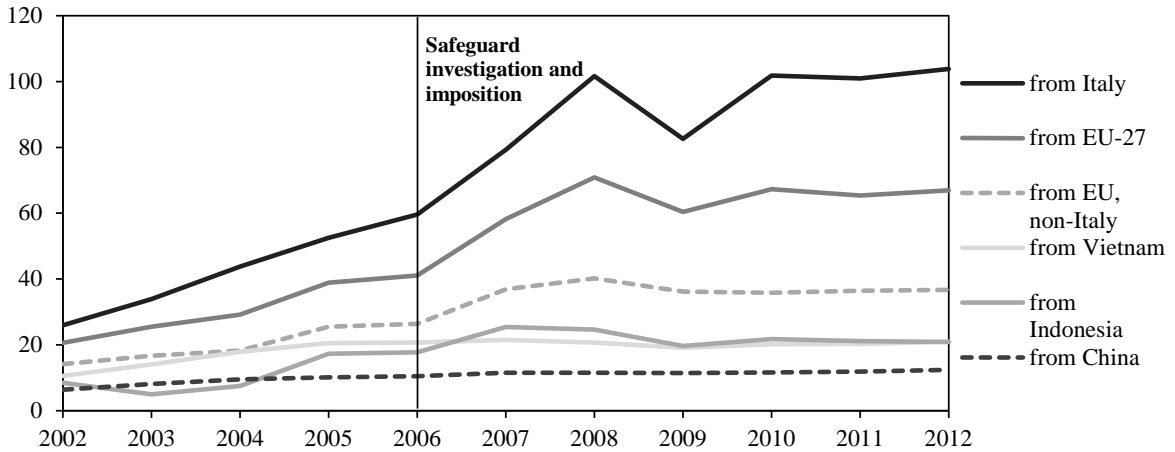
\$ US Millions



Source: constructed by the authors with 6-digit HS import data from UN Comtrade via WITS and Bown (2013).

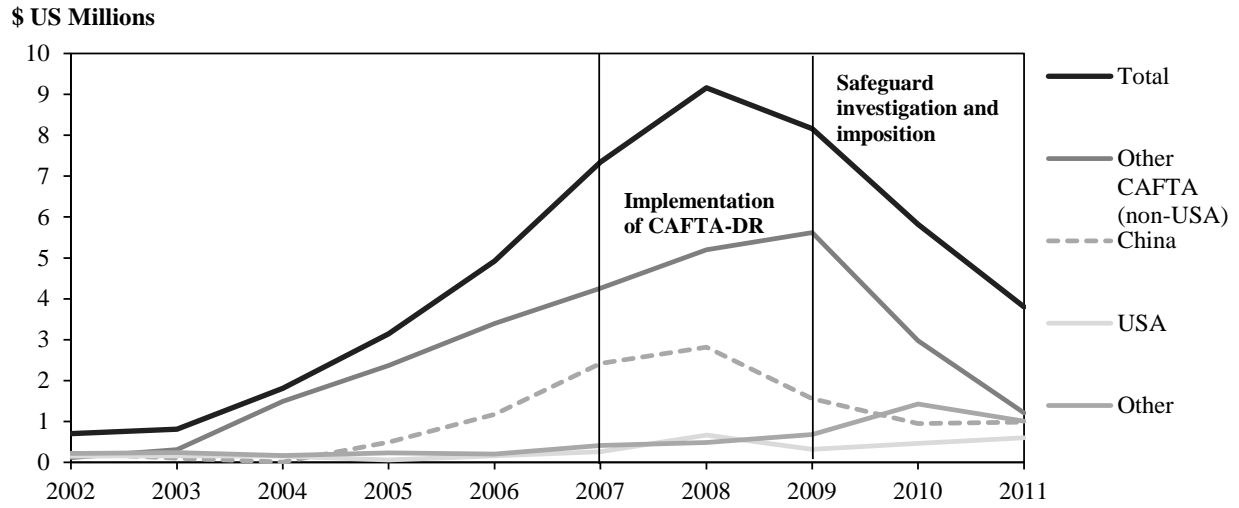
Figure 6. Turkey's Import Prices of Footwear from Selected Source Countries

\$ US Millions



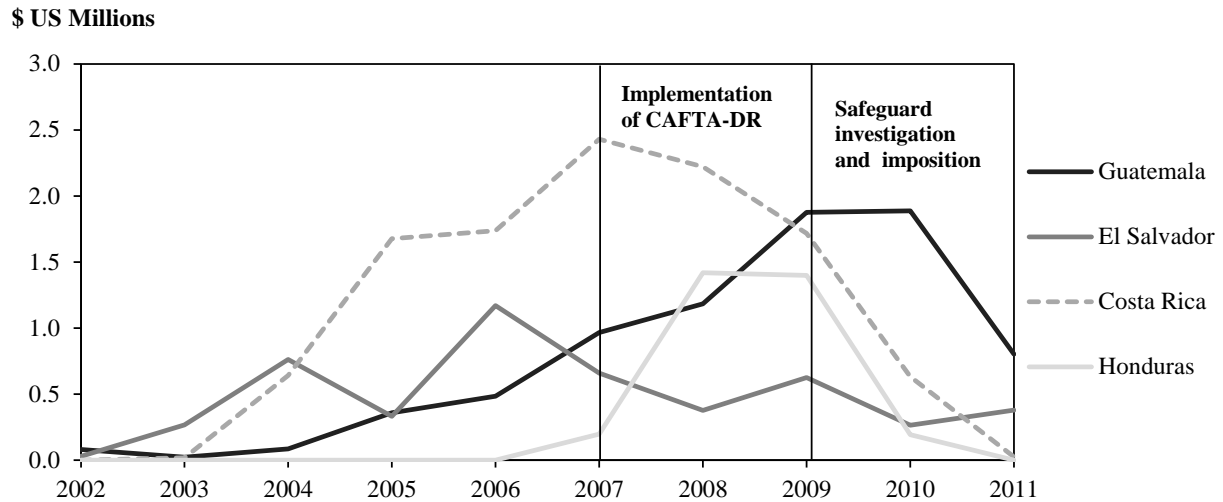
Source: constructed by the authors with 6-digit HS import data from UN Comtrade via WITS and Bown (2013).

Figure 7: Dominican Republic Imports of Polypropylene Bags and Tubular Fabrics



Source: derived from Bown and Wu (2014, Figure 3).

Figure 8: Dominican Republic Imports of Polypropylene Bags and Tubular Fabrics from Selected CAFTA Source Countries



Source: derived from Bown and Wu (2014, Figure 3).