

# FISCAL CAPACITY, DOMESTIC COMPENSATION, AND TRADE POLICY: A LONG-TERM VIEW

THOMAS BRAMBOR AND JOHANNES LINDVALL

## 1. INTRODUCTION

Ever since the middle of the nineteenth century, average tariffs in Latin America have been approximately twice as high as average tariffs in Western Europe, North America, Australia, and New Zealand (Figure 1a). Tariffs have also varied greatly, between countries and over time, *within* these regions: in Western Europe and among its English-speaking offshoots, for example, tariffs have historically been 50 percent higher in majoritarian democracies than in proportional democracies.

This paper examines the relationship between domestic economic and social policies and average tariffs in a sample of 32 countries observed over a period of 140 years, from the early 1870s to the present. The paper's main contribution is that it brings together, and evaluates, two very different ideas about the domestic politics of trade policy: on the one hand the *fiscal capacity hypothesis* (the idea that governments depend on tariffs for revenue if few other sources of revenue are available), and on the other hand the *compensation hypothesis* (the idea that governments use protectionism as a second-best form of social protection if they have no means of compensating losers from trade). Relying on data on average effective tariffs, data on the introduction and effectiveness of income taxes, and data on the introduction and coverage of unemployment benefits, we find support for both of these hypotheses; but we also find that the importance of fiscal capacity and social policy have varied over time – before the First World War, fiscal capacity seems to have mattered more; from the inter-war period onward, social policy did – and we find some support for the conditional hypothesis that the effects of fiscal capacity and compensation are mutually reinforcing: the *combination* of effective income-tax collection and comprehensive social insurance is associated with especially low tariffs.

## 2. CAPACITY AND COMPENSATION

There is, by now, a large literature in political science and economics on the relationship between domestic politics and international trade policies. Most of this literature is concerned with political institutions, including political regimes (democracy and authoritarianism) (Bueno de Mesquita

Thomas Brambor, Lund University, Department of Political Science, P.O. Box 52, 221 00 Lund, Sweden. Phone: +46 46 2224554 ([thomas.brambor@svet.lu.se](mailto:thomas.brambor@svet.lu.se)). Johannes Lindvall, Lund University, Department of Political Science, P.O. Box 52, 221 00 Lund, Sweden. Phone: +46 46 2228931 ([johannes.lindvall@svet.lu.se](mailto:johannes.lindvall@svet.lu.se)). Date of this draft: June 4, 2014.

et al. 2003; Mansfield, Milner, and Rosendorff 2002), electoral systems and party systems (Evans 2009; Grossman and Helpman 2005; McGillivray 2004; Rickard 2012; Rogowski 1987), and forms of government (Goldstein and Gullo 2014; Lohmann and O'Halloran 1994; Nielson 2003).

This paper, by contrast, examines how two types of *public policies* affect the trade policies that governments pursue: on the one hand tax policies (the idea being that taxes on domestic incomes and assets provide governments with alternative sources of revenue, reducing their dependence on customs duties); on the other hand social policies (the idea being that social insurance, and especially unemployment insurance, provides governments with the means of compensating losers from trade). Institutions also matter in our analysis, for there are strong reasons to believe that the historical development of national tax systems and social policy regimes depended on political regimes and constitutional arrangements (see, for instance, Besley and Persson 2011). But we are primarily interested in the effects of domestic tax policies and social policies as such.

Our argument is based on three claims. The first claim is that domestic fiscal capacity is a necessary prerequisite for trade liberalization (the empirical relationship between these variables, as we will show, is particularly evident in data from the period before the First World War). The second claim is that providing compensation for losers from trade, especially through unemployment insurance, allows governments to pursue more liberal trade policies (this pattern is evident from the inter-war period onward). The third part of our argument is that the fiscal capacity effect and the compensation effect are co-dependent: the need to compensate losers from trade has made the modern state even more dependent on effective revenue collection, and the commitment to compensation through the social insurance system is only credible if the state is known to have a secure stream of revenue in the future.

*The Fiscal Capacity Hypothesis.* Import duties and other trade taxes are expensive methods of revenue collection. Throughout history, many states have therefore met growing revenue needs by taxing imports (and sometimes exports). As Figure 1b shows, in the second half of the nineteenth century, governments in Latin America were almost completely dependent on income from tariffs (cf. Clemens and Williamson 2012), and in the same period, governments in Western Europe and its English-speaking offshoots still derived, on average, 40 percent of their income from trade taxes. This is not merely a historical phenomenon. Many developing countries in today's world continue to rely on tariffs to finance essential government activities, and where trade has been liberalized in recent years – in an international environment where many countries have been pressured to move toward free trade by international organizations and powerful trading partners – low- and middle-income countries have often struggled to replace the lost revenues (Baunsgaard and Keen 2010; Cagé and Gadenne 2014).

In much of the theoretical and empirical literature on trade policy in political science and economics, the government's ability to raise revenue from sources other than import duties and other trade taxes is taken for granted. But the fact that governments have historically relied heavily on trade taxes

as a revenue source strongly suggests that any explanation of trade policy that is not limited to the world’s most economically advanced countries must take fiscal capacity into account, and several recent studies have made this argument (for example, Queralt 2014 shows that moves toward free trade have typically been associated with the build-up of domestic fiscal capacity). In countries with low fiscal capacity, there are good reasons to believe that high tariffs are not only, or even primarily, driven by the mobilization of protectionist interests, by ideology, or, more generally, by the types of political trade-offs that governments in the advanced countries have made in the post-war period; tariffs may simply be a way to raise revenue.

The fiscal capacity hypothesis that we consider in this paper is straightforward: before alternative sources of revenue become available, through investments in domestic revenue extraction, tariffs are unlikely to be reduced, since all governments need revenue in order to function effectively. In other words, we expect that countries will be reluctant to move to free trade before their governments have developed the capacity to generate revenue through broad-based taxes on domestic incomes, assets, and consumption.

Empirically, we concentrate on income taxes as the main historical alternative to import duties. Most countries in our sample introduced permanent income taxes in the late nineteenth and early twentieth centuries. Once this other source of government revenue became available, the reliance on custom duties as the main source of government revenue faded. We thus expect the existence of income tax laws to be associated with lower average tariffs (especially if the tax authorities actually manage to extract significant revenue through those laws).

*The Compensation Hypothesis.* The compensation hypothesis is based on a very different idea about the politics of trade. Based on the empirical observation that there is a positive relationship between trade exposure and the size of government (Cameron 1978), Katzenstein (1985) argues that governments in the small, trade-dependent states of Western Europe have maintained support for trade openness through a strategy of *domestic compensation*, using the welfare state to compensate (potential) losers from trade (see also Ruggie 1982, who referred to the international regime that combined trade openness with institutions that supported compensatory domestic policies as “embedded liberalism”). Adserà and Boix (2002) generalize Katzenstein’s argument by developing a theoretical model where this particular combination of policies – trade openness on the one hand, domestic compensation on the other – is treated as one of two possible political equilibria under democracy (the other equilibrium being a closed economy and no domestic compensation through the public sector; according to Adserà and Boix, economic openness can only be combined with low levels of public expenditure under authoritarianism).

Following this line of work – and following Mares (2004) in treating unemployment insurance as the most direct compensation mechanism for losers from trade (see below) – we investigate whether countries that have implemented a system of unemployment insurance have lower tariffs, and whether unemployment insurance systems with a high coverage rate are associated with particularly low tariffs.

It is important to note that our analysis does not treat unemployment insurance as a *response* to economic openness – as in the many studies that use micro- and macro-level evidence to examine the effects of openness on social policies (via changing public preferences for redistribution and social insurance) (see, for example, Garrett 1998, Rodrik 1998, Burgoon 2001, Hays, Ehrlich, and Peinhardt 2005, and Hays 2009). Instead, we treat unemployment insurance as a policy that facilitates trade liberalization by providing governments with the means of compensating losers from trade. Our argument is similar to that of Adserà and Boix, who claim that “the expansion of the public sector is not a mere derivation of trade openness – as assumed in most of the current literature – but a truly political pre-condition needed to secure the liberalization of the economy” (2002, 230). Unlike Adserà and Boix (2002), however, we examine the relationship between unemployment insurance and tariffs, not the relationship between public spending and trade openness. Having a policy choice variable as the main dependent variable arguably takes us closer to the politics of trade than examining an outcome variable such as trade dependence.

Before we consider the third part of our argument – which is concerned with how fiscal capacity and social policy interact – we would like to explain in a little more detail why we concentrate on the provision of unemployment insurance when we examine the role of domestic compensation. The main argument *for* concentrating on unemployment insurance, as Mares (2004) observes, is that it is a policy instrument that compensates losers from trade directly for lost income. The broader measures of social policy expenditures that are typically used as measures of “compensation” in the literature are inferior, Mares argues, since what matters to workers who risk unemployment “is not the statistical artifact known as ‘per capita social policy expenditures,’ but the actual conditions of their social policy coverage, the level and duration of social insurance benefits, the level of insurance contributions, and so on” (2004, 764).

There are at least two potential arguments *against* concentrating on unemployment insurance, but they are not strong enough to persuade us to follow a different route.

The first counter argument is that governments have other means of providing compensation for losers from trade, apart from unemployment benefits: public works and active labor market policies and public employment for exposed-sector workers who risk unemployment, subsidies and other forms of direct and indirect support for import-competing producers. This is an argument that has been made in the recent literature about Latin America: authors such as Kurtz and Brooks (2008) and Nooruddin and Rudra (2014) have argued that the forms of compensation that Latin American governments have been providing, now and in the past, have been different from the forms of compensation that governments have provided in open economies in Western Europe and some of its English-speaking offshoots (see also Rueda, Wibbels, and Altamirano 2013). However, active labor market programs and other forms of public programs directed to the unemployed are typically closely connected with the unemployment benefit system, and it is difficult to think of a system for protecting losers from trade *generally* from

the adverse effects of trade liberalization that does not include some form of income replacement.

The second counter argument is that in many countries, unemployment insurance is not properly regarded as a government program, since benefits are provided by social partnership organizations or other private associations. However, even in countries where unemployment benefits are administered by private associations, the state typically provides supporting legislation, regulations, and subsidies, and guarantees the value of benefits if contribution financing should prove insufficient (on the introduction of different types of unemployment insurance in North America, Oceania, and Western Europe, see Sjöberg, Palme, and Carroll 2010 and Carroll 1999). As we explain below, this is one of the reasons why we expect the effects of fiscal capacity and social policy expansion to be mutually reinforcing.

*Conditional Effects.* So far, we have described the fiscal capacity hypothesis and the compensation hypothesis in general terms, and we have examined the two hypotheses separately. But one of the main points that we wish to make in this paper is that the two hypotheses cannot in fact be kept separate.

First of all, we expect fiscal capacity to matter most in the first period that we examine (the period in the late nineteenth and early twentieth centuries when many states expanded their fiscal capacity), and we expect social policy to matter more later on, once the working class – the group that receives compensation through the social insurance system – was incorporated in the political system, in North America, Oceania, Western Europe, as well as Latin America, although the incorporation of the working class occurred in different ways, and with different historical consequences, in these regions (Collier and Collier 1991; Rueschemeyer, Huber, and Stephens 1992).

Second, we expect there to be a conditional relationship between fiscal capacity and social policy on the one hand and tariffs on the other. It was only possible for states to create some form of unemployment compensation systems once they had first increased fiscal capacity, and providing compensation does not merely require the establishment of a statutory unemployment insurance system (or another system providing compensation for losers from trade); the unemployment insurance system must also be comprehensive, well-funded, and guaranteed by the state for potential losers from trade to be persuaded that they will not, in the end, be harmed by trade liberalization. Any promise of future compensation involves an inter-temporal commitment problem (Lindvall 2010; Scartascini, Stein, and Tommasi 2014), and having high fiscal capacity helps to resolve that problem. In other words, the effect of having an unemployment insurance system in place is likely to be greater where that system is generous and backed up by a state that is able to provide the necessary financial resources.

On the basis of these arguments, we expect the effect of fiscal capacity and social policy to be amplified when states *combine* an effective income tax system with a comprehensive social insurance system. We will simply call this hypothesis the *combined* hypothesis.

*Hypotheses.* To sum up, we examine three hypotheses. According to the *fiscal capacity hypothesis*, states that are able to generate government revenue through income taxes have, on average, lower tariffs. According to the *compensation hypothesis*, states that provide unemployment insurance have, on average, lower tariffs, particularly if benefits are generous and coverage is high. According to the *combined hypothesis*, the effects of fiscal capacity and compensation are mutually reinforcing: a combination of high fiscal capacity and comprehensive social insurance is associated with especially low tariffs.

### 3. RESEARCH DESIGN AND DATA

In the empirical sections of the paper, we examine the interplay of domestic fiscal and social policies in determining tariff policies, covering a time span of 140 years (1870 to the present) and a sample of 32 countries in Europe, Latin America, North America, Oceania, and Japan. We provide evidence that absent sufficient capacity to tax the domestic economy, countries have relied on trade protection for revenue generation. Once fiscal capacity was established, in the form of income taxation, some governments began to use social policies – such as unemployment insurance – as compensation for the losers from international trade, bringing about a reduction in tariffs.

*The Dependent Variable: Average Effective Tariffs.* Our dependent variable is a measure of average effective tariffs: the ratio of total import duties to the total value of imports. In our sample, average effective tariffs vary from zero to 63 percent, with a grand mean of 11 percent. Table 1 provides information about the mean of the average effective tariff rate by country and time period. The historical tariff data come from Clemens and Williamson (2004) and Lampe and Sharp (2013). We have extended these historical time series with data for the 2000s and 2010s from the IMF, the OECD, and the World Bank.<sup>1</sup>

The ratio of import duties and total import values is admittedly an imperfect measure of average tariffs since the relationship between import duties and total import values is not just a function of statutory tariffs, but also of the composition of imports (for example, if a tariff on a particular good is so high that the flow of imports diminishes sharply or ceases entirely, this good would represent such a small share of total imports that the high tariff would not register in an indirect measure of average tariffs). However, there are no direct measures of average tariff rates available that cover the entire period that this paper is examining. Given that this paper is not concerned with the variation in tariffs across industries within countries, but rather the overall trade-policy orientation of governments, the measure that we use is arguably an acceptable proxy. Clemens and Williamson (2004)'s data are widely used in the literature, including in the calculation of the IMF's new

<sup>1</sup>The main discrepancies between the two historical datasets concern France and the United Kingdom, particularly the 1950s and 1960s in France and the late inter-war period and early post-war period in the United Kingdom. We relied on Lampe and Sharp's data for France and Clemens and Williamson's data for the United Kingdom, since these series fit best with the qualitative information that we have about these two individual countries.

economic reform indicators (Giuliano, Mishra, and Spilimbergo 2012, 30); Lampe and Sharp build on Clemens and Williamson’s data.

*Main Independent Variables.* The first of our two main independent variables is fiscal capacity (as we explained in the previous section, we argue that trade policy choices are constrained by the ability of states to finance the central government by means other than revenue from trade taxes). Following Besley and Persson (2009; 2011), we use the introduction of income taxation as our main indicator of the ability of governments to generate domestic tax revenues. Our data on the introduction of income taxes builds on efforts by Aidt and Jensen (2006) and Besley and Persson (2011), and complement their data. Column 2 of Table 1 provides an overview of the time of introduction of the income tax in the sample of 32 countries that are included in the analysis.

The timing of the introduction of a permanent income tax is a necessary condition for the ability to collect tax revenue from domestic sources, but not a sufficient condition. A more complete proxy for the ability to generate revenues from income taxation is how much revenue the government actually manages to raise. As a second measure of fiscal capacity, we therefore use data on revenues from income taxes by the central government (as a share of GDP). These data have recently been compiled by Per Andersson and Thomas Brambor (2014) on the basis of a wide range of secondary cross-national sources and country-specific primary and secondary sources concerning historical government revenues between 1800 (or the time of independence) and the present.<sup>2</sup>

Direct taxation of income is a crucial component in all efforts to replace lost revenues from trade liberalization. Nonetheless, many developing countries, including countries in Latin America, have been more successful in implementing consumption taxes (often in the form of value added taxes) to generate revenues for the state. In addition, the administration and enforcement of tax laws requires investments in administrative capacity, again suggesting that a more inclusive definition of fiscal capacity is called for. Accordingly, we have also constructed a *fiscal capacity index*, which is defined as the sum of the following components:

- (1) The implementation of a permanent income tax (a dummy variable coded 1 in year  $t$  if the country had a permanent income tax at some  $\tau \leq t$  and 0 otherwise).
- (2) The ability to collect income taxes (a dummy variable coded 1 in any year  $t$  if more than 1 percent of the central government revenue as a share of GDP came from direct taxes on income and 0 otherwise).
- (3) The implementation of a high-quality census (a dummy variable coded 1 if the country had administered a population census of reasonable quality before the year under observation and 0 otherwise).<sup>3</sup>

<sup>2</sup>The data on income taxation are unbalanced in time and cover only 29 of the 32 countries in our sample. No data on income taxation as a share of GDP are available for Costa Rica, Portugal, or Greece.

<sup>3</sup>Several recent studies use information about the census or its quality as a measure of state capacity (see Lee and Zhang 2013; Soifer 2012, 2013). More closely related to the concept of fiscal capacity, Aidt and Jensen (2009) include the existence of a census in

- (4) The implementation of a permanent consumption tax (a dummy variable coded 1 in year  $t$  if the country had a permanent consumption tax at some  $\tau \leq t$  and 0 otherwise)

The resulting fiscal capacity index ranges from 0 to 4. Before the First World War, no country in our sample reached 4, the highest level of fiscal capacity. By contrast, in the post-war period, no countries scored 0 or 1.<sup>4</sup>

The second of our two main independent variables is the structure of the unemployment insurance system (since we argue that redistributive social insurance policies, in particular the existence of an unemployment benefits scheme, allow governments to compensate losers from trade and thereby reduce the opposition to trade liberalization). Our data on the introduction of unemployment benefits are drawn from several different sources. We started with the dates provided in the latest editions of the United States Social Security Administration's *Social Security Programs Throughout the World* series of publications. We cross-checked the information provided in these reports with other sources of historical information about unemployment insurance systems, in particular Perrin (1969, Table I), Carroll (1999), Mares (2003), Kuhnle and Sander (2010, Table 5.1), and Sjöberg, Palme, and Carroll (2010, Table 29.1). In most cases, we saw no reason not to rely on the dates provided by the United States Social Security Administration, but in the case of the Netherlands, we decided to use 1916 as the cut-off point, since a voluntary state-subsidized program was introduced in the Netherlands in that year (Sjöberg, Palme, and Carroll 2010). We also went with Sjöberg, Palme, and Carroll (2010) in the case of New Zealand, dating the beginning of the unemployment insurance system to 1938 and not 1930 (since benefits in the 1930s were really a form of relief-work payments). The first column of Table 1 provides the years in which unemployment insurance was established in each country in our sample.

The coverage and generosity of unemployment benefits vary significantly across time and space. Since we expect the redistributive and protective effects of unemployment benefits to matter to tariffs and the degree of protectionism more generally, measuring the scope of the unemployment benefit system is essential. Quinquennial data on the share of the labor force covered by unemployment insurance is available for 18 OECD countries from the *Social Citizenship Indicator Program* (SCIP, see Korpi and Palme 2008) starting in 1930. Where unemployment benefit schemes were introduced before 1930, we complement the SCIP coverage measure with data from Flora, Kraus, and Pfenning (1983). For the period from 1970 onwards, we rely on annual data on unemployment insurance coverage from the *Comparative Welfare Entitlements Dataset* (CWED, see Scruggs and Allan 2006). For

their index of tax collection costs when studying the establishment of the income tax in Europe. For this paper, we collected information on the first census in each country, the establishment of a permanent statistical office tasked with collecting census information, and qualitative information on the characteristics of the first censuses. Using this information, we established which census was the first to provide a population count satisfying some of the basic standards of a modern census.

<sup>4</sup>The average index scores by time period are as follows: (i) Before WWI: 1.0. (ii) Inter-war: 2.5. (iii) Post-WWII: 3.6.



the earlier years for which data is only available in 5-year intervals, we linearly interpolate the measure. The SCIP and CWED databases also provide information on the average income replacement rates for the unemployed; we combine the available data in the same way.

Neither the SCIP nor the CWED dataset include information about social policies in Latin America. In fact, we are not aware of any comprehensive database providing unemployment coverage rates or income replacement rates for the Latin American countries in our dataset. Available qualitative information on the scope of unemployment systems in Latin America suggests, however, that where they have been established at all, the scope of unemployment benefit systems has been limited. Huber and Bogliaccini (2010) note that in Latin America “unemployment insurance is a new feature and has been introduced in only some Latin American social policy regimes, and even where it exists, coverage and benefits are very small.” Instead of unemployment insurance, many countries have had compulsory severance payments, but, as Huber and Stephens (2012, 176) note, those systems “provided little protection in more flexible labor markets.” This means that although some Latin American countries set up programs for pensions and sickness insurance fairly early on – beginning, in some cases, in the early twentieth century – there has been little protection against unemployment.

Based on the dates of establishment of national unemployment insurance schemes (see Table 1) and the available information about coverage, we have created a categorical coverage indicator for the existence and scope of unemployment benefits. In the absence of a national unemployment insurance scheme – or if coverage rates are zero – cases are coded as “no coverage”. Once unemployment benefits are introduced, we distinguish between systems with coverage rates below 50 percent (low coverage) and systems with coverage rates above 50 percent of the labor force (high coverage). Given the qualitative information we have for Latin America, we assume that all existing unemployment benefit systems in Latin America are of the “low coverage” variety.

*Control Variables.* All of our models include several other time-varying determinants of tariff policies whose omission may confound the results.

We control for political regimes and electoral systems in order to account for the effects of institutions on tariff policy that are not mediated by the tax system or the welfare state. Institutional explanations of trade liberalization associate moves to free trade with proportional representation. Rogowski (1987, 206–208) argues, in a seminal contribution, that there is a “natural affinity” between free trade and proportional representation since a trade-dependent state must (a) resist protectionist pressures, (b) combat rent-seeking, and (c) ensure political stability. The type of democracy that best achieves these goals, Rogowski claims, has large electoral districts, to satisfy condition (a), strong parties and closed-list proportional representation, to satisfy condition (b), and parliamentarianism, to satisfy condition (c). The larger electoral districts of proportional electoral systems, as opposed to the single-member districts in majoritarian systems, are thus argued to reduce the influence of particularistic lobbying from protectionist

interest groups on candidates and legislators. We include indicators of proportional and majoritarian electoral systems based on historical information provided in Colomer (2004). Moreover, since the theoretical mechanisms associated with these particular institutional explanations for trade protection are only relevant in a democratic political environment, we combine these institutional variables with a binary indicator of democracy (Boix, Miller, and Rosato 2013).

Our main dependent variable – average effective tariffs – is a ratio of revenue from import tariffs and the overall value of imports. Economic downturns are likely to suppress both of the constitutive parts of this measure (although they may do so unequally). In addition, recessions may induce political decision makers to use “beggar-thy-neighbor” policies of import tariffs to encourage economic recovery – although, as Rodrik (1998) has argued, a prolonged, deep economic crisis may in fact increase the likelihood of trade liberalization in some circumstances (see also Kurtz and Brooks 2008). Finally, economic downturns may increase the pressure to generate revenues from trade taxes. To control for these potential effects of recessions, we include a recession indicator based on historical GDP per capita data from Maddison (2010) in the analysis.

Military conflicts are often associated with volatile trade relations and protectionist trade policies. The two most significant conflicts in our sample period – the two world wars of 1914–1918 and 1939–1945 – are entirely excluded from the analysis for this reason. In addition, we use a war indicator based on the *Correlates of War* project (Barbieri, Keshk, and Pollins 2008) to control for the effects of small to medium-sized military conflicts.

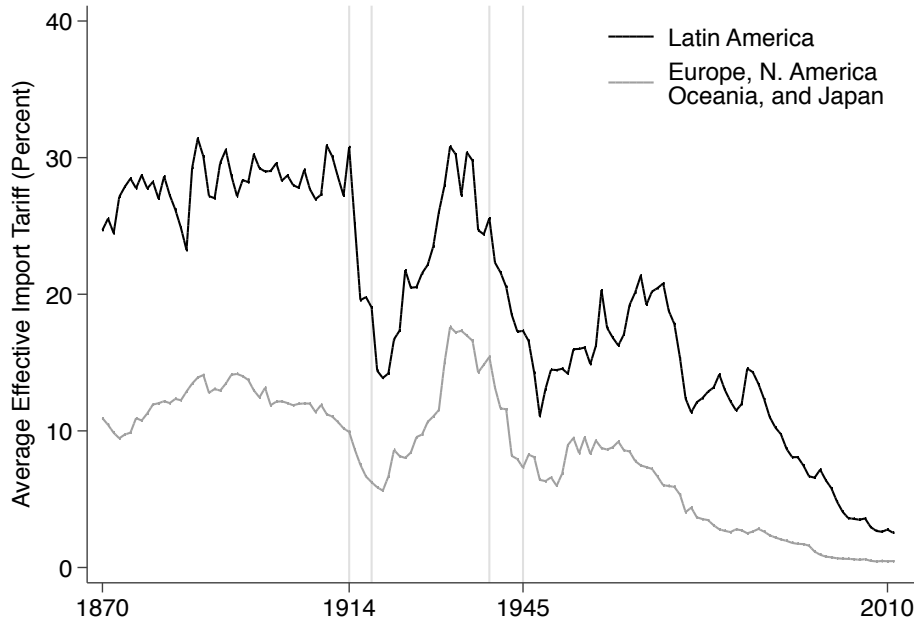
Before the First World War and then again in the inter-war period, many countries in our sample pegged their currencies to gold. The gold standard limited the flexibility of central banks to respond to downturns by expanding the money supply, leaving tariff protection as one of the few levers to adjust. Eichengreen and Irwin (2010) have therefore argued that during the Great Depression, countries on the gold standard were more likely to use tariffs, import quotas, and exchange controls than countries that went to floating currencies. To allow for this possibility, we use an indicator for which countries were on the gold standard using data provided by Reinhart and Rogoff (2009). Finally, tariff policies may in part be driven by political ideology (Dutt and Mitra 2005). To account for this possibility, we include an indicator for the economic ideology of the head of government based on data from Brambor, Lindvall, and Stjernquist (2013).

Before we turn to the panel data analysis, the next section describes the broad trends in our tariff data, the buildup of tax capacity, and the establishment of unemployment insurance systems in Western Europe, North America, Latin America, Oceania, and Japan since 1870.

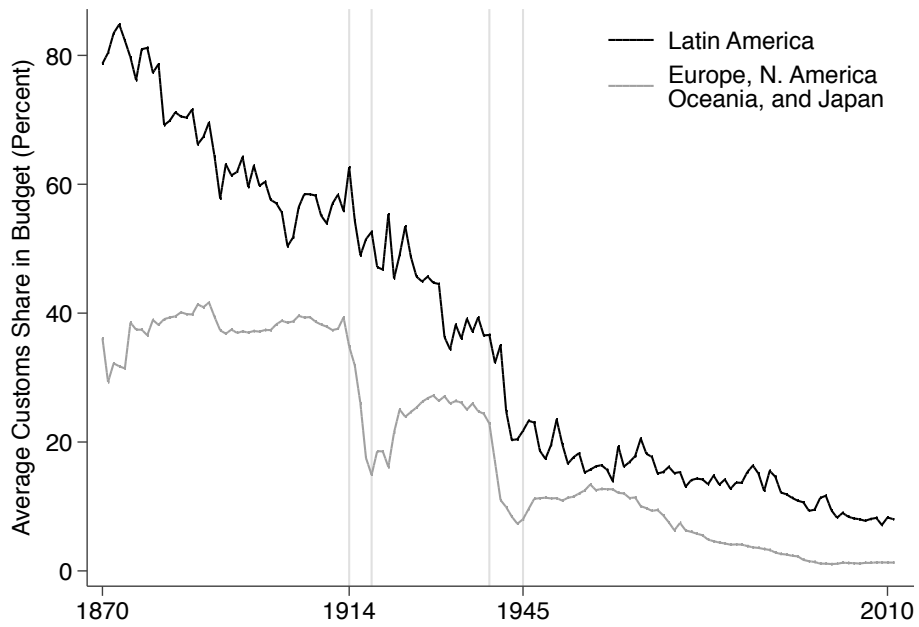
#### 4. TARIFFS, CAPACITY, AND COMPENSATION: A BRIEF HISTORY

In Figure 1a, we see that the average tariff in the world was very high in the nineteenth century, declined in the early twentieth century, increased during the Great Depression, and then fell throughout the post-war period.

FIGURE 1. Import Tariffs and Custom Revenues Since 1865



(A) Average Import Tariffs



(B) Customs Revenue

We also see how different the Latin American experience is from the European experience: Latin American tariffs were much higher than European tariffs throughout the period covered here. Average effective tariffs in Latin America were just under 30 percent in the period between the 1870s and the beginning of the First World War; in Europe, North America, Oceania, and Japan, average effective tariffs were almost exactly half of that, at just under 15 percent. In the same period, customs duties generated just under 40 percent of all government revenue in Europe, North America, Oceania, Japan; in Latin America, the proportion of customs duties in government revenues in the countries for which we have data varied between 50 and almost 100 percent (Figure 1b). Notably, tariffs in Latin America were the world's highest long before the Great Depression (Coatsworth and Williamson 2004), and they were much higher than they were during the heyday of import-substitution industrialization in the 1950s and 1960s.

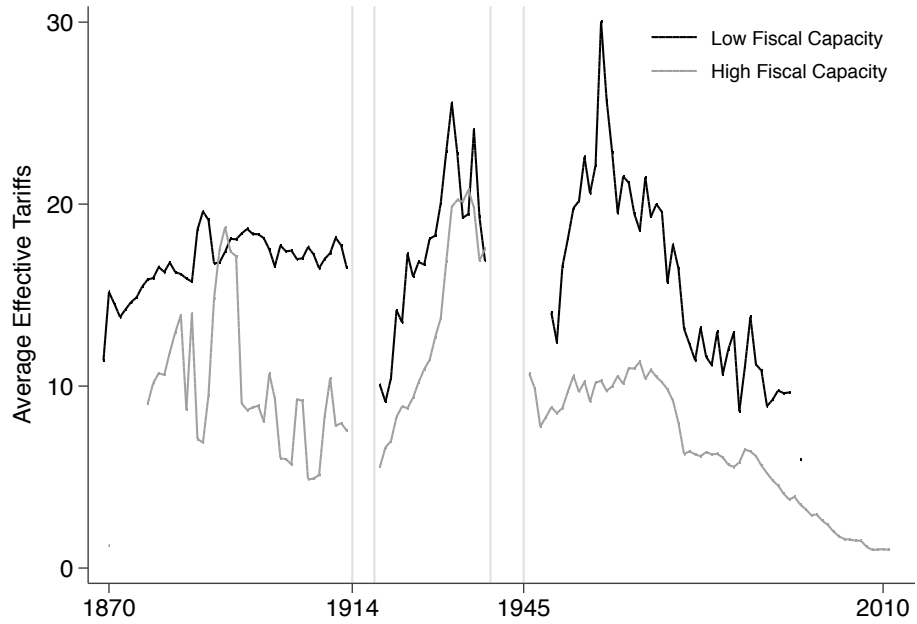
We have argued that the dependence on income from customs is an important part of the explanation for the high level of tariffs in many countries, particularly in Latin America: unable to collect sufficient revenues from other sources, such as taxes on income, property, and consumption, governments fell back on customs as a source of revenue that required little fiscal capacity to implement and collect. Figure 2a uses the fiscal capacity index introduced in the previous section to check whether, on average, countries with lower fiscal capacity have had lower average import tariffs. We find that across the entire period under investigation, countries with fiscal capacity index values of two or lower had higher average import tariffs than countries with fiscal capacity index values of three or greater. This comparison does not control for any potential confounders, but suggests that our argument about fiscal capacity has some empirical merit.

The second, complementary part of our argument is that a comprehensive unemployment insurance system facilitates trade liberalization by serving as a tool to compensate the losers from reducing trade protection. Figure 2b displays the average import tariffs of three groups of countries: (i) countries without any national unemployment insurance system, (ii) countries that have established such a system but in which less than half the labor force is covered by unemployment insurance, and (iii) countries with a comprehensive unemployment insurance system covering more than half of the labor force.

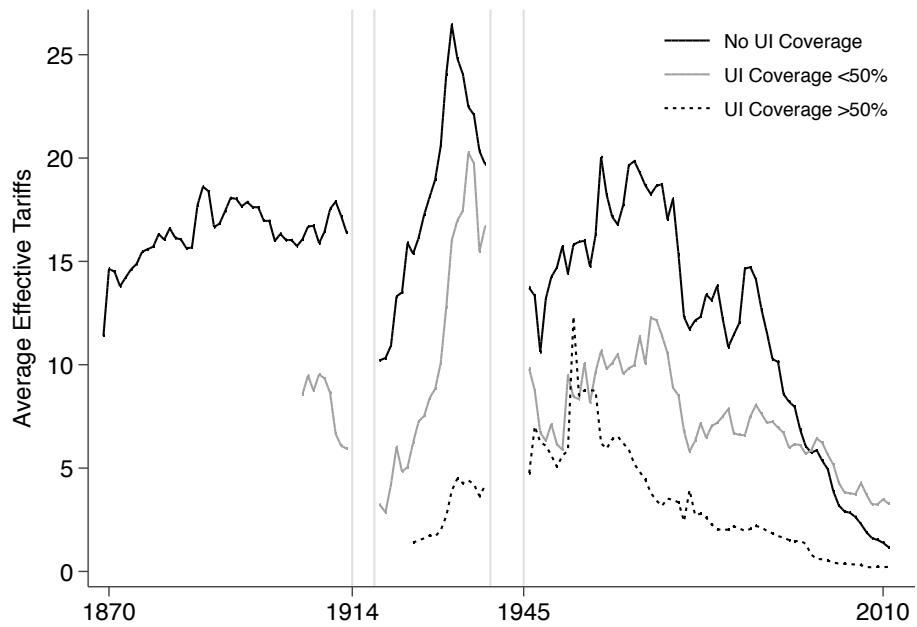
Before the First World War, few countries had unemployment insurance systems, and those that did typically had low coverage and low generosity. In the inter-war period and after the Second World War, however, we find that countries with more comprehensive unemployment insurance systems had, on average, significantly lower average import tariffs. In fact, it is remarkable that the crude coverage indicator that we use almost fully separates countries with high, medium, and low import tariffs, with little overlap across these groups.

The next section investigates whether these descriptive patterns in the data withstand more rigorous testing within a panel framework in which we are able to control for additional explanatory factors.

FIGURE 2. Average Import Tariffs by Fiscal Capacity and Unemployment Insurance Coverage



(A) Fiscal Capacity and Import Tariffs



(B) Unemployment Insurance and Import Tariffs

## 5. THE LONG-TERM DETERMINANTS OF TRADE POLICY

We want to test whether and how social policies and fiscal capacity jointly determine tariff policies. For average tariff levels  $Y_{it}$  of country  $i$  in year  $t$ , we estimate the panel data model

$$(1) \quad Y_{it} = \beta_1 \text{Fiscal Capacity}_{it-1} + \beta_2 \text{Unemployment Benefits}_{it-1} \\ + \beta_3 \text{Fiscal Capacity}_{it-1} \times \text{Unemployment Benefits}_{it-1} \\ + \mathbf{X}_{it-1} \gamma + \delta_t + \epsilon_{it},$$

where *Fiscal Capacity* and *Unemployment Benefits* are the main independent variables of interest,  $\mathbf{X}_{it-1}$  is a matrix of time-varying control variables, and  $\delta_t$  indicates a time trend (constrained to a cubic polynomial), accounting for global trends in tariff levels. All independent variables are lagged by one year. Tariff policies are strongly serially correlated, so the errors are modeled as an AR(1) error process. In addition, to account for both contemporaneous correlation across units and unit-level heteroscedasticity, we employ panel-corrected standard errors (Beck and Katz 1995). The controls for all models include binary indicators for a country's electoral system under democracy (proportional or majoritarian, the residual category being non-democratic), a dummy for all years that the country was in recession (growth was negative), a dummy for involvement in a war, a dummy for countries on the gold standard, and a dummy for countries that had right-wing governments.

Table 2 estimates the joint effects of fiscal capacity (defined in this set of analyses as having an income tax) and unemployment insurance on tariff policy for the period from 1870 to the present.

The odd-numbered models present the results for additive models of the influence of fiscal capacity and social policy. In all these models (and in the even-numbered models, which have interactive specifications) the introduction of a permanent income tax is empirically associated with lower average tariff rates, suggesting that having the capacity to tax domestic incomes induces – or rather, allows – governments to bring down tariffs. The results for unemployment insurance are also robust and consistent across all our different measures of unemployment benefit systems. In Model 1, the existence of a national unemployment insurance policy is negatively associated with average tariffs (as expected by our compensation hypothesis), and this relationship remains significant at the 1 percent level when unemployment benefits are measured by the income replacement rate (Model 3), and when our indicators for low and high coverage are used (Model 5).

In Section 2, we also formulated the hypothesis that a combination of high fiscal capacity and social insurance is associated with especially low tariffs, since countries that have established functioning income tax regimes are able to guarantee the sustainability of unemployment benefit schemes that are comprehensive enough to counteract the short-term negative consequences of trade liberalization. The even-numbered models in Table 2 present tests for this joint relationship between fiscal capacity, compensation, and tariffs, and we do find some evidence for the interactive relationship that we expect. In Model 2 of Table 2, the interaction term is not clearly distinguishable from zero, but in Model 4, when replacement rates are used to

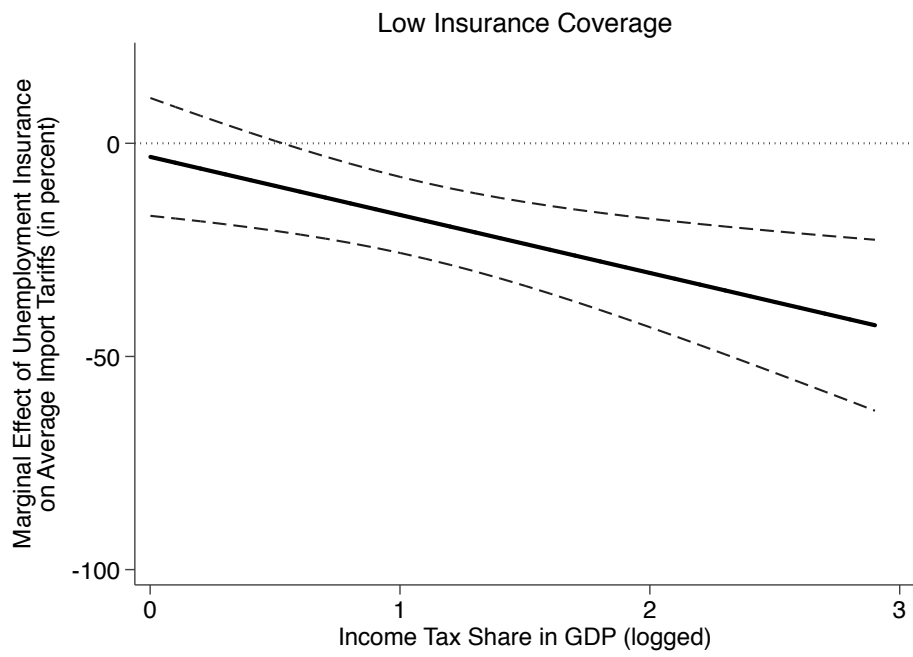
measure unemployment benefit generosity, as opposed to a mere indicator variable, we find that the negative effect of unemployment insurance only becomes apparent once countries have established a permanent income tax. In Model 6, the interaction term for the fiscal capacity indicator and the high-unemployment-insurance-coverage indicator is omitted from the model since there are no country-years in which a country had reached coverage rates of more than 50 percent without first establishing a permanent income tax, which in itself provides evidence for the conditional relationship that we expect.

The introduction of a permanent income tax, while important in its own right, is only a necessary condition for generating revenues from taxes on income. To better proxy for the extent of the capacity to raise revenues, the models in Table 3 use the ratio of total income tax revenue and GDP as a measure of fiscal capacity. Just as the models in Table 2, the models in Table 3 suggest that the ability to compensate losers from trade through unemployment insurance is associated with lower average tariffs, and according to the interaction terms in Models 2, 4, and 6 of Table 3, this reductive effect of unemployment insurance on average tariff rates is particularly strong when the ability to generate state revenues through income taxes is high. In fact, the effect of fiscal capacity on tariffs only seems to operate through the compensation mechanism of unemployment benefits, judging from the fact that the lower-order fiscal capacity terms are not significantly negative in Models 2, 4, and 6.

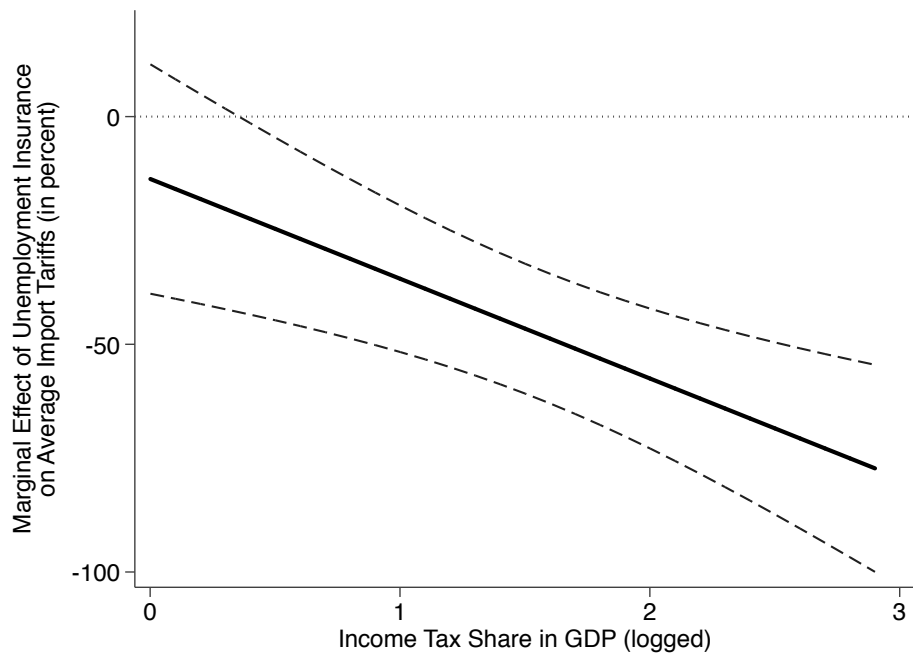
To better judge the combined effects of fiscal capacity and unemployment insurance, we provide a graphical interpretation of the results of Model 6 in Table 3. Figure 3 estimates the marginal effects of having unemployment insurance (compared to the base category of no insurance system) over the range of fiscal capacity (measured as the share of income tax revenue in GDP). At very low levels of fiscal capacity, when income taxes generate less than approximately 1 percent of GDP in revenue, unemployment insurance has no effect on trade tariffs. In contrast, at higher levels of fiscal capacity, unemployment insurance is associated with significantly lower import tariffs. This reductive effect is stronger in countries with higher unemployment coverage rates (compare Figures 3a and 3b). Substantively, countries with very high fiscal capacity – those that are able to generate income taxes of 20 percent of GDP – are estimated to have 75 percent lower tariff rates than systems without unemployment protection, a figure that corresponds quite closely to the comparisons in Figure 2.

In Tables 2 and 3 we proxy for fiscal capacity with a dummy for having a permanent income tax and with the income tax revenue as a share of GDP. However, as argued above, we think a more comprehensive measure of fiscal capacity, adding the establishment of a permanent consumption tax and the quality of the census, may be more appropriate for measuring the underlying ability of governments to generate revenues through taxation. In Table 4 we repeat the basic empirical setup of the previous analysis but now use the fiscal capacity index introduced above to proxy for the ability to tax. The results provide evidence for all three of our hypotheses. In Models 1 and 3 of Table 4 we find that both unemployment insurance and

FIGURE 3. Marginal Effects of Unemployment Insurance Over The Range of Fiscal Capacity (Income Tax Share of GDP)



(A) Low Coverage



(B) High Coverage



increased fiscal capacity are significantly associated with lower import tariffs. More importantly, the combined effect of fiscal capacity and unemployment protection only reaches significance at the highest levels of the capacity index (see Models 2 and 4 of Table 4). Analogous to the interpretation of the marginal effects in Figure 3, we thus find that only in countries with the ability to generate significant revenues does unemployment compensation translate into lower tariffs.

As we have already discussed, the long time period under consideration – and the likely changing relationship between fiscal capacity social policies and tariffs – warrants a separate examination of the relationship between tariff policies, fiscal capacity, and social policies in different time periods. For substantive and historical reasons, it makes sense to distinguish between the period before World War I, the inter-war period, and the time period after World War II. Table 5 re-estimates Models 1 and 2 of Table 3, but now separately for these three periods in time. For the pre-war period, we chose to exclude the indicator for unemployment insurance from the model: by the start of World War I, only five countries had introduced a national unemployment benefits scheme – Denmark (1907), France (1905), Ireland (1911), Norway (1906), and the United Kingdom (1911) – and the systems that did exist had, without exception, low coverage and income-replacement generosity.

Estimating the models for the three time periods separately significantly reduces the power of the tests, but the pattern that we observe in Table 5 nonetheless correspond to our expectations. In the pre-World War I period, from 1870 to 1913, fiscal capacity is strongly and significantly negatively associated with average tariff rates (see Model 1 in Table 5). By 1913, three fifths of the countries in our sample had not yet introduced a permanent income tax, and the share of custom revenues in the central government budget among the countries lagging behind in domestic fiscal capacity was on average 58 percent, a share that was roughly twice as large as the average share for the countries that had already taken that step (28 percent). As a result, tariff policy at that time was largely driven by revenue needs. Significantly reducing tariffs would not only have required appeasing domestic opposition from losers from free trade; more importantly, it would have implied losing significant resources that were needed to finance the central government’s budget.

In the interwar period, after an initial decline in average tariffs after the First World War, the Great Depression and the subsequent political upheaval led to a marked revival of protectionist policies. In Model 2 of Table 5, unemployment insurance and higher fiscal capacity are significantly associated with lower tariff rates (in Model 3, the support for the combined hypothesis is much weaker than it is for the post-war period, as we will soon see). It is noteworthy that there is such a clear relationship between tariff levels and unemployment insurance coverage – which is our main empirical measure of compensation – already in the inter-war period (cf. Mares 2004). This suggests that the international *regime* of “embedded liberalism” was preceded by – and perhaps depended on – the establishment of domestic political arrangements that supported such a combination of liberal trade

policies and a compensatory system of social protection. It is also interesting to note, with respect to the control variables, that we only find a robust relationship between proportional representation and the level of tariffs in the pre-World War I era and – especially – in the inter-war period, again suggesting that the effects of domestic political arrangements were more powerful in the period before the Second World War, when the international free-trade regime of the post-war era had yet to emerge.

In the period following World War II, we witness a trend to radically lower tariffs in the Western World. In Latin America, by contrast, many countries followed the economic recipe of Import-Substitution Industrialization (ISI), implementing prohibitively high import tariffs on some industrialized products with the goal of spurring economic development (we will have more to say about this period in the next section). Model 4 suggests that unemployment insurance continued to be associated with lower tariffs in the post-war period, but income taxes were not, at least not directly. We continue to find evidence for the hypothesis that a combination of high fiscal capacity and unemployment insurance is associated with especially low tariffs (see Model 5).<sup>5</sup>

## 6. THE POST-WAR EXPERIENCE

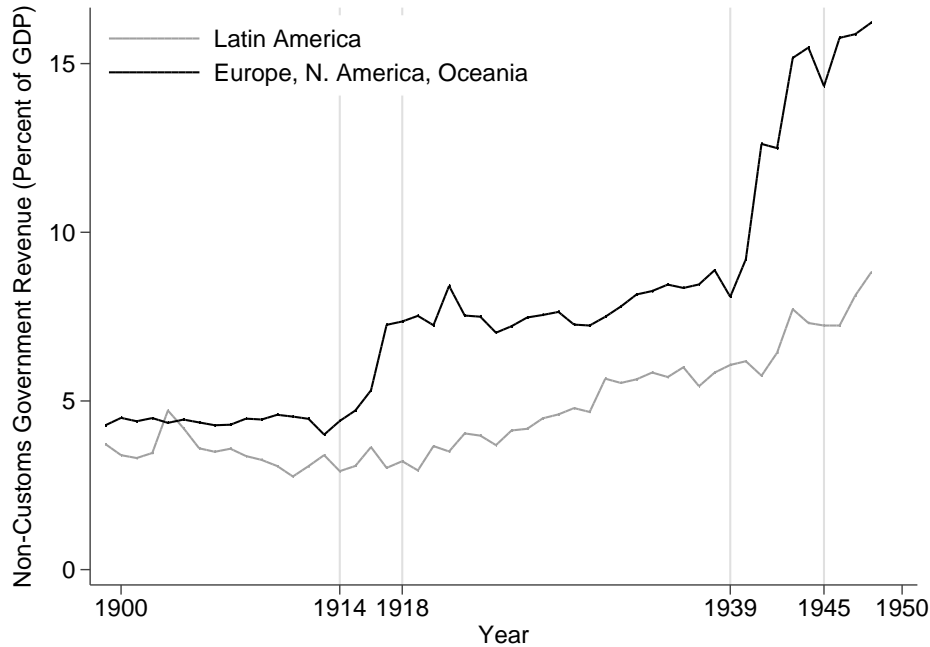
The statistical analyses that we presented in Tables 2–5 provide some support for all the hypotheses that we formulated in Section 2, especially the third, combined hypothesis: that a combination of high fiscal capacity and comprehensive social insurance is associated with particularly low tariffs.

We believe that these results help to explain the divergence in trade policies between North America and Western Europe on the one hand and Latin America on the other that occurred in the early post-war period, when Latin American countries opted for a policy of import-substitution industrialization, while North America and Western Europe sought to establish the international free-trade regime that we now associate with “embedded liberalism” (Ruggie 1982).

This divergence is often explained, with respect to the Latin American exception, with reference to economic ideas and the industrial-policy strategies that those ideas informed. In the 1950s and 60s, Raúl Prebisch and Hans Singer (Prebisch 1950; Singer 1950) developed and popularized the idea that industrial laggards should use trade protection to protect “infant industries” since, they argued, a dependence on exports of primary products is likely to lead to progressively worse terms of trade as the prices of primary products fall in relation to manufactured products (an hypothesis for which there is mixed empirical support; see Cuddington 1992 and Harvey et al. 2010). In response to these sorts of arguments, many countries in Latin America raised their import tariffs on manufactured goods to encourage industrialization and diversification of their export goods away from primary products. Many recent studies go back to the “ISI period” in the 1950s and

<sup>5</sup>It is important to note, that by the 1950s, all countries in Western Europe in our sample, North America (except Mexico), Australia, and Japan had already introduced unemployment insurance systems. Our findings in Models 4 and 5 may thus largely be a comparison of Latin America’s policies compared to the rest of the countries in the sample.

FIGURE 4. Non-Customs Revenue, 1900–1950



1960s when they seek to explain the dynamics of labor market policy, social policy, and trade policy in Latin America, in comparison with other regions.

What we wish to emphasize is that if our results are correct and a move to free trade requires both high fiscal capacity and a comprehensive social policy, North America and Western Europe were in a completely different situation in the wake of the Second World War than Latin America was, suggesting that the role of ideas may have been limited, and that the “ISI period” must be seen in its proper historical context. By the 1950s, almost all countries in North America and Western Europe had introduced some form of unemployment insurance (Sjöberg, Palme, and Carroll 2010, Table 29:1), but only one Latin American country had (and, judging from Perrin 1969, Uruguay’s unemployment benefit system was very limited in scope in comparison with the systems of North America and Western Europe).

Perhaps even more importantly, by the end of the Second World War, states in North America, Oceania, and Western Europe had increased their fiscal capacity greatly as a result of the two world wars, in which most of them had been involved (and those that were not involved mobilized nevertheless). As Figure 4 shows, before 1914, average non-customs government revenue as a percentage of GDP was only marginally higher in North America, Oceania, and Western Europe than it was in Latin America, but as a consequence of the First World War, this ratio increased from 4 to 7 percent in North America, Oceania, and Western Europe (with no corresponding increase in Latin America), and as a consequence of the Second World War, it had increased to more than 16 percent in North America, Oceania, and Western Europe by 1950; by that time, Latin American states only extracted

some 7–8 percent of GDP in non-customs revenue. There are strong reasons to believe that access to domestic revenue sources and established mechanisms of compensation were necessary conditions for the free-trade regime that the U.S.-led West established in the wake of the war.

## 7. CONCLUSION

This paper has examined three hypotheses about the relationship between domestic politics and trade policies, particularly tariffs. We find that both fiscal capacity, institutions, and social policy have influenced tariff policies in rich democracies, but their effects have varied over time. Before the First World War, fiscal capacity dominates. In the inter-war period, both fiscal capacity and redistributive politics mattered. After the Second World War, protectionism was mainly a result of redistributive politics in the absence of compensation through social policy. We find some evidence of a conditional relationship (tariffs are associated with especially low tariffs in the presence of both high fiscal capacity and comprehensive social insurance).

Our arguments and findings have important implications for the contemporary discussion about whether Latin American governments – and governments in other developing or middle-income countries – can, do, and will pursue compensatory policies, and about the reasons for why the forms of compensation that they have been providing have been different from the forms of compensation that governments have provided in Western Europe and some of its English-speaking offshoots (Kurtz and Brooks 2008, Rueda, Wibbels, and Altamirano 2013; see also Nooruddin and Rudra 2014). Since the Latin American experience from the 1950s onward is very important in these accounts, it is essential, in our view, to fit the import-substitution policies that many countries in Latin America pursued in the first postwar decades into a historical pattern, for when Latin American countries opted for import-substituting industrialization, they did so in circumstances when countries in Western Europe and North America had recently increased their fiscal capacity dramatically, as a consequence of the two world wars. Fiscal capacity and the capacity for compensation are essential explanatory variables in analyses of the trade policies that governments pursue.

## REFERENCES

- Adserà, Alicia and Carles Boix. 2002. "Trade, Democracy, and the Size of the Public Sector." *International Organization* 56 (2):229–262.
- Aidt, Toke S., Jayasri Dutta, and Elena Loukoianova. 2006. "Democracy comes to Europe: Franchise extension and fiscal outcomes 1830-1938." *European Economic Review* 50 (2):249–283.
- Aidt, Toke S. and Peter S. Jensen. 2009. "The Taxman Tools up: An Event History Study of the Introduction of the Personal Income Tax." *Journal of Public Economics* 93 (1–2):160–175.
- Andersson, Per and Thomas Brambor. 2014. "Central Government Revenues, 1800–2012 Data Set, Codebook Version 1.0."
- Barbieri, Katherine, Omar Keshk, and Brian Pollins. 2008. "Correlates of War Project Trade Data Set Codebook, Version 3.0." URL <http://correlatesofwar.org>.
- Baunsgaard, Thomas and Michael Keen. 2010. "Tax revenue and (or?) trade liberalization." *Journal of Public Economics* 94 (9–10):563–577.
- Beck, Nathaniel and Jonathan N. Katz. 1995. "What to do (and not to do) with Time-Series Cross-Section Data." *The American Political Science Review* 89 (3):634–647.
- Besley, T. and T. Persson. 2009. "The Origins of State Capacity: Property Rights, Taxation, and Politics." *American Economic Review* 99 (4):1218–1244.
- Besley, Tim and Torsten Persson. 2011. *Pillars of Prosperity*. Princeton: Princeton University Press.
- Boix, Carles, Michael Miller, and Sebastian Rosato. 2013. "A Complete Data Set of Political Regimes, 1800–2007." *Comparative Political Studies* 46 (12):1523–1554.
- Brambor, Thomas, Johannes Lindvall, and Annika Stjernquist. 2013. "The Ideology of Heads of Government, 1870–2012." Version 1.0. Department of Political Science, Lund University.
- Bueno de Mesquita, Bruce, Alastair Smith, Randolph M. Siverson, and James D. Morrow. 2003. *The Logic of Political Survival*. Cambridge: MIT Press.
- Burgoon, Brian. 2001. "Globalization and Welfare Compensation: Disentangling the Ties That Bind." *International Organization* 55 (3):509–51.
- Cagé, Julia and Lucie Gadenne. 2014. "Tax Revenues, Development, and the Fiscal Cost of Trade Liberalization, 1792–2006." Unpublished manuscript, Harvard University and University College London.
- Cameron, David. 1978. "The Expansion of the Public Economy: A Comparative Analysis." *American Political Science Review* 72 (4):1243–1261.
- Carroll, Eero. 1999. *Emergence and Structuring of Social Insurance Institutions*. Edsbruk: Akademitryck.
- Clemens, Michael A. and Jeffrey G. Williamson. 2004. "Why Did the Tariff-Growth Correlation Change After 1950?" *Journal of Economic Growth* 9 (1):5–46.
- . 2012. "Why Were Latin America's Tariffs so Much Higher Than Asia's Before 1950?" *Revista de Historia Económica (New Series)* 30 (01):11–44.

- Coatsworth, John H. and Jeffrey G. Williamson. 2004. "Always Protectionist? Latin American Tariffs from Independence to Great Depression." *Journal of Latin American Studies* 36 (2):205–232.
- Collier, David and Ruth Berins Collier. 1991. *Shaping the Political Arena*. Princeton: Princeton University Press.
- Colomer, Josep M., editor. 2004. *The Handbook of Electoral System Choice*. Basingstoke: Palgrave Macmillan.
- Cuddington, John T. 1992. "Long-run trends in 26 primary commodity prices: A disaggregated look at the Prebisch-Singer hypothesis." *Journal of Development Economics* 39 (2):207–227.
- Dutt, Pushan and Devashish Mitra. 2005. "Political Ideology and Endogenous Trade Policy: An Empirical Investigation." *Review of Economics and Statistics* 87 (1):59–72.
- Eichengreen, Barry and Douglas A. Irwin. 2010. "The Slide to Protectionism in the Great Depression: Who Succumbed and Why?" *The Journal of Economic History* 70 (04):871–897.
- Evans, Carolyn L. 2009. "A Protectionist Bias in Majoritarian Politics: An Empirical Investigation." *Economics & Politics* 21 (2):278–307.
- Flora, Peter, Franz Kraus, and Winfried Pfenning. 1983. *State, Economy, and Society in Western Europe 1815-1975: The growth of industrial societies and capitalist economies*. Campus Verlag.
- Garrett, Geoffrey. 1998. *Partisan Politics in the Global Economy*. Cambridge: Cambridge University Press.
- Giuliano, Paola, Prachi Mishra, and Antonio Spilimbergo. 2012. "Democracy and Reforms: Evidence From a New Dataset." NBER Working Paper 18117.
- Goldstein, Judith and Robert Gulotty. 2014. "America and Trade Liberalization: The Limits of Institutional Reform." *International Organization* 68 (2):263–295.
- Grossman, Gene M. and Elhanan Helpman. 2005. "A Protectionist bias in Majoritarian Politics." *Quarterly Journal of Economics* 120 (4):1239–1282.
- Harvey, David I, Neil M Kellard, Jakob B Madsen, and Mark E Wohar. 2010. "The Prebisch-Singer Hypothesis: Four Centuries of Evidence." *Review of Economics and Statistics* 92 (2):367–377.
- Hays, Jude C. 2009. *Globalization and the New Politics of Embedded Liberalism*. Oxford: Oxford University Press.
- Hays, Jude C., Sean D. Ehrlich, and Clint Peinhardt. 2005. "Government Spending and Public Support for Trade in the OECD." *International Organization* 59 (2):473–494.
- Huber, Evelyne and Juan Bogliaccini. 2010. "Latin America." In *The Oxford Handbook of the Welfare State*, edited by Francis G. Castles, Stephan Leibfried, Jane Lewis, Herbert Obinger, and Christopher Pierson. Oxford: Oxford University Press.
- Huber, Evelyne and John D. Stephens. 2012. *Democracy and the Left*. Chicago: University of Chicago Press.
- Katzenstein, Peter J. 1985. *Small States in World Markets*. Ithaca: Cornell University Press.

- Korpi, Walter and Joakim Palme. 2008. *The Social Citizenship Indicator Program (SCIP)*. Swedish Institute for Social Research.
- Kuhnle, Stein and Anne Sander. 2010. "The Emergence of the Western Welfare State." In *The Oxford Handbook of the Welfare State*, edited by Francis G. Castles, Stephan Leibfried, Jane Lewis, Herbert Obinger, and Christopher Pierson. Oxford: Oxford University Press.
- Kurtz, Marcus J. and Sarah M. Brooks. 2008. "Embedding Neoliberal Reform in Latin America." *World Politics* 60 (2):231–280.
- Lampe, Markus and Paul Sharp. 2013. "Tariffs and Income: A Time Series Analysis for 24 Countries." *Econometrics* 7:207–235.
- Lee, Melissa and Nan Zhang. 2013. "Measuring the Accuracy of the National Census: A New Objective Indicator of State Absence."
- Lindvall, Johannes. 2010. "Power Sharing and Reform Capacity." *Journal of Theoretical Politics* 22 (3):1–18.
- Lohmann, Susanne and Sharyn O'Halloran. 1994. "Divided Government and U.S. Trade Policy." *International Organization* 48 (4):595–632.
- Maddison, Angus. 2010. "Statistics on World Population, GDP and Per Capita GDP, 1-2008 AD."
- Mansfield, Edward D., Helen V. Milner, and B. Peter Rosendorff. 2002. "Why Democracies Cooperate More: Electoral Control and International Trade Agreements." *International Organization* 56 (3):477–513.
- Mares, Isabela. 2003. *The Politics of Social Risk: Business and Welfare State Development*. New York: Cambridge University Press.
- . 2004. "Economic Insecurity and Social Policy Expansion: Evidence from Interwar Europe." *International Organization* (4):745–774.
- McGillivray, Fiona. 2004. *Privileging Industry*. Princeton: Princeton University Press.
- Nielson, Daniel L. 2003. "Supplying Trade Reform: Political Institutions and Liberalization in Middle-Income Presidential Democracies." *American Journal of Political Science* 47 (3):470–491.
- Nooruddin, Irfan and Nita Rudra. 2014. "Are Developing Countries Really Defying the Embedded Liberalism Compact?" *World Politics* 66 (4).
- Perrin, Guy. 1969. "Reflections on Fifty Years of Social Security." *International Labour Review* 99 (3):249–292.
- Prebisch, Raul. 1950. "The economic development of Latin America and its principal problems." Tech. rep., United Nations, Economic Commission for Latin America (CEPAL), Lake Success, New York.
- Queralt, Dídac. 2014. "From Mercantilism to Free Trade: A History of Fiscal Capacity Building." Unpublished manuscript, Juan March Institute, Madrid.
- Reinhart, Carmen M. and Kenneth S. Rogoff. 2009. *This Time Is Different: Eight Centuries of Financial Folly*. Princeton University Press.
- Rickard, Stephanie. 2012. "A Non-Tariff Protectionist Bias in Majoritarian Politics." *International Studies Quarterly* 56 (4):777–785.
- Rodrik, Dani. 1998. "Why Do More Open Economies Have Bigger Governments?" *Journal of Political Economy* 106 (5):997–1032.
- Rogowski, Ronald. 1987. "Trade and the Variety of Democratic Institutions." *International Organization* 41 (2):203–223.

- Rueda, David, Erik Wibbels, and Melina Altamirano. 2013. "The Origins of Dualism." Unpublished manuscript, Duke University and the University of Oxford.
- Rueschemeyer, Dietrich, Evelyne Huber, and John D. Stephens. 1992. *Capitalist Development and Democracy*. Chicago: Chicago University Press.
- Ruggie, John G. 1982. "International Regimes, Transactions, and Change: Embedded Liberalism in the Postwar Economic Order." *International Organization* 36 (2):379–415.
- Scartascini, Carlos, Ernesto Stein, and Mariano Tommasi. 2014. "Veto Players and Policy Adaptability. An Intertemporal Perspective." *Journal of Theoretical Politics* 26 (2):222–248.
- Scruggs, Lyle and James Allan. 2006. "Welfare-state decommodification in 18 OECD countries." *Journal of European Social Policy* 16 (1):55–72.
- Singer, Hans W. 1950. "The Distribution of Gains between Investing and Borrowing Countries." *The American Economic Review* 40 (2):473–485.
- Sjöberg, Ola, Joakim Palme, and Eero Carroll. 2010. "Unemployment Insurance." In *The Oxford Handbook of the Welfare State*, edited by Francis G. Castles, Stephan Leibfried, Jane Lewis, Herbert Obinger, and Christopher Pierson. Oxford: Oxford University Press.
- Soifer, Hillel David. 2012. "Measuring State Capacity in Contemporary Latin America." *Revista de Ciencia Política* 32 (3):585–98.
- Soifer, Hillel David. 2013. "State Power and the Economic Origins of Democracy." *Studies in Comparative International Development* 48 (1):1–22.
- United States Social Security Administration. 2012a. *Social Security Programs Throughout the World: Asia and the Pacific, 2012*. Washington, D.C.: United States Social Security Administration.
- . 2012b. *Social Security Programs Throughout the World: Europe, 2012*. Washington, D.C.: United States Social Security Administration.
- . 2013. *Social Security Programs Throughout the World: The Americas, 2013*. Washington, D.C.: United States Social Security Administration.



TABLE 1. Unemployment Insurance, The Income Tax, and Average Tariffs

Country	UI System Established	Income Tax Introduced	Average Tariff Rate		
			Pre-WWI	Interwar	Post-WWII
Argentina	1991	1932	24	18	11
Australia	1944	1915	19	25	8
Austria	1920	1849	6	12	3
Belgium	1920	1922	2	5	1
Bolivia		1975			11
Brazil	1986	1923	36	24	7
Canada	1940	1917	18	14	5
Chile	2002	1924	20	22	12
Colombia	2002	1927	35	26	14
Costa Rica		1946			10
Denmark	1907	1903	10	6	2
Ecuador	2001	1926			26
Finland	1917	1920			4
France	1905	1911	8	9	3
Germany	1927	1920	7	15	3
Greece	1954	1919	22	15	11
Ireland	1911	1853			5
Italy	1919	1864	12	10	3
Japan	1947	1887	7	5	3
Mexico		1924	18	21	11
Netherlands	1916	1893	1	4	2
New Zealand	1930	1891	20	17	8
Norway	1906	1892	11	10	2
Peru		1936	31	23	17
Portugal	1975	1896	32	18	5
Spain	1919	1932	13	19	4
Sweden	1934	1902	9	8	2
Switzerland	1924	1939	3	12	5
United Kingdom	1911	1842	1	3	3
United States	1935	1913	28	17	4
Uruguay	1934	1960	35	27	12
Venezuela	1989	1942			10

TABLE 2. Effects of Tax Capacity (Income Tax Established) and Unemployment Insurance on Tariff Policy  
(Dependent Variable: Logged Average Tariff Rate)

Unemployment Insurance Measure:	UI System Established			Log(Replacement Rate)			Coverage Indicator		
	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6			
Permanent Income Tax	-0.109** (0.045)	-0.091* (0.048)	-0.135*** (0.048)	-0.127*** (0.049)	-0.134*** (0.045)	-0.118** (0.048)			
Unemployment Insurance	-0.138*** (0.041)	-0.060 (0.074)	-0.165*** (0.024)	0.004 (0.088)					
Unemployment Insurance x Income Tax		-0.100 (0.078)		-0.172** (0.086)					
Unemployment Insurance Low Coverage					-0.129*** (0.039)	-0.063 (0.075)			
Unemployment Insurance High Coverage					-0.399*** (0.056)	-0.413*** (0.058)			
Low Coverage x Income Tax						-0.081 (0.079)			
Proportional Democracy	-0.045 (0.031)	-0.044 (0.031)	-0.024 (0.033)	-0.025 (0.033)	-0.054* (0.031)	-0.052* (0.031)			
Majoritarian Democracy	-0.052 (0.034)	-0.050 (0.034)	-0.030 (0.037)	-0.029 (0.037)	-0.057* (0.033)	-0.055* (0.033)			
Recession	0.003 (0.007)	0.003 (0.007)	0.008 (0.007)	0.008 (0.007)	0.003 (0.007)	0.003 (0.007)			
War	0.005 (0.015)	0.005 (0.015)	-0.004 (0.016)	-0.003 (0.016)	0.003 (0.015)	0.003 (0.015)			
Right Government	-0.001 (0.010)	-0.001 (0.010)	0.002 (0.011)	0.002 (0.011)	-0.001 (0.010)	-0.001 (0.010)			
Number of Countries	32	32	32	32	32	32			
Observations	3539	3539	2996	2996	3539	3539			

\*  $p < 0.10$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$  (two-tailed). Standard errors in parentheses are panel-corrected for heteroscedasticity and model an AR(1) error process. All models contain a cubic polynomial of time. Constants estimated but not reported. All independent variables are lagged by one period.

TABLE 3. Effects of Tax Capacity (Income Taxes Over GDP) and Unemployment Insurance on Tariff Policy  
(Dependent Variable: Logged Average Tariff Rate)

Unemployment Insurance Measure:	UI System Established			Log(Replacement Rate)			Coverage Indicator		
	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6			
Income Tax Share of GDP (logged)	-0.040 (0.030)	0.053 (0.047)	0.010 (0.035)	0.039 (0.051)	-0.066** (0.030)	0.016 (0.045)			
Unemployment Insurance	-0.153*** (0.046)	0.028 (0.069)	-0.179*** (0.025)	-0.147*** (0.039)					
Unemployment Insurance x Income Tax		-0.162*** (0.050)		-0.019 (0.016)					
Unemployment Insurance Low Coverage					-0.163*** (0.044)	-0.023 (0.071)			
Unemployment Insurance High Coverage					-0.436*** (0.063)	-0.116 (0.128)			
Low Coverage x Income Tax						-0.113** (0.049)			
High Coverage x Income Tax						-0.198*** (0.067)			
Proportional Democracy	-0.062* (0.037)	-0.068* (0.037)	-0.040 (0.039)	-0.045 (0.039)	-0.075** (0.037)	-0.080** (0.037)			
Majoritarian Democracy	-0.044 (0.039)	-0.042 (0.039)	-0.006 (0.043)	-0.002 (0.043)	-0.041 (0.038)	-0.038 (0.038)			
Recession	0.001 (0.007)	0.002 (0.007)	0.006 (0.008)	0.006 (0.008)	0.002 (0.008)	0.002 (0.008)			
War	0.005 (0.015)	0.005 (0.016)	-0.006 (0.016)	-0.006 (0.016)	0.002 (0.016)	0.003 (0.016)			
Right Government	-0.009 (0.012)	-0.010 (0.012)	-0.007 (0.014)	-0.007 (0.014)	-0.009 (0.013)	-0.009 (0.013)			
Number of Countries	29	29	29	29	29	29			
Observations	2937	2937	2510	2510	2937	2937			

\*  $p < 0.10$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$  (two-tailed). Standard errors in parentheses are panel-corrected for heteroscedasticity and model an AR(1) error process. All models contain a cubic polynomial of time. Constants estimated but not reported. All independent variables are lagged by one period.

TABLE 4. Effects of Tax Capacity (Fiscal Capacity Index Indicators) and Unemployment Insurance on Tariff Policy  
 Dependent Variable: Logged Average Tariff Rate

	UI System Established			Log(Replacement Rate)	
	Model 1	Model 2	Model 3	Model 3	Model 4
Unemployment Insurance	-0.136*** (0.040)	-0.060 (0.074)	-0.174*** (0.024)	0.037 (0.086)	
Low Fiscal Capacity	-0.233*** (0.085)	-0.237*** (0.084)	-0.278*** (0.078)	-0.277*** (0.078)	
Medium Fiscal Capacity	-0.306*** (0.093)	-0.308*** (0.095)	-0.376*** (0.088)	-0.363*** (0.089)	
High Fiscal Capacity	-0.341*** (0.097)	-0.343*** (0.099)	-0.406*** (0.092)	-0.392*** (0.093)	
Very High Fiscal Capacity	-0.331*** (0.100)	-0.196* (0.107)	-0.387*** (0.095)	-0.278*** (0.102)	
Unemployment Insurance x Medium Capacity		-0.019 (0.069)		-0.043 (0.044)	
Unemployment Insurance x High Capacity		-0.036 (0.082)		-0.193** (0.084)	
Unemployment Insurance x Very Capacity		-0.241*** (0.089)		-0.235*** (0.085)	
Proportional Democracy	-0.045 (0.031)	-0.044 (0.031)	-0.029 (0.033)	-0.030 (0.033)	
Majoritarian Democracy	-0.053 (0.034)	-0.052 (0.034)	-0.029 (0.037)	-0.028 (0.037)	
Recession	0.003 (0.007)	0.003 (0.007)	0.008 (0.007)	0.008 (0.007)	
War	0.006 (0.015)	0.005 (0.015)	-0.005 (0.016)	-0.005 (0.016)	
Right Government	-0.000 (0.010)	-0.001 (0.010)	0.001 (0.011)	0.001 (0.011)	
Gold Standard	0.030 (0.024)	0.028 (0.024)	0.012 (0.025)	0.012 (0.025)	
Number of Countries	32	32	32	32	
Observations	3539	3539	2996	2996	

\*  $p < 0.10$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$  (two-tailed). Standard errors in parentheses are panel-corrected for heteroscedasticity and model an AR(1) error process. All models contain a cubic polynomial of time. Constants estimated but not reported. All independent variables are lagged by one period.

TABLE 5. Time Period Specific Effects of Tax Capacity (Income Tax Share in GDP) and Unemployment Insurance on Tariff Policy  
(Dependent Variable: Logged Average Tariff Rate)

Time Period:	Pre WWI		Interwar		Post WWII	
	Model 1	Model 2	Model 3	Model 4	Model 5	Model 5
Income Tax Share of GDP (logged)	-0.526*** (0.096)	-0.152*** (0.053)	-0.124 (0.081)	0.005 (0.043)	0.124* (0.072)	0.124* (0.072)
Unemployment Insurance		-0.181** (0.072)	-0.140 (0.114)	-0.402*** (0.097)	-0.056 (0.178)	-0.056 (0.178)
Unemployment Insurance x Income Tax			-0.065 (0.100)		-0.218*** (0.083)	-0.218*** (0.083)
Proportional Democracy	-0.245** (0.118)	-0.313*** (0.071)	-0.339*** (0.072)	-0.003 (0.056)	-0.014 (0.056)	-0.014 (0.056)
Majoritarian Democracy	-0.017 (0.057)	-0.056 (0.068)	-0.056 (0.067)	-0.035 (0.069)	-0.033 (0.068)	-0.033 (0.068)
Recession	0.013 (0.011)	0.020 (0.022)	0.023 (0.023)	-0.006 (0.012)	-0.006 (0.012)	-0.006 (0.012)
War	-0.022 (0.033)	-0.028 (0.064)	-0.046 (0.068)	0.017 (0.021)	0.019 (0.021)	0.019 (0.021)
Right Government	-0.039 (0.029)	-0.018 (0.031)	-0.019 (0.032)	-0.007 (0.018)	-0.008 (0.018)	-0.008 (0.018)
Number of Countries	22	24	24	29	29	29
Observations	728	447	447	1682	1682	1682

\*  $p < 0.10$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$  (two-tailed). Standard errors in parentheses are panel-corrected for heteroscedasticity and model an AR(1) error process. All models contain a cubic polynomial of time. Constants estimated but not reported. All independent variables are lagged by one period.