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The pre-Trump Build-up of Trade Discrimination: Scale, Form, and Drivers

Simon J. Evenett

European University Institute

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European University Institute

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Abstract

This paper contests the view that, before the U.S. tariff increases of 2018 and 2019, governments around the world successfully resisted protectionist pressures since the onset of the global financial crisis. Before President Trump was inaugurated, the cumulative build-up of over 11,000 policy interventions that discriminated against foreign commercial interests implicated over two-thirds of world goods trade. An exploratory data analysis of possible drivers of national policy mixes towards domestic and foreign commercial interests is presented. Clear differences between G20 and other nations and between the immediate crisis response (from November 2008 to December 2010) and afterwards are found.

Keywords

Global financial crisis, protectionism, World Trade Organization, G20, trade discrimination

1. Introduction*

The implementation of President Trump's *America First* trade policy, which has so far seen import tariffs imposed on approximately \$300 billion of trade, is regarded by many analysts as a defining moment for the multilateral trading system. Some contrast brazen U.S. unilateralism with policy choice in the years before, often crediting world trade rules with reining in protectionism. Paul Krugman, for example, has argued:

“The world trading system is actually a quite remarkable construction—a framework that has consistently produced a high level of global cooperation. It has been pretty robust in the face of severe shocks—notably, the world did not see a resurgence of protectionism after the 2008 financial crisis” (Krugman 2018).

But is this true? Did governments refrain from discriminating against foreign commercial interests during and after the worst global economic crisis in three-quarters of a century? For those who only associate protectionism with tariff increases, the answer is clear: there was no resurgence in protectionism. But as every economics student who has taken an international trade class knows, tariffs are not the only policy instrument available to governments to discriminate against foreign commercial interests.

Much is at stake. There is the reputation of the World Trade Organization (WTO) to think of. Coming on top of the failure to conclude the Doha Development Agenda and the near breakdown in the Appellate Body, a finding that WTO rules did not prevent widespread discrimination against foreign commercial interests during the crisis-era would cast a further cloud over the state of global cooperation on trade policy. An alternative perspective is that it may have been too much to expect an incomplete trade rule-book to rein in the behaviour of desperate governments.

A finding that there has been widespread resort to trade discrimination might also call into question our understanding of both unilateral trade policy choice (in particular the literature relating business cycles to protectionism¹) and the theory of the WTO. Over the past 20 years the thrust of the latter has been to explain why cooperation between governments happens under the auspices of the WTO (Bagwell, Bown and Staiger 2016). Where does that theory stand if the predominant feature of the past 10 years has been unilateral, extensive resort to trade discrimination? Or, put differently, if the past decade has witnessed substantial resort to trade distortions then how can this be reconciled with a body of theoretical work whose central finding is that governments forgo short-term advantage?

The evidential point of departure in this paper from other assessments of the crisis-era protectionism that focus on tariff changes and trade defence actions (Bown 2011, Kee, Neagu, and Nicita, 2013) is to employ a dataset that contains not only these policy instruments but other trade distortions. Those other trade distortions relate not only to measures that restrict imports but also to policies that stimulate exports. Once consideration is given to the gamut of public policies that can discriminate against foreign commercial interests, then the scale of commerce affected changes markedly from the low percentage points of trade affected that are reported, for example, in the WTO's monitoring reports on protectionism.

So as to be clear, no claim is made in this paper to have discovered non-tariff measures or that this paper is the first to study them. Baldwin (1970) serves as an important reminder that alert trade analysts have long been aware of the potential significance of policies other than tariffs and trade defence.

* Thanks to Patrick Buess and Piotr Lukaszuk for their support in preparing the figures for this paper. All errors are mine. Comments are welcome and should be sent to simon.evenett@unisg.ch. The project to which this paper contributes has received funding from the European Union's Horizon 2020 research and innovation program under grant agreement No 770680.

¹ Rose (2013).

Moreover Bhagwati (1988), among others, showed that resort to voluntary export restraints was the preferred discriminatory response following the sharp downturn of the early 1980s, not tariffs. Furthermore, agricultural trade economists have long been interested in the impact of state-provided export incentives, the importance of which in the contemporary era will soon become apparent.

Despite receiving a mandate from governments to document, measure, and assess non-tariff measures in 1969, the United Nations has not been able to deliver reliable data on these state acts. Now that a database is available that contains lots of information of tariffs and non-tariff measures, one goal of this paper is to examine the amount of trade covered by different policy interventions that discriminate against foreign commercial interests. It is therefore possible to see whether focusing solely on tariffs and trade defence actions provides a misleading assessment of the scale of trade discrimination witnessed since the start of the global financial crisis.

Complicating the assessment of the impact of the WTO on government resort to trade discrimination is the fact that from November 2008 to December 2018 the leaders of the Group of Twenty (G20) governments foreswore resort to certain trade policy instruments. The G20 pledge to eschew protectionism was not a binding, enforceable obligation, unlike WTO commitments. For some, then, the G20 pledge was cheap talk. However, for others—in particular, numerous political science, international relations, and international legal scholars—such “soft law” can alter behaviour. This begs the question whether the pattern of discriminatory policy choice by the G20 nations differed from those of other nations?

An exploratory empirical analysis of the determinants of G20 and non-G20 nations’ resort to trade discrimination is conducted here. This analysis is far from definitive but given the lack of research on the drivers of trade discrimination it is a start that other analysts may wish to build upon. Since Eichengreen and Irwin (2010) demonstrated the importance of substitutability between tariff increases and devaluations of the national currency in the 1930s, consideration is given here to the possibility of substitution *or* complementarity between exchange rate changes as well as fiscal stimulus packages and the resort to trade discrimination.

An implication of the “embedded liberalism” perspective advanced by Ruggie (1982) is that international trade norms—such as non-discrimination—can be suspended by governments if social or economic order is threatened by a crisis. To examine this matter here, the extent to which the resort to trade discrimination correlates with the change in unemployment at the beginning of the global financial crisis is examined.

The possibility that WTO obligations might have affected the form rather than the quantum of trade discrimination is also examined here. Specifically, evidence is presented on whether the extent of pre-crisis tariff binding overhang is correlated with measures of national trade policy stance once the global financial crisis hit. Taken together, the results of this exploratory empirical analysis shed light on whether G20 government behaviour differs from other nations and where it does not.

The emphasis throughout this paper is on policy choice before President Trump was inaugurated. Given his election was largely unanticipated, in particular before the second half of 2016, then the policy choices of other governments are unlikely to have been influenced by the expectation of his election and the *America First* trade policies that might follow.

The remainder of this paper is organised as follows. Section two describes the data sources employed in this paper. Section three presents evidence on the share of goods trade affected by crisis-era discrimination since November 2008. The scale of pre-Trump trade discrimination worldwide is compared to the amount of Chinese exports hit by U.S. tariff increases in 2018, hence putting the first year of the Sino-U.S. trade war in perspective.

Section four presents two sets of comparisons between the trade-related policy choices of the G20 members as compared to other nations. The findings of the exploratory data analysis described above is summarised in this section. Conclusions are presented in section five.

2. Data sources employed

The database on commercial policy intervention used in this study is the Global Trade Alert (GTA). Established in June 2009, it seeks to document *all* public policy *changes* that *alter the relative treatment* of domestic versus foreign firms around the *world*.² Country coverage, therefore, extends beyond the G20. Identifying changes in public policy implies that the GTA database is best thought of revealing the “delta” (the change) in public policy towards international business rather than the height or size of any trade distortion or liberalisation.

The GTA does not confine itself to a pre-defined set of trade policy instruments or to those policy instruments covered by WTO agreements.³⁴ Nor does the GTA confine itself to measures harming foreign commercial interests, liberalising policy interventions are recorded too. Moreover, governments may discriminate against foreign commercial interests in markets abroad, not just in their home markets. Therefore, where relevant, evidence of changes in public policy towards exporters was collected as well.

Wherever possible, and this has been the case in over 93% of interventions documented, official sources are used to document a public policy intervention. As of this writing, the Global Trade Alert database includes information on 20,477 different public policy interventions, over 14,000 of whose implementation harmed foreign commercial interests.⁵

The GTA database uses the United Nations (UN) MAST classification for non-tariff measures. Where possible non-tariff measures, including tariff-rate quotas, are assigned to their respective MAST “chapter” and reference will be made in the next section to different MAST chapters.⁶ Later a distinction will be made between the more transparent commercial policy interventions and less transparent state actions and the MAST classification will be used to give a precise definition of the former.

Each entry in the GTA database contains information on the implementing jurisdiction, the dates a measure was announced, came into effect, or lapsed, the policy instrument used, the products⁷ or services⁸ affected, the sector affected, and a description of the measure. From this information, automated means are used to establish which trading partners are affected by the implementation of a measure.

For example, if Switzerland raises the tariff on imported butter then fine-grained UN trade data (from the UN COMTRADE database) is used to identify which trading partners exported butter to Switzerland in the year before the measure came into force. So-called support tables for international trade in goods, foreign direct investment, migration and where possible services trade have been assembled so that the identification of affected trading partners is subject to the least human intervention possible (thereby reducing the potential for human error.)

² For a longer account of the methods used by the GTA team to document public policy see section four of Evenett (2019).

³ The pitfalls in confining data collection to a pre-defined set of trade policies are described in section three of Evenett (2019). The deeper question here is, given the many forms of cross-border commerce in existence in the 21st century, what definition of protectionism is fit for purpose? Having written this, the GTA does not include information on technical barriers to trade, sanitary and phytosanitary standards, and regional trade agreements, each of which some analysts contend can be a source of discrimination against foreign commercial interests. There exist other databases that document developments in each of the latter three areas of policy.

⁴ Notice also that the relative treatment test is not a test of WTO legality.

⁵ Statistics on global totals for policy interventions harming and benefiting foreign commercial interests can be obtained from https://www.globaltradealert.org/global_dynamics.

⁶ For a list of the 16 MAST chapters of non-tariff measures as well as other information about this UN initiative see https://unctad.org/en/PublicationsLibrary/ditctab20122_en.pdf?user=46.

⁷ Products are classified using the six-digit level of disaggregation of the UN Harmonised System. This is the most disaggregated product classification for which international trade data is available worldwide.

⁸ Services are assigned the relevant three-digit level of disaggregation of the UN CPC sectoral classification.

To avoid including public policy interventions that are likely to have trivial effects on international commerce, the GTA team uses *de minimis* thresholds. For example, trading partners where less than \$1 million of trade is affected by a foreign state act are not included in reports of policy interventions contained in the GTA database. Moreover, state aid involving less than \$10 million of state largesse or less than \$10 million of commerce are excluded as well.

For each public policy intervention affecting goods trade in the GTA database, which includes information on the implementing jurisdiction, the product codes affected, and the affected trading partners, it is possible to calculate the total value of international trade that is “covered” or potentially affected by the implementation of that intervention. Given that the implementation of an intervention in a given year could affect the amount of trade in that year, then estimates of the potential trade affected must come from prior years.

So as to avoid crisis-era intervention affecting any of the trade affected calculations, the GTA team uses the global trade flows available at the six-digit level of the UN Harmonised System for 2005-2007, three years before the crisis began, to define the shares of world goods trade affected by each intervention. Data on the total value of global trade in the year before an intervention is implemented as well as the calculated share of world trade mentioned in the last sentence are then used to estimate the total amount of trade affected by the implementation of that intervention.⁹

The use of the GTA database in research, business analyses, media articles, and by governments is growing. As of this writing, there are 1,690 entries in the Google Scholar database that mention the GTA and its findings. The GTA database is frequently downloaded from its website.¹⁰ In 2016, the International Monetary Fund (IMF) noted “The Global Trade Alert database has the most comprehensive coverage of all types of trade-discriminatory and trade-liberalizing measures, although it begins only in 2008” (IMF 2016). An independent comparison of available datasets on crisis-era trade policy found that the GTA had the largest country coverage of non-tariff measures (Rau and Vogt 2017).

In the exploratory data analysis conducted here three macroeconomic indicators are used. The data source for each is the World Bank’s *World Development Indicators*. The first seeks to capture the scale of the fiscal stimulus that a government undertook and is measured by the logarithm of the ratio of final government consumption spending on goods and services at the end of a given period to that at the beginning of the time period in question.

The second indicator relates to exchange rate depreciation. Here the specific measure used is the percentage depreciation in the value of a national currency against the United States Dollar during the period in question. The third indicator relates to the dislocation in a national labour market at the start of the global financial crisis. This is measured as the increase in percentage points of the unemployment rate from 2007 to 2009.

As part of the exploratory data analysis it was necessary to construct a measure of how constrained a WTO member’s tariff policies were by its respective tariff bindings just before the global financial crisis began. Using the WTO publication *Tariff Profiles 2008* it was possible to calculate the difference between the mean bound tariff rate and the mean applied tariff rate for all goods for 2007 (or for the latest year available.) For the 123 jurisdictions for which this data was available, 96 of them had a tariff binding overhang of more than seven percentage points.

The seven percentage point threshold is important for it equals the size of the tariff increase undertaken by the United States when it implemented the Smoot-Hawley tariff in 1930. Therefore, 78% of the WTO members for which data is available could have raised their tariffs by the same amount as Smoot-Hawley and not broken their WTO obligations at the beginning of the global financial crisis of

⁹ The GTA team has experimented with other ways to address the endogeneity problem. For more information kindly write to the author.

¹⁰ The data is available at https://www.globaltradealert.org/data_extraction.

2008. Several large emerging markets (but not China) could have done so. Such evidence already casts doubt on the degree to which WTO obligations actually limited resort to trade discrimination at the start of the global financial crisis. Indeed, it would be better to argue that these 96 governments did not raise their tariffs significantly at the beginning of the crisis because they chose to, not because they were prevented from doing so by their WTO commitments.

Having described the data employed, the discussion now turns to an assessment of the amount of global trade affected by the build-up of discrimination against foreign suppliers of goods since November 2008, the month that the G20 Leaders declared for the first time that they would eschew protectionism.

3. The build-up of crisis-era trade discrimination worldwide.

The purpose of this section is to summarise the principal implications of the GTA's data collection for the scale of global goods trade that face policy-induced discrimination. Although the focus of this paper is on developments before President Trump was inaugurated, data on the years 2017-19 is also presented for completeness sake.

In estimating the scale of world goods trade facing discrimination imposed by foreign governments it is important to take into account of

- (a) the fact that a discriminatory measure may lapse or be removed,
- (b) the fact that a measure may be implemented during a year and therefore some adjustment for duration in force is required,
- (c) that a particular trade flow may face multiple policy-induced trade distortions when competing at home or abroad, and
- (d) that state-provided export incentives by other governments may create trade distortions for a nation's exports to third markets.

Each of these features have been accounted for in the estimates that follow.

Figure 1 presents for each of the years 2009 to 2019¹¹ estimates of the shares of world goods trade affected by every trade distortion in force in a given year (see the line "All included MAST chapters"¹²). Given that the GTA started collecting data in November 2008, then it is worth recalling that the shares presented would have been zero at the start. The reported shares therefore reveal how much of global goods trade were affected by the trade discrimination introduced since the beginning of the global financial year *and* that remained in force during each subsequent year. By 2016, before President Trump was inaugurated, more than two-thirds of global goods trade faced one or more trade distortions that were in effect that year.

The build-up over time in the shares of global goods trade affected by trade discrimination is shown clearly in Figure 1. There was a huge jump at the start of the crisis era. During 2009 39% of world goods trade competed against trade discrimination that had been implemented in the previous 14 months (that is, since 1 November 2008). By 2010 that percentage had jumped to 57% from which it rose more slowly to 69% in 2013. A plateau of sorts emerges during 2013-16. After 2016, the share of world goods trade affected rose further, reaching 74% in June 2019.

Figure 1 also breaks down the total share of world goods trade affected by trade discrimination into three categories of policy instrument: import tariff increases, subsidies to import-competing firms

¹¹ The estimates for 2019 relate to the trade discrimination in effect in June 2019.

¹² Technically, import tariff increases do not have a place in the MAST classification but since they are a form of trade discrimination they are included in the calculation for "all" trade distortions.

(MAST chapter L), measures that affect exports including export incentives (MAST chapter P).¹³ There are several pertinent findings.

First, in each year before and after President Trump was inaugurated, the share of world goods trade affected by measures to promote exports is larger than the shares affected by subsidies to local firms and by import tariff increases. From the global perspective, measures to expand exports and grab market share from foreign rivals are on a greater scale than measures to restrict imports.

Notice also that in 2009, when many policymakers were worried about governments turning inward and succumbing to the import restrictions of the 1930s, in fact over a third of world goods trade was affected by new export incentives. As policymakers pinched the protectionist balloon in one place air was displaced not eliminated.

It is, therefore, particularly unfortunate that so many trade analysts, journalists, and policymakers link trade discrimination or protectionism to import restrictions and falling world trade. Every agricultural trade economist is aware of the effects of export subsidies on global food trade. During the crisis years that problem spread to manufactured goods trade, the WTO rules on export incentives for such goods notwithstanding.

Second, the fact that the share of global goods trade affected by export incentives fell in 2014 and the share affected by subsidies to local firms fell in 2015 implies that there is nothing inherent in the construction of the GTA dataset that implies these shares must rise over time.

Third, even though tariff increases have received a lot of attention in 2018 and 2019, in fact subsidies to import-competing firms still affect a larger share of world goods trade. Without in any way diminishing the potential resource misallocation and damage done by import tariff increases, taken together with the finding about export incentives, different types of subsidies dominate crisis-era trade discrimination. It may be that such subsidies are harder to detect—perhaps because they can be easier for governments to hide—but that does not deny their potential economic significance.

Fourth, underlying the statistics presented in Figure 1 are thousands of discriminatory policy interventions documented by the GTA team. This serves as an important reminder that the world trading system can become thoroughly distorted by the accumulation of trade distortions. High profile protectionist acts, such as the Smoot-Hawley Act, are not necessary for a world trading system to become riddled with distortions.

Fifth, since Figure 1 does report data on the shares of goods trade affected since President Trump was inaugurated, it is worth noting that the share of world trade affected by import tariff increases more than doubled from January 2016 to June 2019. Over the same timeframe the share of world goods trade affected by export incentives and subsidies to local firms also rose significantly. There is no suggestion that the United States is responsible for all of these changes.

Figure 1 can be thought of as revealing the share of world goods trade affected by the stock of trade distortions in force in each year. Another way of assessing the scale of world trade affected by government resort to trade discrimination is to compare the amounts of trade implicated by new trade distortions that are implemented each year. Figure 2 presents data on the latter.

Given the interest in the Sino-U.S. bilateral tariff war, rather than report actual amounts of trade affected, each piece of data is benchmarked against the total value of Sino-U.S. trade affected by tariff increases in 2018, indexing the latter at 100. Figure 2 presents data for each of the years 2009 to 2018

¹³ There are other forms of trade discrimination, such as government procurement measures to buy local products, that do not fit into these three categories. The purpose here is to show how much goods trade is affected by each of these three significant types of trade discrimination. Note also that any trade flow could be affected by more than one of these three types of trade discrimination, so there is no reason to expect the sum of the trade affected in any year across these three classes of policy to equal or be less than the total for the “all” category.

on the indexed value of trade affected by (a) U.S. tariff increases that target only China and visa versa, (b) all tariff hikes that harm only one nation's exports, (c) all import distortions implemented in a given year and (d) all export incentives implemented in a given year. Note also that the vertical axis of Figure 2 uses a logarithmic scale.

The line at the bottom of Figure 2 confirms that Sino-U.S. targeting of each other's exports was unusually high in 2018, indeed at least 10 times higher than any year from 2009 to 2017. Targeting with tariff increases of any one nation's exports, which includes of course U.S. targeting of Chinese exports and visa versa, spiked in 2014. This reflects the EU's withdrawal of trade preferences from Chinese goods, which came into force that year.¹⁴ Not all tariff increases have the public profile of those imposed by the Trump Administration.

A key finding in Figure 2 is the extent to which the trade affected by new import distortions of any kind is, in every year, multiples of the tariff increases associated with the Sino-U.S. tariff war in 2018. In fact, in 2018 the ratio of trade affected by new import distortions that year to trade affected by the tariff hikes between the U.S. and China was over eight, implying that plenty of other import restrictions were being imposed while attention focused on developments in Beijing and Washington, DC. Another implication is that most policy interventions that restrict or limit imports do not target a single trading partner.

Another striking finding of Figure 3 is that *in every year* the implementation of new export incentives has implicated more trade than that associated with new import distortions. The findings imply that in 2009 nearly 20 times as much trade was affected by new export incentives implemented that year than by the trade at risk from the Sino-U.S. bilateral tariff war of 2018.

At least as far as the amount of trade affected is concerned, the findings in Figure 2 call into question claims that U.S. tariff hikes of 2018 and Chinese retaliation were a defining moment in the development of the world trading system.¹⁵ In every year before the Sino-U.S. trade war the amount of trade affected by import distortions and by export incentives was far greater. The prominence of an act of trade discrimination can be misleading indicator of its global significance.

In sum, well before the Trump Administration came into office there was sustained resort by governments around the world to trade discrimination. By 2016 over two-thirds of world goods trade was affected by trade discrimination that was in effect that year. Given that the GTA reporting started in November 2008 and allowing for the fact that some discrimination may not have been documented, then the actual share of world goods trade affected is larger. Moreover, as shown in Figure 4 of Evenett (2019), larger and larger proportions of world goods trade faced multiple policy-induced trade distortions. This is the consequence of the more than 11,000 instances of trade discrimination implemented worldwide between November 2008 and December 2016.

The absence of comparable information on the resort to trade discrimination before November 2008 might lead some to argue that it is unclear that the global financial crisis induced increased resort to trade discrimination. If this "business as usual" argument is correct then it implies that there was sustained resort to trade discrimination implicating significant scales of global commerce *before* the global financial crisis. In which case, it would be hard to argue that world trade rules reined in trade discrimination in that era as well.

Of course, it would be preferable to nail down the argument with data on commercial policy choice from before November 2008. Even without such data, logic dictates that one cannot simultaneously

¹⁴ For more details see <https://voxeu.org/article/raising-tariffs-china-without-grabbing-headlines>.

¹⁵ There may well be other grounds for arguing that the Sino-U.S. trade war was a defining moment. Evenett and Fritz (2018) argue that the brazen nature of the U.S. actions against China contrasts sharply with the creeping, hidden, or murky protectionism witnessed globally in prior years.

argue that the WTO was effective in deterring protectionism before the global financial crisis *and* that there was no fundamental change in resort to trade discrimination since the crisis began.

4. Exploratory analysis of the drivers of national resort to trade discrimination.

The purpose of this section is to examine whether certain factors account for the cross-national variation in the relative treatment of domestic versus foreign commercial interests. Particular attention is given to the share of nation's entries in the GTA database whose implementation harmed foreign commercial interests. Plus a distinction is often drawn between policy measures implemented during initial crisis response (November 2008 to December 2010) and afterwards (but before the Trump Administration took office, therefore, from January 2011 to December 2016). Having written that, data for the entire period November 2008 to December 2016 is occasionally presented in this section.

Moreover, in this section a distinction is often drawn between resort to traditional, more transparent policy instruments and resort to subsidies. The former are taken to include import tariff increases, trade defence measures and safeguards (MAST chapter D), non-automatic licensing procedures (MAST chapter E1), import quotas (MAST chapter E2), export restraints including voluntary export restraints (MAST chapter E5), tariff-rate quotas (MAST chapter E6), and quantity controls not otherwise specified (MAST chapter E9). For the purposes of the analysis here subsidies are taken to include subsidies to firms competing in home markets (MAST chapter L), export subsidies (MAST chapter P7), and export credits (MAST chapter P8). Recall that there are other forms of trade discrimination that fall outside these two groups, therefore observing, for example, an increased share of measures that are transparent does not automatically imply that the share of subsidies implemented by the same jurisdiction must be lower.

Recalling also the discussion in the Introduction concerning the factors potentially influencing the behaviour of G20 governments, then a distinction is often drawn here between the variation in policy stance between G20 members and other governments. Indeed, this provides a good starting point for the discussion in this section. First indicators of the resort to trade discrimination for the G20 are contrasted with those of the next 20 largest trading nations (identified using pre-crisis trade data for 2007). In Figure 3 the proportion of harmful measures implemented by the G20 and the "next 20" is shown for all years and broken down into the initial crisis years and subsequent years.

Compared to the next 20 largest trading nations, on average the policy mix of the G20 nations was skewed more towards discrimination than liberalisation and more towards the resort to subsidies, both for import-competing firms and exporters. Resort to traditional instruments of trade discrimination was similar. Breaking out the policy responses between the initial crisis response and subsequent years is revealing. At the start of the crisis the G20 nations resorted more to traditional forms of discrimination and to subsidies than the next 20 largest trading nations. After that, during 2011 to 2016, the G20 resorted proportionally more to subsidies and less to transparent trade discrimination, such as tariff increases. Overall, G20 policy stance shifted away from more transparent trade discrimination as the crisis era lengthened.

Attention now turns towards other stylised facts concerning the crisis-era commercial policy response of the G20 members as compared to other nations. In what follows, rather than compute averages across the G20 members, each G20 member is treated as a separate observation and so are all of the other customs territories (referred to below collectively as non-G20), not just the 20 next largest traders.

The first hypothesis considered is whether governments that resort more to harmful measures also resort to more traditional forms of trade discrimination. For both the G20 and non-G20 countries during

the entire period November 2008 to December 2016¹⁶ there is a strong negative and statistically significant relationship¹⁷ between resort to harmful measures and resort to transparent forms of trade discrimination, such as import tariffs (see Figure 4). The negative relationship is stronger for the G20 countries than for the non-G20 countries. This finding is consistent with the claim that governments under more pressure to favour domestic commercial interests resort to less transparent measures for doing so.

The second hypothesis is that governments that resort more to harmful measures also resort more to subsidies. This hypothesis is not rejected by the data for the G20 members and the non-G20 members for the entire period and for the two sub-periods. A positive correlation is found for the G20 and non-G20 countries in Figure 5, suggesting that governments under more pressure to favour local firms did so through subsidies of different types.¹⁸ That this is a global phenomenon is significant in light of the criticism that singles out China's system of subsidisation.

The third hypothesis examined is whether greater resort to trade discrimination correlates with a higher proportion of imports being affected such discrimination. Figure 6 reveals no such correlation in the data for either the G20 nations or the non-G20 nations for the entire period (November 2008-December 2016, see upper panel of Figure 6). However, for the initial crisis phase a positive correlation was found for the non-G20 nations, which might be related to the earlier finding that for these countries the resort to traditional forms of trade discrimination falls off slowly as the propensity to resort to trade discrimination increases. Whatever the reason, Figure 6 shows a clear difference in behaviour between the G20 and non-G20 nations, at least as far as the initial crisis response is concerned.

The possibility that resort to trade discrimination might substitute for exchange rate depreciation was noted in the Introduction. Here the discussion is broadened to include fiscal policy stimulus, not least because many governments responded initially to the global financial crisis by increasing public expenditure on goods and services in a Keynesian manner. Later, of course, many governments embraced austerity programmes, with the opposite implications for government spending (or at least for the growth of government spending.)

Figure 7 plots the resort to trade discrimination (as measured by the share of measures implemented that were harmful to foreign commercial interest) against the logarithm of the ratio of government spending on final consumption goods between the respective end year and start year. For both the G20 and non-G20 there is a negative relationship between these two variables in the initial crisis response years, November 2008-December 2010, suggesting that fiscal stimulus acted as a substitute for tilting the commercial playing field in favour of national firms. However, the negative relationship is only statistically significant for the non-G20 nations. Moreover, the relationship breaks down for the later years (2011-2016). In sum, as far as fiscal policy is concerned, the substitutability hypothesis cannot be entirely rejected. Nor can it be argued that it is entirely endorsed.

As far as the potential substitutability between exchange rate depreciation and resort to trade discrimination is concerned, if anything, as the upper panel of Figure 8 shows, these two policy interventions were complements for the non-G20 nations during their initial crisis responses. Interestingly, no such relationship carries over to the period 2011-2016. Among the G20 nations there is no strong relationship between these two policy choices during the initial crisis response (November 2008-December 2011) or subsequently (2011-2016). Once again, G20 behaviour appears to diverge from non-G20 behaviour.

¹⁶ And for both sub-periods.

¹⁷ For each plot from Figure 4 an ordinary least-squares regression was performed on the relationship between the variables on the two axes for the G20 sample and separately for the non-G20 sample. The fitted lines are reproduced in each figure as are the p-values for the estimated coefficients.

¹⁸ The correlation remains positive and the p-values low if the observations where no subsidies were observed are dropped.

To assess whether the initial dislocation in the labour market, as proxied by the increase in the rate of unemployment from 2007 to 2009, may have influenced the resort to trade discrimination, the relationship between these variables was plotted and analysed (see Figure 9). The Embedded Liberalism hypothesis of Ruggie suggests that accepted international norms, such as non-discrimination towards trading partners, may be suspended if a crisis threatens social stability. Countries differ in terms of the initial labour market impact of the global financial crisis and so it is of interest to see if any clear relationship appears in the data.

The upper panel of Figure 9 shows that for the G20 members resort to trade discrimination was higher by governments whose economies had experienced higher initial increases in unemployment. However, this positive relationship is not statistically significant. Interestingly, for the initial crisis years there is a mild negative relationship between the initial unemployment increase and resort to trade discrimination for the non-G20 countries, which is at odds with Ruggie's thesis. As the bottom panel of Figure 9 shows there is no apparent relationship between the initial increase in unemployment and the propensity to engage in trade discrimination from 2011-2016, suggesting that whatever initial shock there was to national labour markets did not have an enduring effect on commercial policy choice.

The tightness of a country's WTO obligations is the final conditioning factor considered here. Much is made of trade rules and their apparent power. Given the substantial differences in the tariff binding overhangs across WTO members before the global financial crisis hit, to what extent did governments with less room for manoeuvre chose different commercial policy mixes than others? In Figure 10 the propensity to resort to discrimination was plotted against the tariff binding overhang in 2007 for the initial crisis years (November 2008-December 2010) and subsequently (January 2011-December 2016).

Reviewing both panels of Figure 10 for non-G20 countries there is no evident relationship between their commercial policy responses and the tightness of their tariff bindings in either period. This may be because other factors matter or that there may be better indicators of the strength of a nation's WTO disciplines. In contrast, for the G20 members a negative relationship is found in both periods, implying that the smaller the tariff binding overhang the larger the resort to trade discrimination. However, it should be noted that that relationship is only statistically significant¹⁹ once the initial crisis era passed, that is, for the six years 2011-2016. It would appear that tighter tariff disciplines on G20 members are associated, if anything, with more harmful policy mixes towards foreign commercial interests.

Similar correlations were performed for the resort to transparent forms of trade discrimination, see Figure 11. In both periods there is no apparent relationship between resort to transparent forms of trade discrimination and strictness of tariff bindings for the large group of non-G20 countries. However, for the G20 countries there is a statistically insignificant positive relationship, suggests a weak tendency for G20 members that have plenty of space to raise their tariffs to resort to more transparent forms of trade discrimination (of which, tariff increases are one option.)

When it comes to the resort to subsidisation, however, there are stronger relationships between the tightness of tariff bindings and the propensity to intervene in this manner to harm foreign commercial interests, see Figure 12. Although in terms of statistical significance the relationship is stronger for the years 2011-16, in both periods those G20 members that had less room to increase their import tariffs resorted more to subsidisation of local firms and of exporters. Whatever one's assessment of the effect of WTO disciplines on the quantum of G20 trade discrimination, this finding suggests that the latitude allowed governments in their pre-crisis tariff obligations at the WTO affected the form in which they discriminated against foreign commercial interests. Taking the findings of Figures 11 and 12 together, G20 governments appear to have substituted transparent trade restrictions for subsidies.

Overall, this exploratory data analysis has revealed differences between G20 and non-G20 members in the resort to trade discrimination and in the form of that discrimination. Monetary and fiscal policy

¹⁹ And only at the 10% level.

choices appear to have influenced the commercial policy decisions of the non-G20 members more than the G20 members. Whereas the tightness of pre-crisis tariff bindings appears to have had more influence on the propensity and form of trade discrimination of the G20 members than on the non-G20 members.

5. Concluding remarks

Given the attention that the Sino-U.S. trade war has received, it is no wonder that analysts begun to examine the causes and consequences of this high-profile disruption to what many regarded as a well-functioning global trading system. Making use of a detailed dataset of public policy intervention collected over the past decade, evidence was presented here that shows that the world trade in goods was thoroughly distorted, principally by trade-distorting subsidies, well before the election of President Trump seemed at all likely.

Since economic policy analyses require carefully-specified initial conditions against which to judge a policy shock, such as imposing tariffs on several hundred billion US dollars of Chinese imports, then taking account of how distorted trade was when the Trump Administration took office could have material implications for the estimates of that shock. Put differently, modelling the impact of the Sino-U.S. tariff war on the assumption that world goods markets are trading freely, or moderately freely, may be highly misleading.

Another important finding is that steps to stimulate national exports cover much more of world goods trade than steps to restrict imports. The trade policy response to the 1930s Great Depression involved significant resort to import restrictions and competitive devaluations. The trade policy response to the 2008 Global Financial Crisis was dominated by measures to promote exports. Like generals, who are often accused of trying to re-fight the last war, many trade policy analysts appear to have looked for the 1930s policy response and, having found none, prematurely declared victory for the world trading system. For sure, the economics and political economy of export incentives and import restrictions are certainly different, but they are both trade distortions.

That nearly three-quarters of world trade currently faces one or more trade distortions imposed since the crisis began calls into question the effectiveness of current international trade rules.²⁰ Some may be tempted to argue that matters would have been worse in the absence of those trade rules. Surely, the riposte is that if distortions to three-quarters of world trade constitute victory, then what constitutes defeat? Still, as the exploratory data analysis revealed, international trade rules may well have affected the form—if not necessarily the quantum—of trade discrimination implemented by the G20 members.

One of the more interesting findings in the exploratory analysis relate to the differences in the factors that correlate with the commercial policy choices of the G20 and non-G20 countries. These differences are worth exploring further. Was G20 policy choice different because these economies were larger, in absolute or relative terms? Or was there something about the dialogue among the G20 members that altered their resort to trade discrimination? If so, what mechanism was at work and how did it add value to the dialogue under WTO auspices?

In sum, the travails of the world trading system pre-date the Trump Administration coming to office. Stating that does not deny or diminish the harm being done to international trade and investment flows by the implementation of *America First* commercial policies. Those policies should be condemned on a number of grounds, economic, political, and geo-strategic. The risk is that by concentrating attention on the high-profile tariff developments of the past two years, other commercially significant forms of trade discrimination have been overlooked by analysts and policymakers. The consequences are likely to be poorly framed analysis and inadequate policy prescription.

²⁰ Even in the absence of export incentives, as of this writing some 40.9% of world goods trade faces other forms of trade discrimination. Containing protectionism to “just” two-fifths of global goods trade hardly seems a success either.

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Figure 1: By 2016, more than two-thirds of global goods trade faced trade distortions implemented since the crisis began

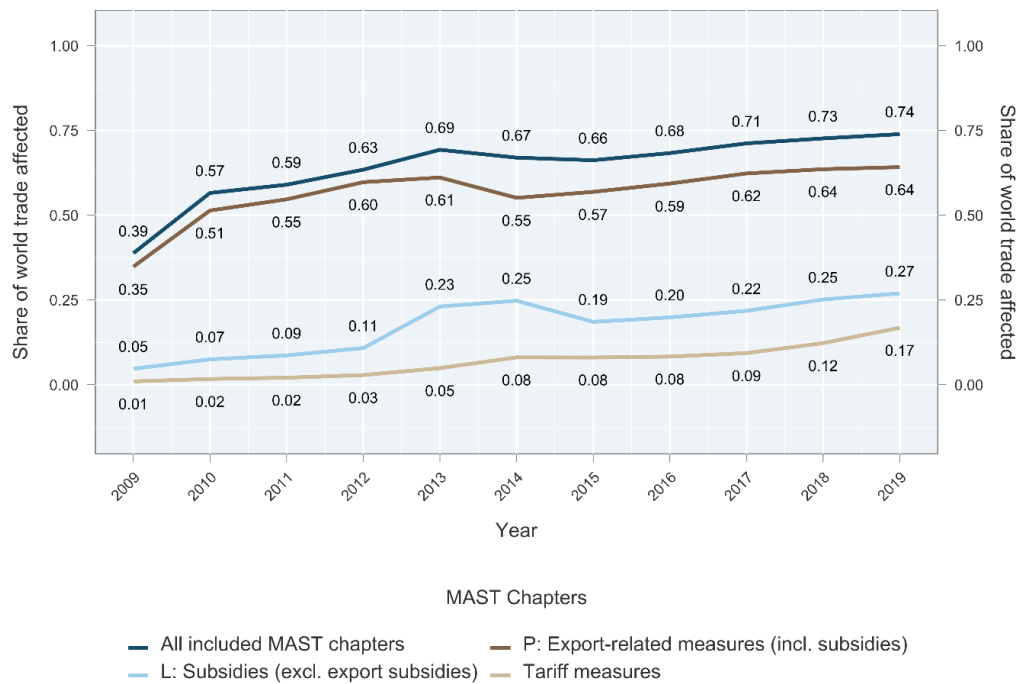


Figure 2: The trade affected by the Sino-U.S. bilateral tariff war pales when compared global totals for annual resort to new import distortions and new export incentives

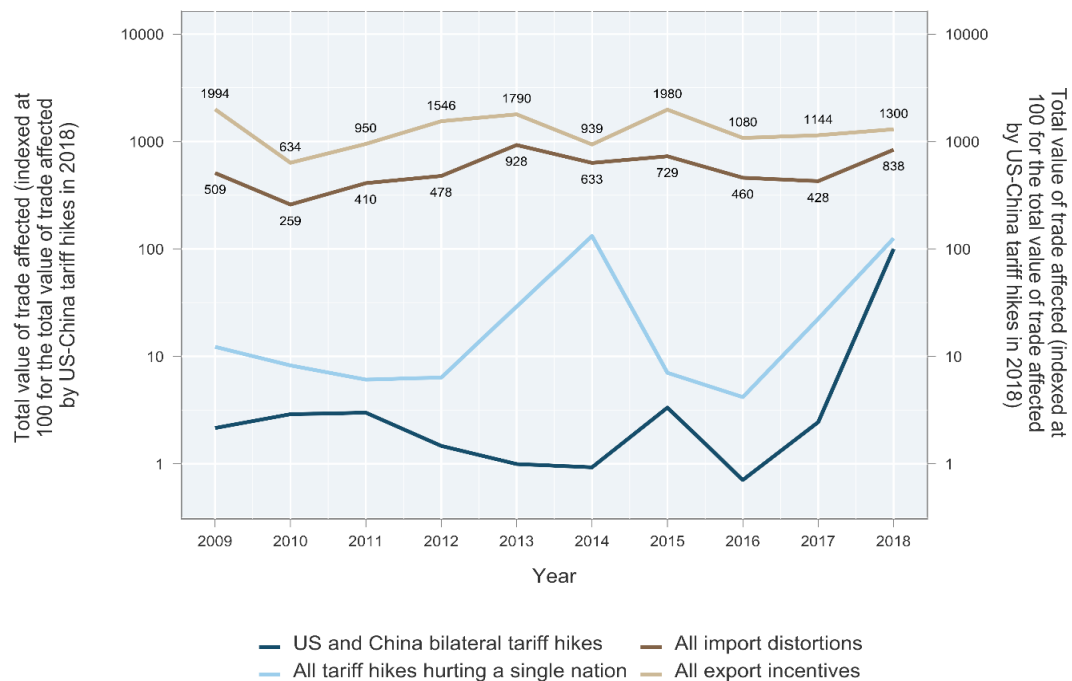


Figure 3: Compared to the next 20 largest trading nations, the G20 resorted to more trade discrimination and to more subsidies throughout

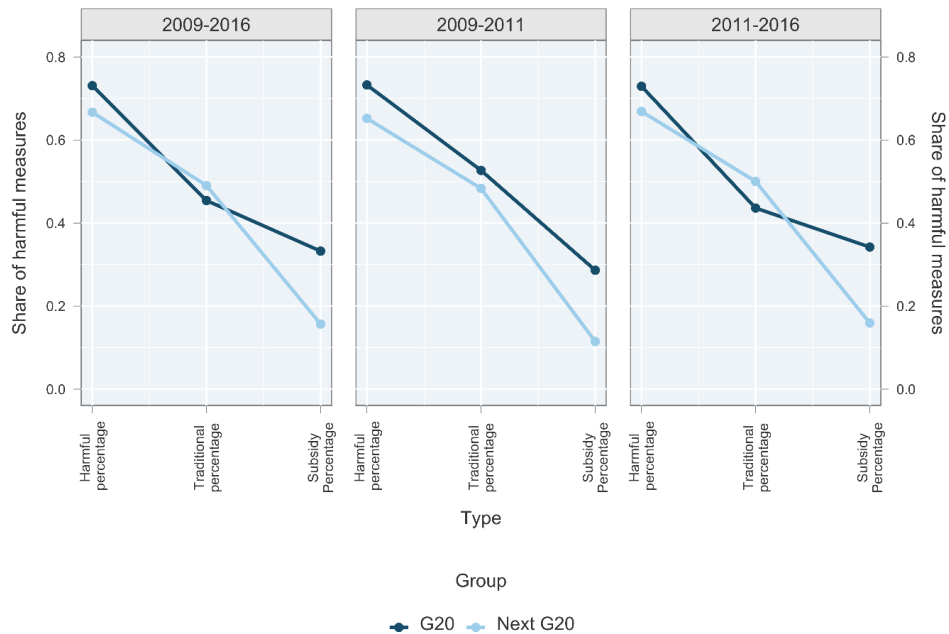


Figure 4: Governments that resorted more to trade discrimination resorted less to transparent trade restrictions, November 2008-December 2016

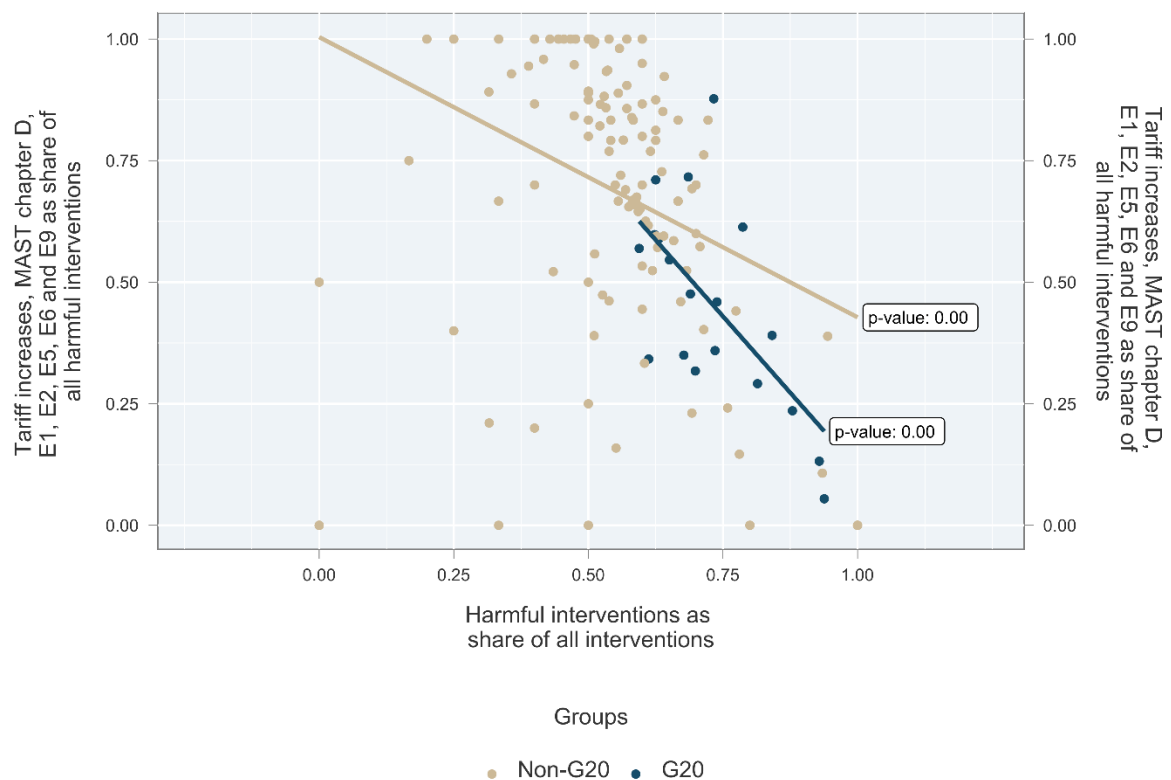


Figure 5: Governments resorted more to subsidies when they resorted more to trade discrimination, November 2008-December 2016

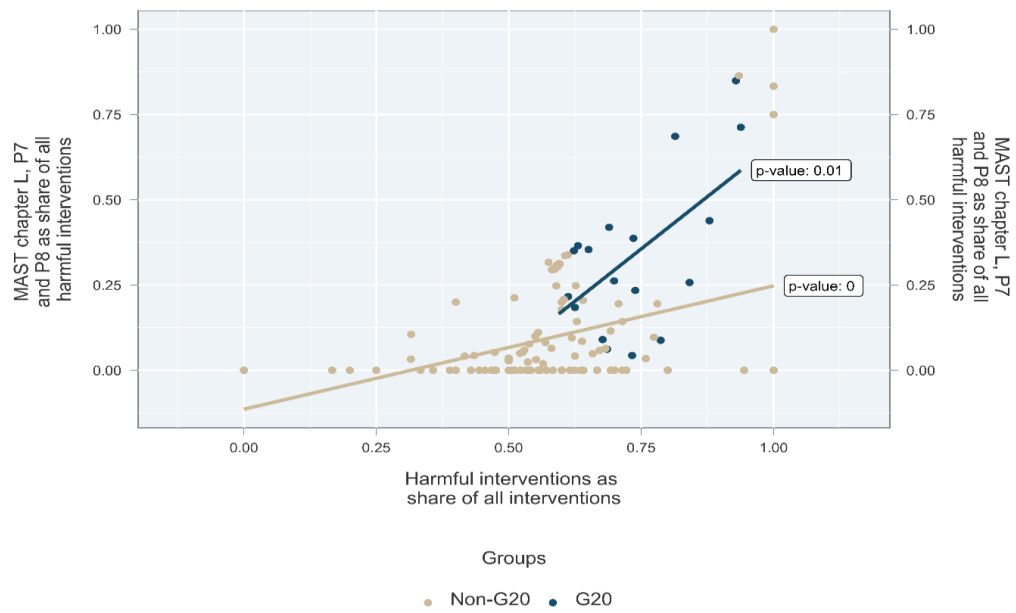
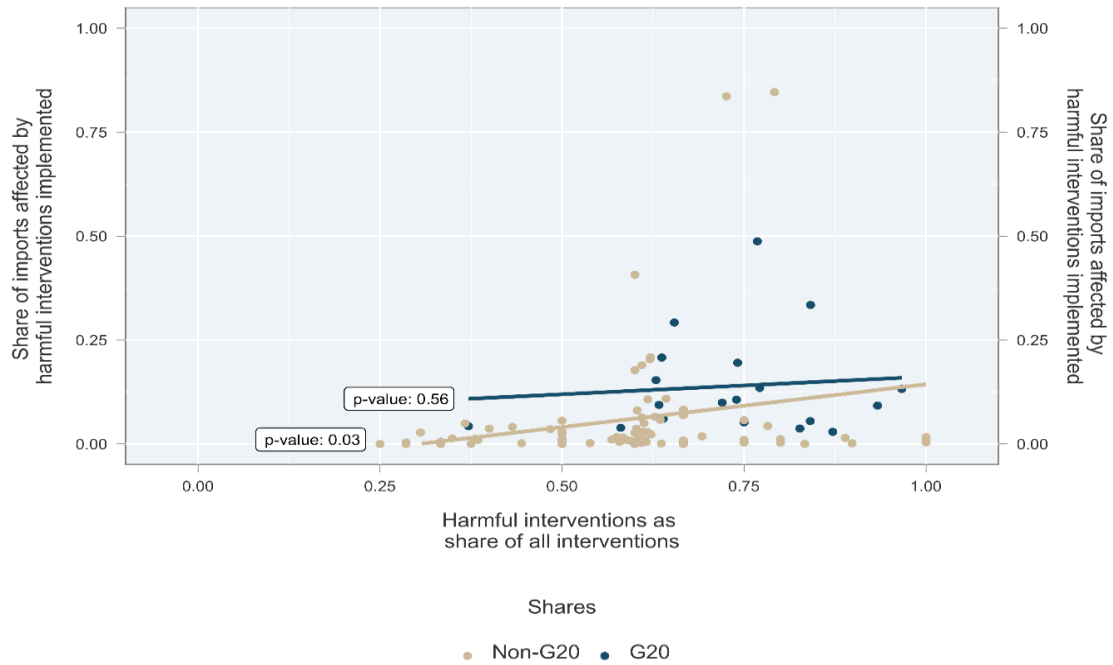


Figure 6: Only in the initial crisis response did greater resort to trade distortions result in a higher share of imports being affected and then only for non-G20 nations

November 2008-December 2016.



November 2008-December 2010.

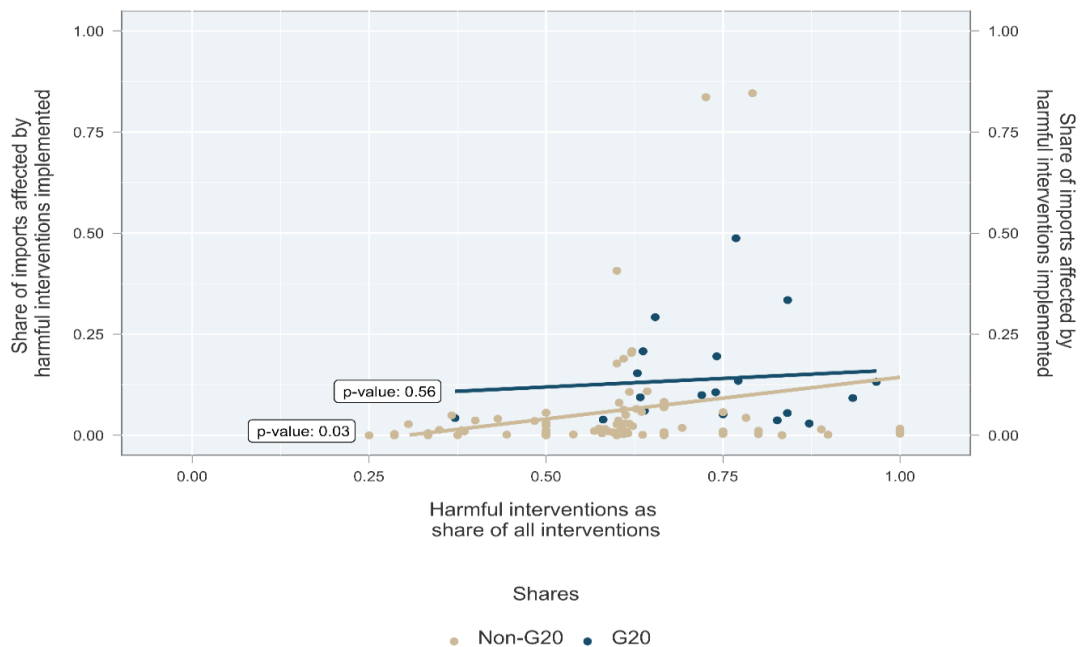
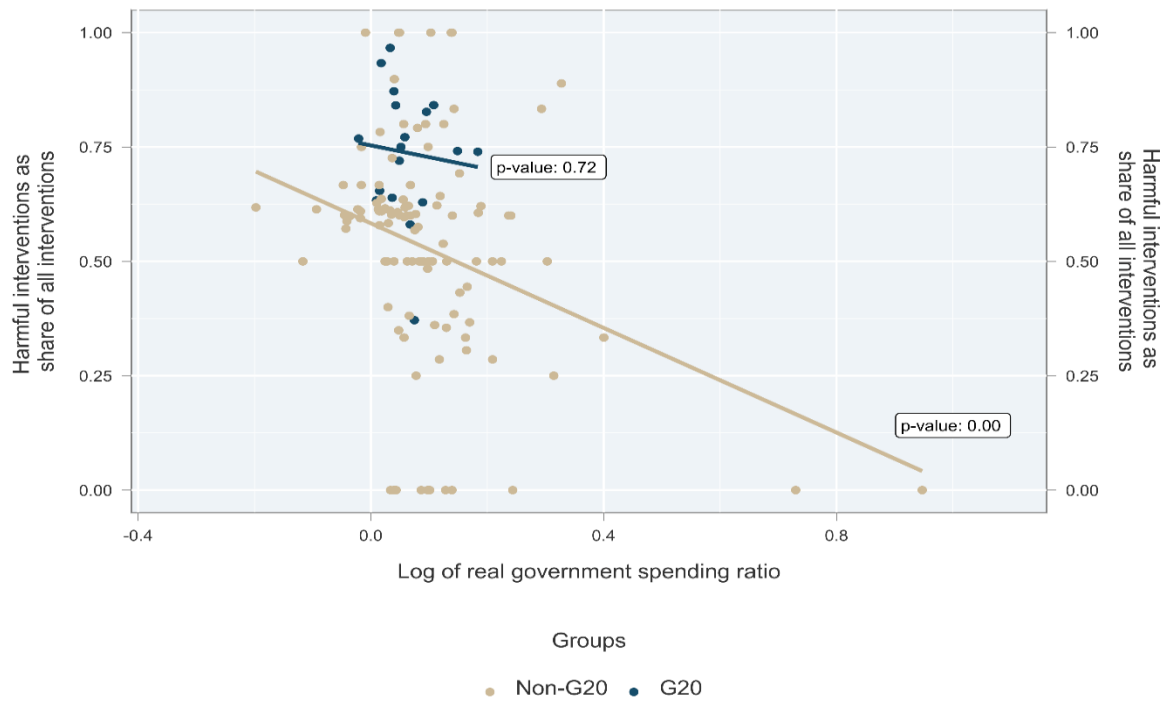


Figure 7: Non-G20 governments that expanded government spending more resorted less to trade discrimination but the relationship broke down after the initial crisis response

November 2008-December 2010.



January 2011-December 2016.

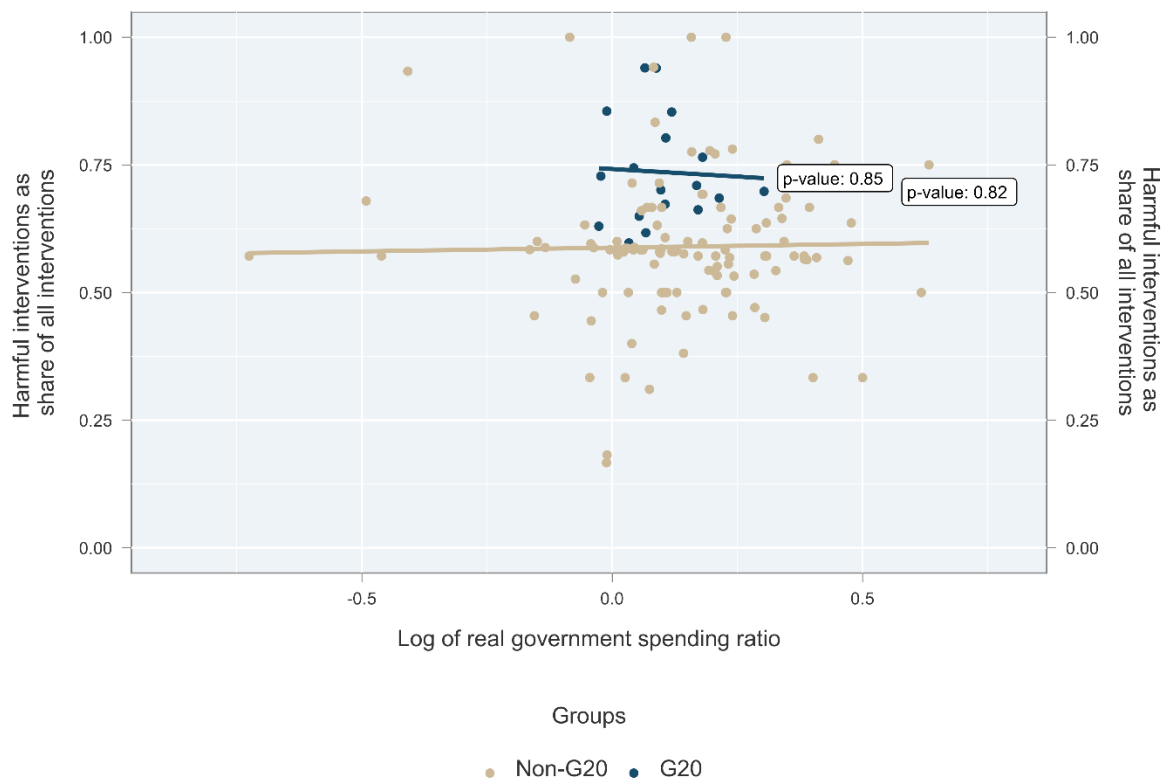
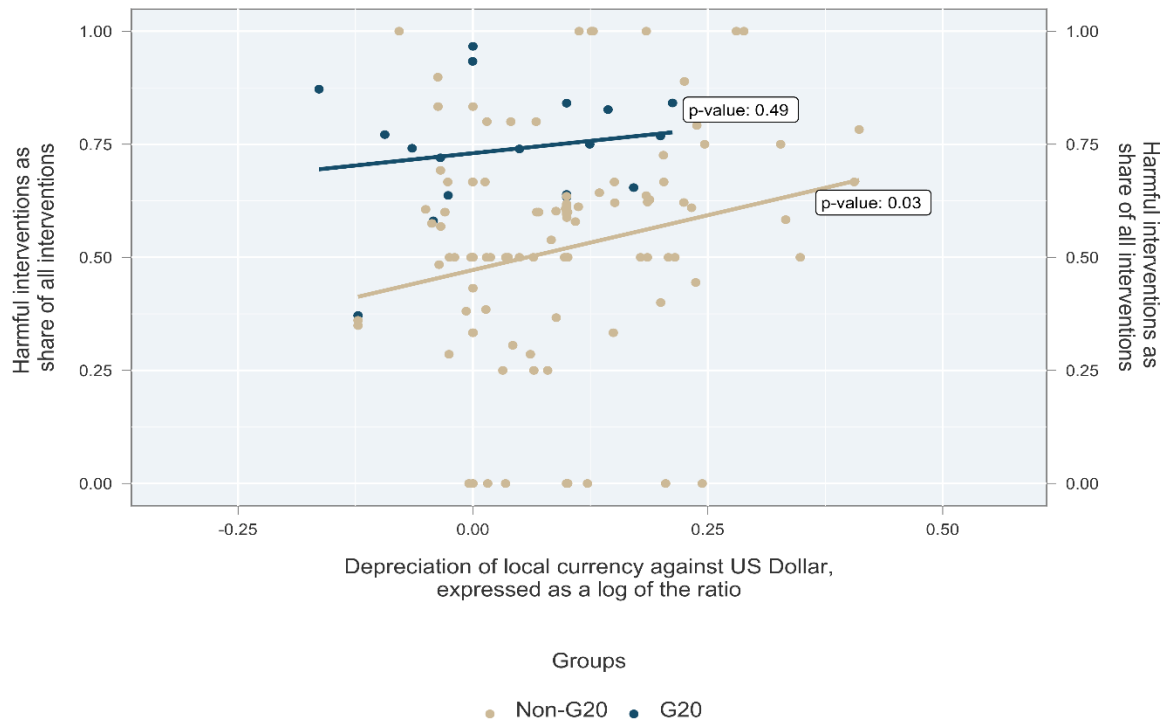


Figure 8: For non-G20 governments resort to trade discrimination appears to complement exchange rate depreciation, but only in the initial crisis response

November 2008-December 2010.



January 2011-December 2016.

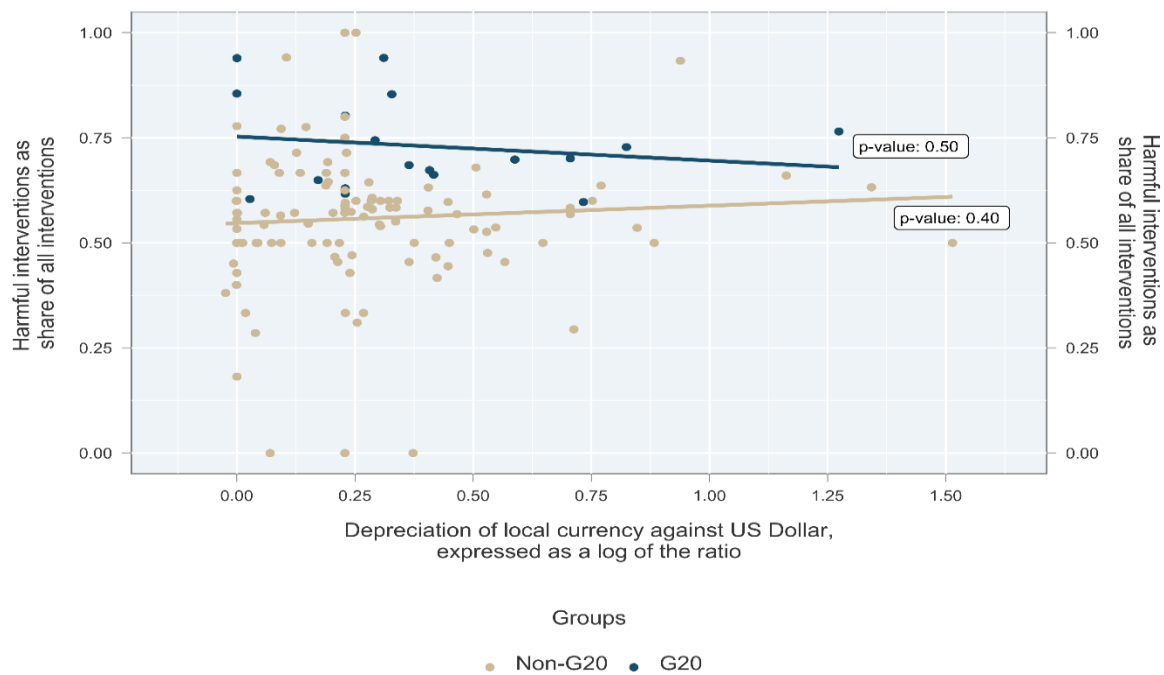
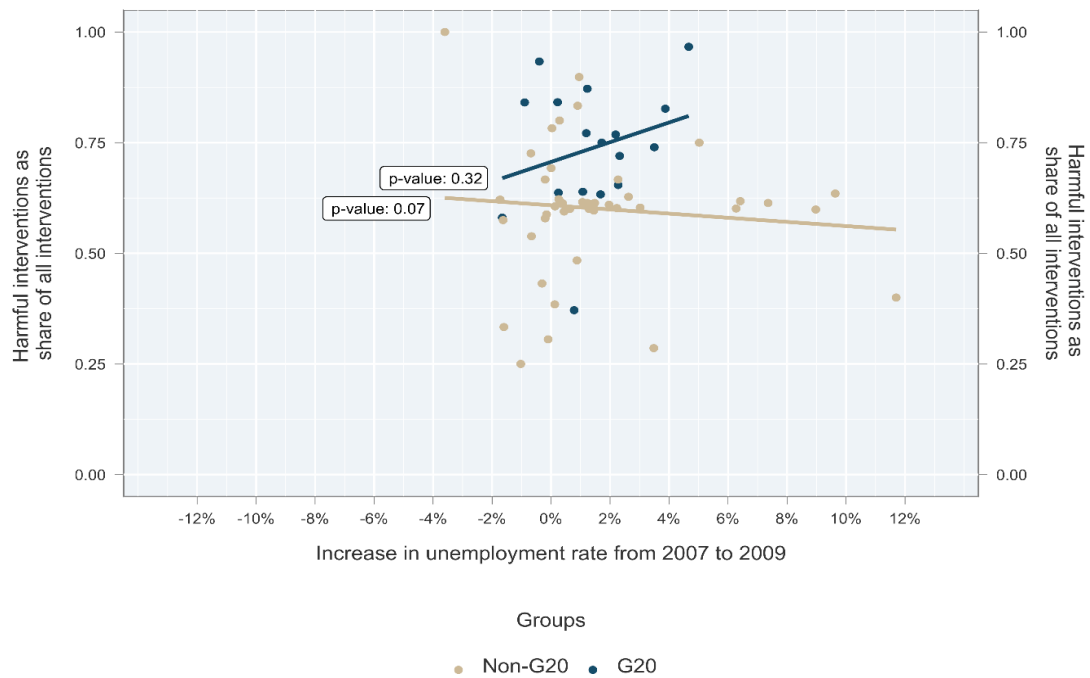


Figure 9: Initial increases in unemployment may have affected resort to trade discrimination in the early years of the crisis only

November 2008-December 2010.



January 2011-December 2016.

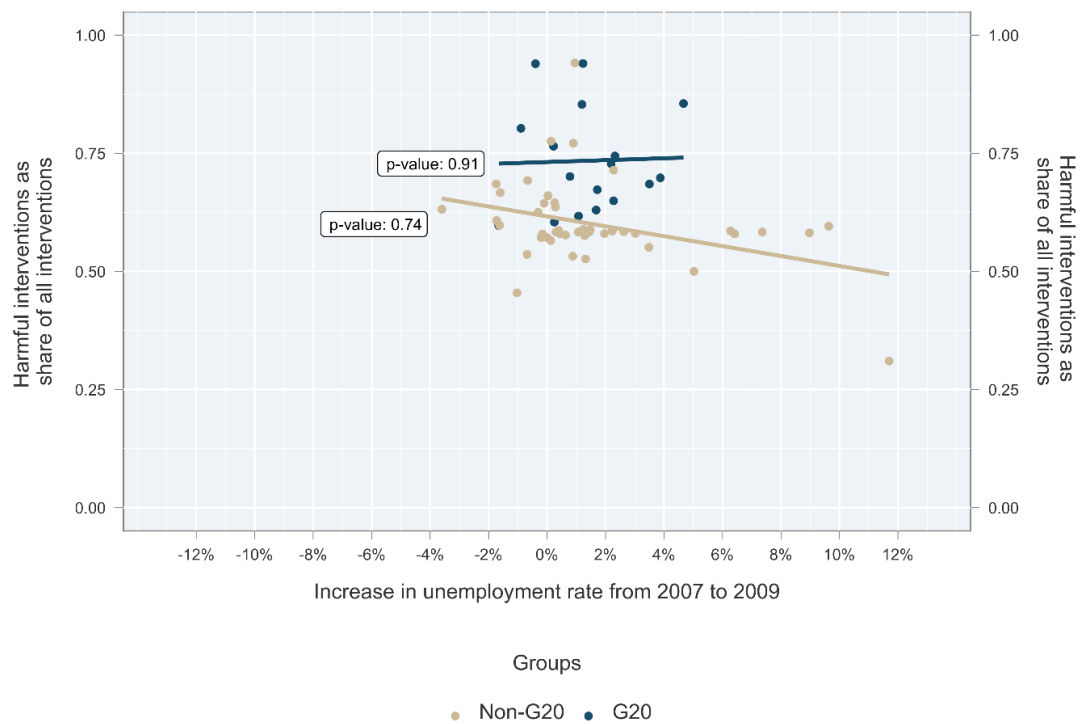
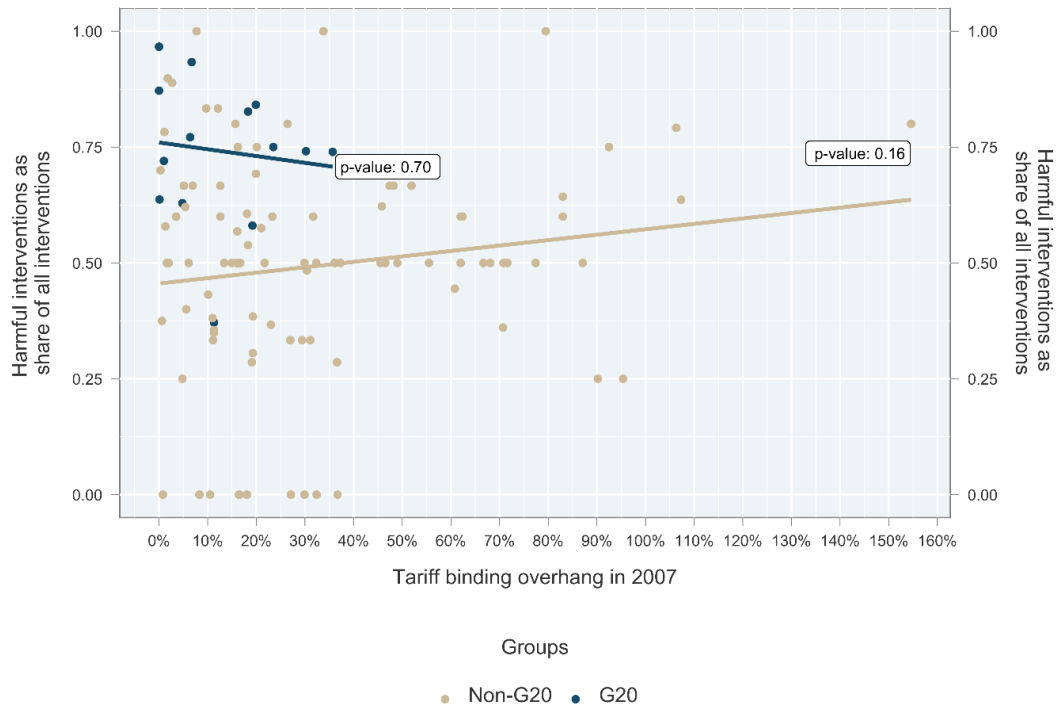


Figure 10: G20 members with smaller tariff binding overhangs tended to resort more to trade discrimination but only after the initial crisis period was over

November 2008-December 2010.



January 2011-December 2016.

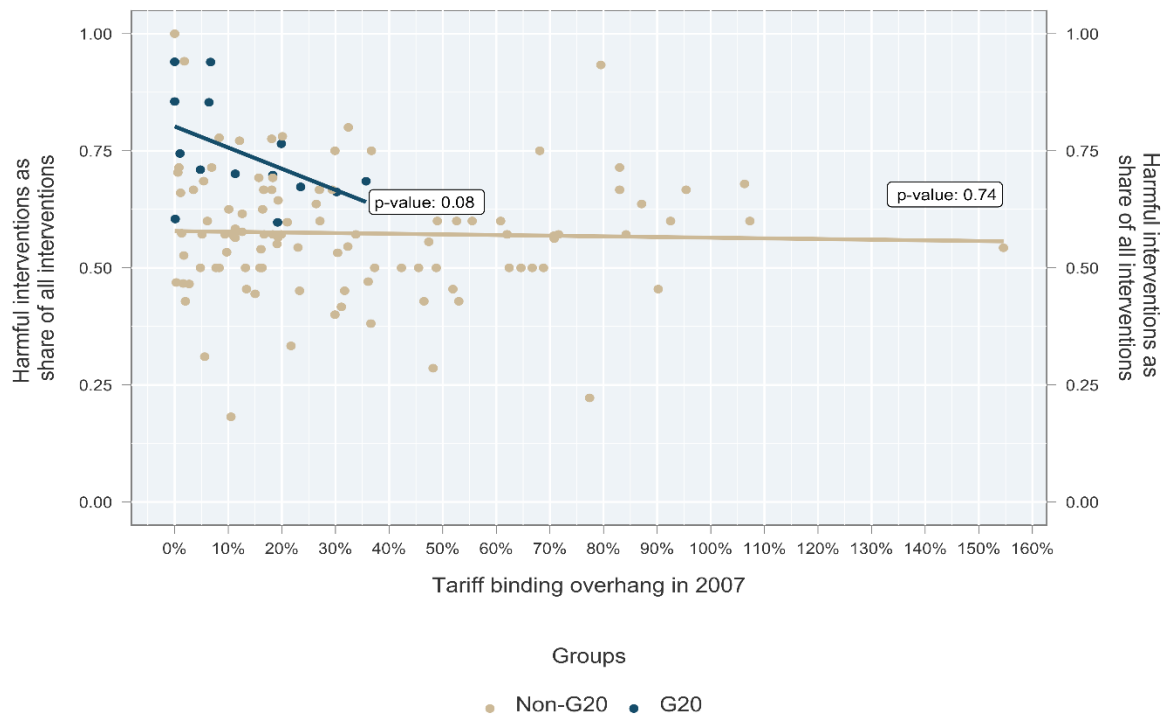
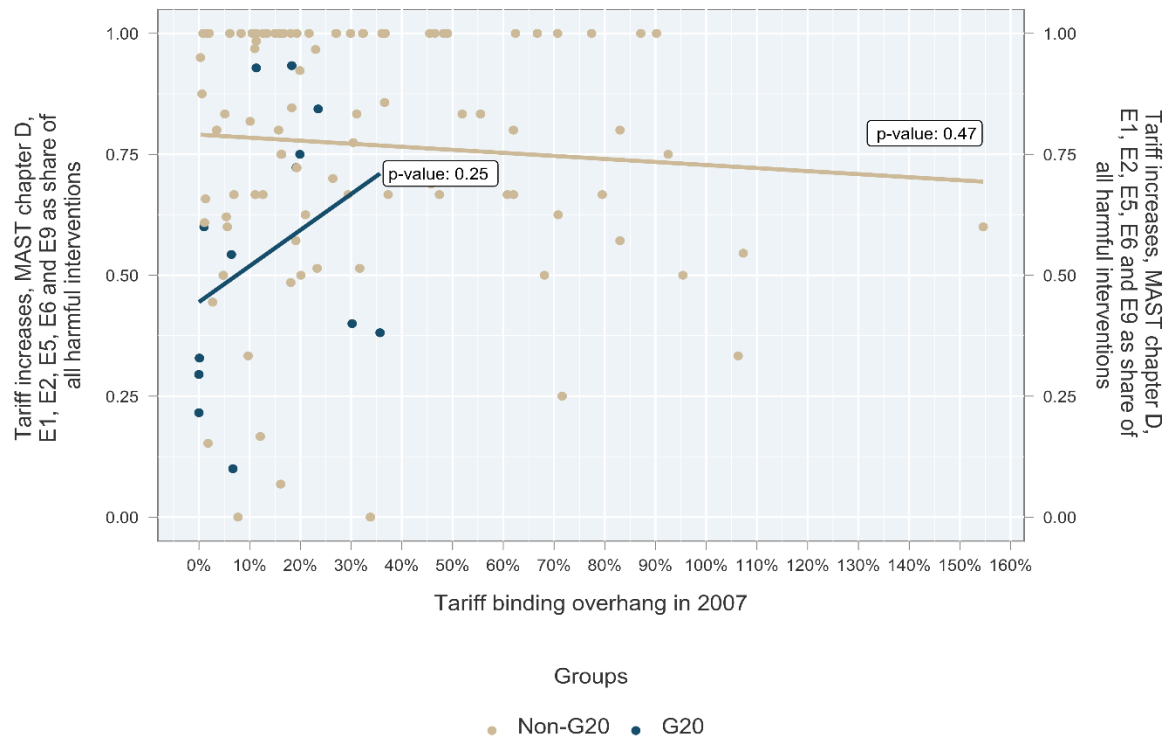


Figure 11: A weak positive correlation exists for the G20 members between the size of tariff binding overhang and resort to more transparent trade discrimination

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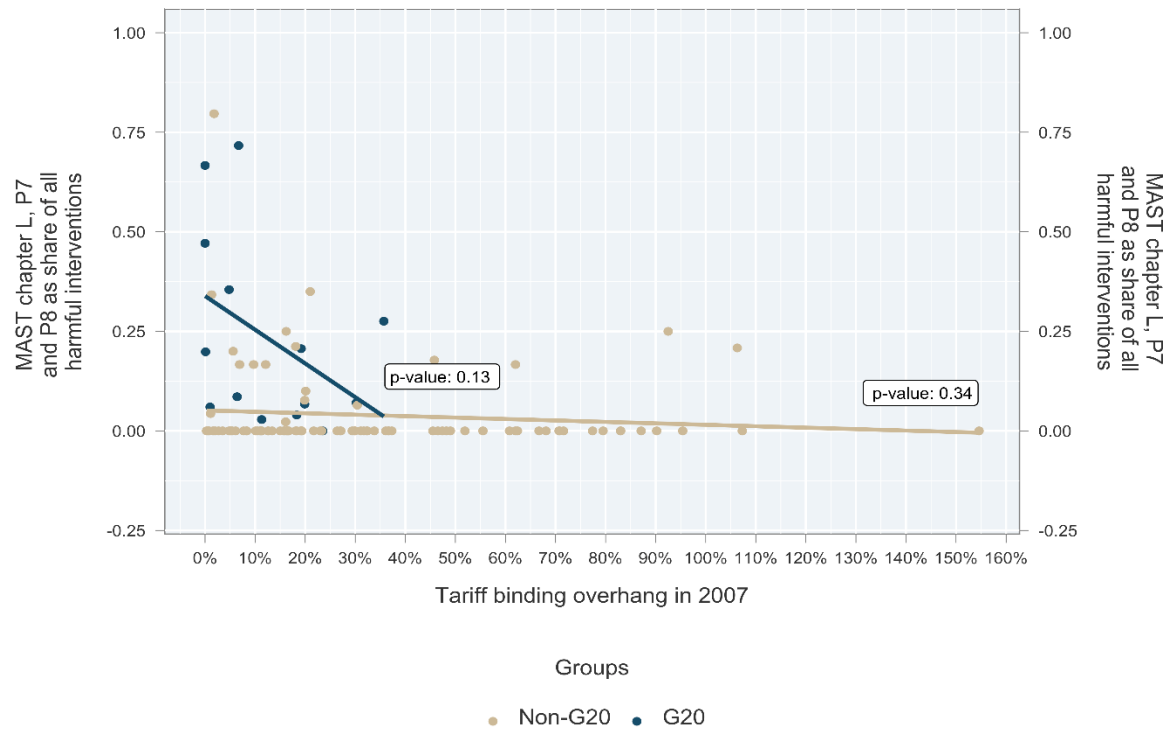


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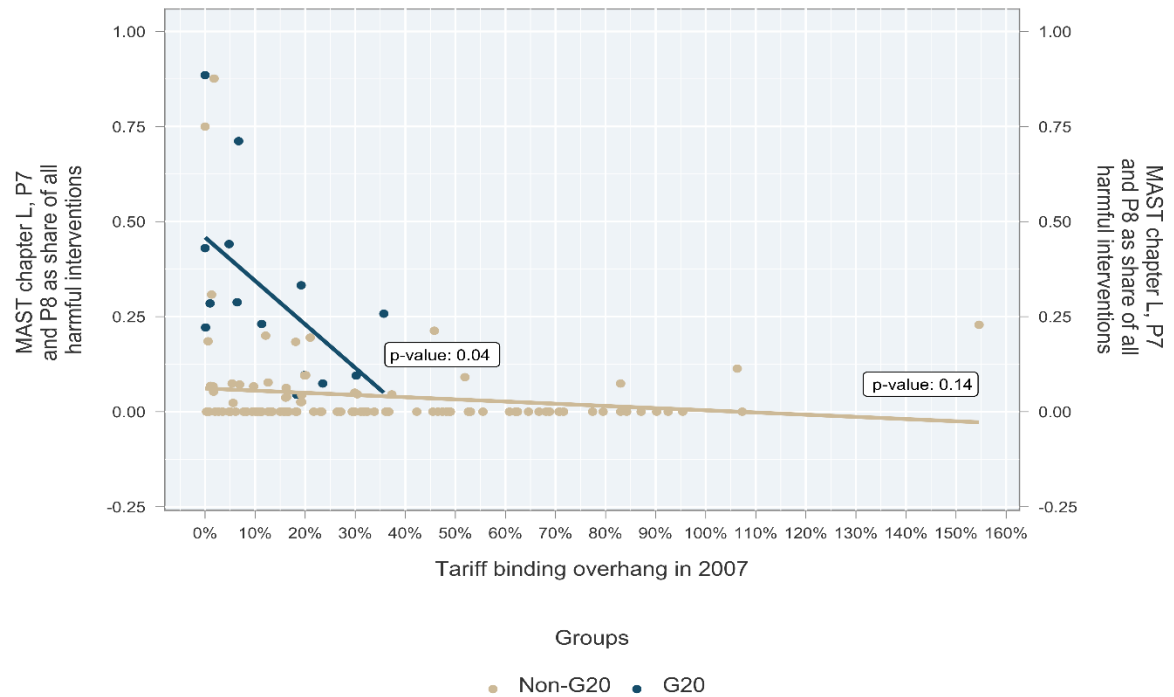


Figure 12: G20 members with smaller tariff binding overhangs resorted more to subsidies, in particular after the initial crisis period was over

November 2008-December 2010.



January 2011-December 2016.



Author contacts:

Simon J. Evenett

Professor of International Trade and Economic Development, University of St. Gallen
Academic Director, University of St. Gallen MBA programme.

HSG-MBA

Blumenbergplatz 9

9000 St Gallen

Switzerland

Email: simon.evenett@unisg.ch