

Stolper-Samuelson Democratizes

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Abstract: While much research has dealt with how policies in democracies differ from those under other political systems, relatively little effort has been devoted to studying how episodes of democratization change economic policies. We do so in the context of trade policy taking into account both classical and new trade theory, as well as considerations from political economy. Exploring data on trade policy and regime change between 1975 and 2010, we find that regime behaviour under unstable political institutions in labour abundant countries is consistent with the Stolper-Samuelson Theorem. In turn, when moving to a stable democracy or to a relatively capital abundant economy, all effects cease to be significant.

Keywords: trade policy, Stolper-Samuelson, democratization

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1. Introduction

Whether democratic governance causes a change in institutions and policies, or whether certain institutions and policies further democratic accountability remains an old discussion in political economy. Yet, while much research has dealt with how policies in democracies differ from those under other political systems, relatively little effort has been devoted to studying how episodes of democratization alter economic policies. A number of papers have recently devoted more attention to this subject, developing roughly along similar lines. On one hand, Rode and Gwartney (2012) and Giuliano et al. (2012) represent a strand of literature that encounters stable democratizations to cause improvements in economic freedom and the rule of law. On the other hand, Lawson and Clark (2010) find evidence for the Hayek-Friedman hypothesis, which basically states that sufficient standards in the rule of law are necessary for democratization to happen. Related issues specific to policies and institutions affecting international trade have been investigated by O'Rourke and Taylor (2006) or Milner and Mukherjee (2009), who ask if democratization has fostered higher levels of trade, or if trade increase the likelihood of democratization. The authors find ample evidence that supports the first hypothesis, but little or none for the second.

In this paper, we expand on this topic by studying how democratization affects trade policy, dependent on the stability of political change, the ideology of governments taking power after transition, and factor endowments of the local economy that may influence voter preferences for trade policies. To outline the potential theoretical expectations, we combine both classical and new trade theory with a number of recent insights from public choice and political economy. Given the implications of theory, our starting point consists of three elements; 1) the effects of democratization for trade will depend on whether it represents a stable change of political institutions, or remains a temporary aberration from some form of non-democratic regime; 2) the constellation of voter interests in society are dependent on factor endowments that affect the

direction in which trade policy is changed; and 3) the ideological position of the government taking power after democratization most likely influences changes in trade policy.

Although trade liberalization is known to be conducive to long-run economic growth and thus to the benefit of society as a whole, liberalization of trade policy may entail a medium-run *distributional* dilemma. Based on the Heckscher-Ohlin model, the Stolper-Samuelson Theorem states that the owners of resources, which are used intensively in the type of production the country has a comparative advantage in, will gain relatively more than other agents. In turn, comparative advantages in Heckscher-Ohlin arise out of factor endowments, such that the owners of the relatively abundant resource are likely to gain the most from trade liberalization. By this logic, it follows that in a simple two-factor, two-sector, two-country world, trade liberalization is going to be relatively beneficial to labour in the comparatively labour-rich country and beneficial to capital in the relatively capital-rich country. However, we note two complications to this more traditional thinking.

First, in virtually all democratic elections, labour is going to be abundant. As trade policy, including official tariffs, less visible non-tariff barriers, and capital controls, becomes subject to democratic decision-making, democratization may change trade policy in a direction that we should think to be beneficial to the interests of labour. In other words, when countries democratize a logic that follows the Stolper-Samuelson Theorem predicts trade policy to change in the following direction: capital rich countries will establish higher trade barriers, while labour rich countries will lower them.

Second, in relatively rich, capital abundant countries, new trade theory focusing on intra-industry trade and geographical factors may be a more relevant explanatory tool, and these countries also enjoy deep financial markets. Both factors create much more intricate associations between trade liberalization and voter interests, yielding potentially very different interest

constellations than the Heckscher-Ohlin model and a difference between the distribution of factor and personal incomes. A main implication from applying new trade theory is that the effects of regime change are likely to vary between poor / capital poor and rich / capital abundant countries, depending on structural characteristics within the latter.

Recent papers study voters' preferences and beliefs about globalization and trade, yet few studies have been devoted to preferences in trade policy change (although see Jäkel and Smolka, 2013). Relatedly, Dutt and Mitra (2005), Milner and Kubota (2005), O'Rourke and Taylor (2006) and Aidt and Gassebner (2010), all find strong evidence that democratizations further free trade across countries, and that moves towards free trade are highly dependent on underlying capital or labour endowments. Nonetheless, these important contributions neither account for the stability of political change, nor the possibility that voter interests might be imperfectly represented by the incoming democratic governments. We assume that both issues would substantially affect trade policy outcomes following a democratic transition. Our main question is whether such beliefs and interests really become influential during democratization so that the outcomes are also observable.

We find that in countries with a low capital-labour ratio, the Stolper-Samuelson Theorem provides a correct implication, as left-wing governments in unstable democracies are substantially more prone to liberalize trade policy. In contrast, stable and unstable autocracies with left-wing regimes generally prevent trade reform, as these regimes are also either the principal owners of capital or represent political elites that effectively are. Finally, we find no clear evidence of any regime effects in capital abundant countries, regardless of the ideological position of the incumbent government, meaning that stable democratizations in high-income societies will not significantly alter the existing trade policies in easily predictable ways.

The rest of the paper is structured as follows. Section 2 briefly outlines the standard logic of the Stolper-Samuelson Theorem, new trade theory and possible extensions. Section 3 describes our

main data and estimation strategy and section 4 reports the results. Section 5 discusses the main implications and concludes.

2. Theory

The theoretical foundations of our empirical study on trade policy reform are summarized in Figure 1, where we establish a conceptual framework for considering this problem. It consists of three stages: 1) which trade theoretical model is most appropriate in a given situation; 2) the distributional and welfare consequences of each, and 3) the political effects arising out of these consequences, i.e. a set of standard public choice problems often ignored by the ‘pure’ trade literature. We distinguish between classical and new trade theories and draw a line between the public choice considerations in democracies and autocracies, and between stable and unstable regime types.

Insert Figure 1 about here

2.1. Classical trade theory

Classical trade theory, beginning with David Ricardo’s introduction of the concept of comparative advantages, notes that trade liberalization may mean relative losses for some groups in society. The most widely used model in modern economics that accounts for this same fact is the Heckscher-Ohlin model, named after the Swedish economists Eli Heckscher and Bertil Ohlin. It specifies in detail which groups in society gain more than others from trade liberalization. Heckscher and Ohlin noted that Ricardian comparative advantages arise due to differences in factor endowments. For example, countries with an abundance of labour, relative to other production factors, will have a comparative advantage in production processes that require relatively large quantities of labour,

since abundance also makes labour the relatively cheaper factor. The general formulation of this effect, known by most standard textbooks as the Stolper-Samuelson Theorem, states that an increase in the relative price of a good – for example due to trade liberalization – will lead to an increase in the (relative) return to the factor which is used most intensively in the production of the good (e.g. Stolper and Samuelson, 1941; Feenstra, 2004).

Therefore, the standard implication of the Stolper-Samuelson Theorem in a standardized two-factor model is that in countries characterized by low capital-to-labour ratios, i.e. countries that are relatively abundant in labour as a production factor, ‘labour’ as population segment ought to support trade liberalization, because it will improve both the absolute wages as well as the distribution of incomes in its favour. Conversely, capital owners – the opposite group in the population – ought to oppose trade liberalization. The political implications that are usually drawn from the distributional consequences of trade liberalization, as described in the Stolper-Samuelson Theorem, imply that left-wing parties in labour abundant countries, which are mostly poor countries, should logically support trade liberalization, while right-wing parties should oppose it (cf. Hillman, 1989; Dutt and Mitra, 2005).

While many economists have deemed the Stolper-Samuelson Theorem dead, the evidence for its distributional consequences in developing countries remains strong (e.g. Beyer et al., 1999). For example, extensions of the theorem that differentiate between skilled and unskilled labour tend to match voter preferences fairly well. In general, both partisan political choices and voter preferences also tend to match the predictions of extended Heckscher-Ohlin models (Dutt and Mitra, 2005; Mayda and Rodrik, 2005; Jäkel and Smolka, 2013). However, as we outline in the following, under reasonable assumptions new trade theory often yields quite different implications for trade liberalization and how the different voter groups are affected by it.

2.2. New trade theory

Since the late 1970s, alternatives to the Heckscher-Ohlin model and other classical trade theory have multiplied. What has colloquially become known as ‘new trade theory’ are in fact two partially overlapping strands of the literature: one following Krugman’s (1979) seminal contributions to economic geography, and another associated with Melitz’s (2003) introduction of heterogeneous firms in the trade literature. The former is surveyed in Neary (2009) while the latter is summarized in Harrison et al. (2011).

Krugman’s (1979) elegant formulation of Dixit and Stiglitz’s (1977) model, featuring consumers with a “love of variety”, was part of the impetus that started a large literature on intra-industry trade. As Krugman’s firms are homogenous but produce heterogeneous goods with the same technology, trade liberalization between similar countries leads to more varieties in the market and welfare gains, but no shifts in the factor contents in production or their returns. Within the original formulation of new trade theory, trade reform does not hold any implications for the distribution of factor incomes, except if some firms exit the market (as in Foellmi and Oechslin, 2010). Likewise, in Melitz’s (2003) model that started the heterogeneous firms literature (sometimes known as ‘new new trade theory’), trade reform merely reallocates resources *within* industries, but not across industries. Similar to Krugman’s original theory, Melitz’s initial formulation holds no implications for income inequality. However, subsequent literature has introduced a large number of complications, yielding implications for gains from trade and the distribution of incomes. As this literature is long and complex, we only briefly mention some of the most intuitive theoretical results.

An early example is Dinopoulos and Segerstrom (1999) who model a situation in which firms undertake research and development in order to get a competitive edge over other firms. As tariff liberalization raises the returns to innovative activities, given that such activities are skilled-labour

intensive, trade reform will increase the demand for skilled labour and its wages. Here, productivity increases from research and development not only affect overall welfare but also income inequality, as skilled labour wages are assumed to be above the median income.

Another mechanism explored in a number of papers is the introduction of efficiency wages in the Melitz model. For example, Davis and Harrigan (2011) show in a model with shirking that trade liberalization tends to root out firms that are bad at detecting shirkers. Since firms with low detection skills will need to pay higher wages due to trade reform, their exit from the market will tend to eliminate the high-paid, low effort jobs along with firms with high marginal costs. Through this mechanism, trade therefore decreases income inequality by rooting out firms with jobs that ‘unfairly’ paid high wages. However, with a similar mechanism in Helpman et al. (2010), where firms screen potential employees and pay higher wages to more productive workers, trade liberalization exacerbates the wage inequality created by screening, because it increases the returns to screening in high-productivity firms, but does the opposite in low-productivity firms. Introducing other types of labour market frictions tends to have similarly diverse effects, as summarized by Harrison et al. (2011).

In the literature following Krugman, the original set-up was celebrated in part precisely because it did not lead to asymmetric income or welfare gains from trade. If one additionally assumes in Krugman (1980) that the two industries do not have similar technology and trade causes specialization in one of the two classes of goods, the model reverts to a Heckscher-Ohlin-type implication. However, without additional assumptions, neither model holds direct inequality implications. Neary (2009) nevertheless emphasizes that models of agglomeration and industry concentration in particular can point to surprising effects. One that is possibly relevant to the present paper arises, if trade causes agglomeration and industry growth affects local development through backward and forward linkages. In that case, national income inequality may be affected,

although the direction depends on whether the affected population groups in the area initially were below or above the national median income. In addition, even with ‘new trade’ agglomeration effects, industry growth in such models in relatively poor countries is likely to arise in labour intensive industries, which gives rise to a Stolper-Samuelson like effect in situations of imperfect competition and thus to lower inequality. Recently, Baldwin and Forslid (2010) propose another mechanism by combining the approaches of Krugman and Melitz. Under this framework, trade liberalization causes more firms to export and the new exporters are relatively smaller firms. This also leads to a Stolper-Samuelson-like result, where owners of large and efficient firms will support trade liberalization, while owners of small and non-exporting firms will oppose it, despite an overall welfare gain for society.

In total, new trade theory provides a long list of mechanisms through which trade reform might affect both, overall welfare and the income distribution. While classical trade theory, exemplified here by the Heckscher-Ohlin model, holds unambiguous implications for the distributional effects of trade, neither strand of new trade theory does so. Instead, following either Krugman or Melitz, the distributional consequences of trade liberalization depend on very specific assumptions that could give rise to positive, negative, or neutral effects of trade reform. Overall, the implications of trade theory for the effects of trade reform depend crucially on countries’ degree of inter- and intra-industry trade and thus, whether classical or new trade theory is more likely to provide the better framework for understanding its effects. As Neary (2009, 232) credits Krugman for pointing out, this theoretical ambiguity may “explain the lack of apparent conflict in the adjustment to growing trade in post-war Western Europe,” as most of this growth has been in intra-industry trade, which creates no clearly identifiable distributional conflict. Before we proceed to hypothesizing on the likely determinants of trade reform based on trade theory, we outline two further conditions for drawing such implications that tend to go unnoticed in the literature.

2.3. Conditions for trade theoretical policy effects

We nevertheless note that for the Stolper-Samuelson Theorem as well as implications from new trade theory to map clearly onto political preferences and partisan ideology, two conditions must be met. First, most studies making any implications assume that left-wing parties represent a poor segment of society, which in models consists of either labour or low-skilled labour while right-wing parties tend to represent capital owners, high-skilled labour and entrepreneurs. This implication presupposes not only the existence of democratic political institutions, but also institutions that effectively allow for ideological differences to make a significant impact on decision-making. The second implicit assumption is that the distribution of factor incomes maps sufficiently closely onto the distribution of personal or household incomes.

The first condition is that the incentives in the political system are structured in a way that it rewards partisan politics. In other words, if political institutions are democratic, this condition means that central policy areas such as trade policy cannot be characterized by median voter politics (cf. Mueller, 2003). A second condition is that the influence of special interest groups is not strong enough to trump that of voters with partisan preferences (e.g. Hillman, 1982; Grossman and Helpman, 1994). If the latter situation is present, trade policy outcomes need not in any way reflect the preferences and interests of broad voter groups affected by the policy.

We argue that both these political conditions are, a priori, more likely to hold in countries with low capital-labour ratios and relatively unstable political institutions. First, median voting depends on having a stable party system in which parties, moving their policy platforms toward the median voter, are not punished by suddenly appearing new parties filling an ideological void, left

by the moving party or by intra-party conflict.¹ It also rests necessarily on an informed expectation that democratic political institutions themselves, and the party system, will survive. Second, institutional stability itself entails a situation in which log-rolling implies that parties often vote for proposals that are not in their ideological interest, or that of their constituency (Tullock, 1981). Yet log-rolling, in particular connected to major reforms in which parties and party blocs engage in intertemporal log-rolling, presupposes a relatively stable party system. Otherwise, the benefits of engaging in an intertemporal agreement may vanish if the partner loses influence in the next parliament, in which case pure partisan voting may be preferable. In both cases, the rationality of political actions that decouple party choices from their ideology crucially rest on political actors to have a sufficiently long time horizon, in order to move party positions and engage in logrolling. If time horizons become short due to institutional instability, it may well be rational to revert to partisan politics.

Third, Olson (1982) argues that stable political systems are subject to “institutional sclerosis”, a situation in which the rent-seeking behaviour of special interest groups becomes less costly and partially institutionalized as special interests develop stable political partnerships. The agricultural policies of most Western countries provide pertinent examples in which costly support systems and protectionist policy persist despite substantial and well-documented costs to most consumers, including the median voter. In such a setting, Riezman and Wilson (1997) for example argue that limits on campaign contributions, i.e. on lobbying, may cause welfare-worsening trade reform. Institutional and political stability therefore facilitates the influence of special interest groups and

¹ Imagine for example that a right-wing party moves from a strongly right-wing position to a position substantially closer to that of the median voter. This entails no loss of support from voters with ideal points to the right of the party if either there is no alternative right-wing party, or if alternatives are subject to the same median voter logic. It will, however, cause a loss of support if a *newly* formed party or an existing party moving to the right can take over a sufficient number of the disenfranchised voters.

makes significant reforms less likely. This problem is only exacerbated if established special interests may suffer a transitional loss as a result of reform, even if the reforms were Pareto improving in the long run (cf. Tullock, 1975; Leighton and López, 2013). Conversely, rent-seeking is costly to special interests in relatively unstable political systems, as interest groups must invest in the support from several political actors and may need to form new attachments when political power or the institutional set-up changes. The instability of political institutions also implies that all political actors, whether parties or private interests, logically have shorter time horizons. These features of instable political institutions allow for a larger influence of partisan beliefs and specific preferences of parties' core constituencies. A similar situation arises, if the political institutions of autocracies are comparatively instable.

The second overall condition is most often made implicitly without discussion. The Heckscher-Ohlin model, as most other trade models, holds implications for the *functional* distribution of income, i.e. the distribution of returns to different factors of income.² This distribution maps directly onto the distribution of personal incomes if and only if legal individuals only have income from one type of productive activity and there are no income effects across types of production. If, for example, households earn an income from both wages (labour) and as capital owners in the form housing capital, investments or pension savings that allow for consumption smoothing over the life cycle, then neither the Stolper-Samuelson logic nor other clear distributional effects need to apply. This situation is likely to occur in relatively wealthy countries with deep financial markets, where a large part of the population is effectively both wage earners and capital owners. A further complication in rich countries is that a significant part of the elderly

² A potential exception is new trade models in which consumers do *not* have homothetic preferences or where taste differences correlate with factor ownership. This allows for rich and poor to consume different baskets of goods such that trade liberalization that affects prices and the price structure can have distributional consequences. We refrain from discussing this complication as only few models make this type of assumption.

population earns relatively little in terms of wages, but lives a comfortable life in retirement. Their income is entirely disconnected from the distribution of factor incomes and thus also from any immediate trade logic while they remain a substantial voter group.

As such, the fairly simple distributional and political logic behind the Heckscher-Ohlin model, as well as the new trade models that generate distributional consequences, is only likely to hold under these two conditions. Both are a priori more likely to hold in relatively poorer countries with low capital-labour ratios. In high capital-labour ratio societies, financial markets are almost by definition deeper and both public and private pension systems extend to substantial parts of the population, both of which tend to violate the second condition. The richer countries with high capital-labour ratios are also likely to have political institutions that are more inclusive and stable. This difference is, as we show in the next section, likely to change any simplistic implications from trade theory.

2.4. Democratization effects

Whether income and education is a requisite for the existence of democracy, or democracies conduct more sound economic policies and grow faster is an old discussion in political economy. In recent years, numerous studies have found the level of democracy to exert a decidedly positive impact on institutional development and overall liberalization policies. For instance, de Haan and Sturm (2003) show with cross sectional data how a country's level of democracy, measured by its Polity IV score or Freedom House ranking, exerts a positive impact on subsequent increases in economic freedom. Using panel data, Pitlik (2008) obtains similar results. Lundström (2003) employs the areas from an early version of the Fraser Institute's Economic Freedom of the World index and finds that democracy significantly reduces *government operations and regulations* and *restraints on international exchange*. More recently, Lawson and Clark (2010) examine the

connection between economic and political freedom in light of the Hayek-Friedman hypothesis, which states that politically free countries must also be economically free, but not necessarily the other way around. They find support for this observation, which suggests that causality between economic freedom and democracy is not clear a priori. Nonetheless, they also suggest that democracies are not necessarily harmful for institutional development but rather provide governments with the necessary legitimacy to implement liberal institutional reforms that sometimes involve high transitional costs (de Haan and Sturm, 2003).

While much research has dealt with how policies in democracies differ from those under autocratic governments, relatively little effort has been devoted to studying how episodes of democratization alter economic policies. This is surprising, because the focus on democratization potentially indicates the direction of causality. A number of papers have recently devoted more attention to this subject. For instance, Gwartney and Rode (2012) encounter stable democratizations to be related to following improvements in economic freedom, while unstable democratizations are associated with reductions. Relatedly, Bjørnskov and Rode (2014) find evidence that stable democratizations increase the *access to sound money* via the establishment of more independent central banks. On the contrary, unstable democratizations substantially reduce access to sound money by creating an environment of inflationary policies. These authors also find some evidence that democratization is positively related to following increases in *freedom to trade*.

The specific connection between democratization and trade policies has further been investigated by a number of authors. All of these bear important relations to the present paper. In particular, Dutt and Mitra (2005) find support for the claim that democratization is compatible with trade liberalization in countries where a majority of voters would expect to gain from more open trade policies. A similar result is encountered by Milner and Kubota (2005), who encounter democratization to have a positive effect on trade openness in a sample of developing countries.

They argue that unskilled labour, which represents the majority of the new electorate and also the abundant production factor, expects to benefit from trade liberalization as predicted by the Stolper-Samuelson model. Also O'Rourke and Taylor (2006) find strong historical evidence that democratizations further free trade across countries, and that moves towards free trade are highly dependent on relative capital or labour endowments. Finally, results by Milner and Mukherjee (2009) support the claim that democratization fosters trade openness, but not for trade to increase the likelihood for democracy.

The present paper on democratization and trade liberalization has the goal to advance these important contributions in three points. First, all of the above use either the Freedom House or Polity IV democracy scores, which have recently been criticised on several grounds. Our investigation consequently employs a sound alternative by Cheibub et al. (2010), which is further described in the following section. Second, none of these authors account for the *stability* of political change that countries are facing. For example, if the democratization period is one of general political insecurity, where a democratic transition is followed by a coup and another transition, this logic of newly enfranchised electorates demanding more liberal trade policies might be substantially impeded by short-term political horizons. We account for this fact with our coding scheme that distinguishes between stable and unstable political regimes.

Third, none of the papers cited above account for the possibility that broad voter interests might be imperfectly represented by the incoming democratic governments. It is particularly unlikely that the newly enfranchised electorate is politically well organized at the onset of democratic rule and may thus tend to favour its traditional constituency. So even if a majority of voters has an active interest in trade liberalization, it will be difficult to organize and overcome the collective action problem facing a large and relatively heterogeneous coalition. As predicted by Olson (1982), the interests of small and homogenous groups might therefore be overrepresented in

such a situation. Our paper accounts for this fact by considering the fractionalization of government and its ideological orientation. All of these variables are discussed in the following section.

3. Data and estimation strategy

As the principal interest of our paper is the effect of democratization on trade policy, a comprehensive measure of the latter is also required. Following authors such as Robertson et al. (2008) or Bjørnskov and Rode (2014), we opt for using a sub-indicator from the Economic Freedom of the World (EFW) index by Gwartney et al. (2013) to measure how liberal a country's trade policies are. This index is published annually by the Canadian Fraser Institute and is nowadays divided into five major areas: 1 *Size of government: Expenditure, taxes, and enterprises*, 2 *Legal structure and security of property rights*, 3 *Access to sound money*, 4 *Freedom to trade internationally*, and 5 *Regulation of credit, labor, and business*. All sub-indicators are measured on a zero to ten scale, reflecting the degree to which the economic institutions and policies of a country correspond to free market principles. Zero represents the least free and ten the most free.³

In many recent papers, the individual areas have been successfully used as proxies for the concepts they try to measure (e.g. Berggren and Jordahl, 2005; Justesen, 2008). In particular, area 4 is composed of four sub-areas that measure A *Tariffs*, B *Regulatory trade barriers*, C *Black Market exchange rates*, and D *Controls of the movement of capital and people* using nine different variables. It thus tries to measure the institutional barriers to free trade, not the volume of trade over GDP, as for example employed by Milner and Mukherjee (2009). We perform a series of tests with the full index including trade flows in the form of international trade tax revenue, as well as trade

³ The EFW Index has been used extensively by social science research in recent years. It is based entirely on data published in secondary sources, which means it can be easily verified and duplicated by others (Berggren, 2003). This transparency feature adds to its credibility.

policy per se, which both includes official tariff barriers as well as less immediately visible regulatory non-tariff barriers and capital controls that also limit trade, and tariff policy on its own. As direct market regulations can often achieve the same aims as trade protection, we also repeat our analysis with the overall measure of area 5, measuring the regulation of credit, labour and product markets.

To separate regime types, we identify and measure transitions to and from democracy with a comprehensive new dataset by Cheibub et al. (2010), which uses the contestability of elections to classify countries as either democratic or non-democratic since the 1950's. According to its creators, it avoids the problems inherent in the Freedom House (FH) and Polity IV scores, which they argue are based on overly subjective evaluations and inadequate operational rules. Vreeland (2008) and Cheibub et al. (2010) claim that the middle categories of the FH and Polity IV variables add little useful information, in order to distinguish between political regimes. They also argue that, contrary to frequent practice, the two measures are not interchangeable in regression analysis. As an alternative, they propose a dichotomous variable that takes the value of one, if a country's legislative and executive offices are chosen by contested and popular elections, and zero otherwise. The data are available on an annual basis for all countries of the world from 1946 (or the respective year of independence) through 2008.

Some might object that this classification involves only a reductionist definition of democracy and that it does not fully capture the additional dimensions of a "real" democracy, such as equality before the law, protection of individual rights, constraints on the executive, and freedom of the press. Undoubtedly, there is some merit to this view, especially if one is interested in a broad, maximalist concept that involves additional features and normatively desirable attributes, which are generally associated with institutional democracy. On the other hand, however, there is really no way in which such a broad definition of democracy can be fully measurable without using

subjective evaluations of the additional elements. Furthermore, using measures that are based on a more comprehensive concept of democracy means that it is difficult to distinguish clearly between its different dimensions or possible consequences (Munck and Verkuilen, 2002; Vreeland, 2008). For example, one could ask if equality before the law is really an element of democracy, rather a consequence of it, or perhaps a precondition for democracy (Friedman, 1962).⁴

Reproducing studies by Rodrik and Wacziarg (2005), and Epstein et al. (2006), Cheibub and his co-authors further show that the choice of democracy measure in different empirical studies does matter, and that it has important implications for the results obtained. This point is highly relevant, because our focus is on the impact of democratic transitions rather than the level of democratic rule. Using either the Freedom House or Polity IV data would mean that identifying transitions would involve some rather arbitrary decisions regarding where to draw the line for the classification of a country as becoming democratic. Obviously, this problem does not arise when using the new DD dataset, because a democratic transition merely entails a change from zero to one in the time series values of the respective country. By adopting the minimalist definition of the DD dataset to identify democratizations, we can therefore avoid some potential pitfalls that might otherwise influence our results.

Identical to the definitions used by Bjørnskov and Rode (2014), the DD data is used here to define three distinct binary variables at 5-year intervals from 1975 to 2010. The first is *Stable*

⁴ A further potential worry would be that the DD indicator treats ‘semi-democracies’ as fully autocratic. However, comparing this indicator with Polity IV and applying a cut-off value of 5 or 6 as an indicator of some democracy, very few countries coded as democratic according to this criterion are not democratic according to Cheibub et al. In recent years, the group of countries that are consistently democratic according to Polity but not DD includes Guyana, Lesotho, Mozambique, Namibia, Russia and South Africa. Only Nigeria and Papua-New Guinea are treated as democratic by DD but not Polity in recent years. Even though one could in principle wish for a category of stable semi-democracies, it is unlikely to change results in the following.

Democracy, which is assigned a value of one when a country becomes democratic during the observation period, and zero otherwise. This means that stable autocracies are the reference group with a value of zero over the total observation period. It also means that stable democracies are assigned a value of one throughout the whole period. The reason we still refer to it as a democratic transition variable has to do with our estimation procedures, which are described at the end of this section.

The second variable denotes an *Unstable Democracy*, which is assigned a value of one, if a country is already democratic and we also observe an end to its democratic rule (i.e. a coup d'état) at some time during the total observation period. Democracies are classified as unstable for the five year period before and after the occurrence of the coup, where the elimination of democratic rule has to last for at least two years. Generally, any regime change considered, has to last for at least two years, otherwise it is not taken into account. This latter criterion implies that only transitions of some permanence are considered. Thus, stop-gap regimes that briefly hold power are not counted. Apart from major transition phases, there are no interruptions of democratic rule in our dataset that last for less than two years.

The third variable represents an *Unstable Autocracy*, and it is constructed from the authoritarian regime categorization by Cheibub et al. (2010), who distinguish between civil, military, and monarchic dictatorships. We assign a value of one to this variable, if a country is under autocratic rule and it underwent a change in its authoritarian regime coding during the observation period. Such a regime change, without the country becoming democratic, is taken to be an indicator of power conflicts inside the authoritarian regime that would potentially affect its political stability. Consistent with the definition of unstable democracy, we classify autocracies as unstable for the five year period before and after the occurrence of an authoritarian regime change.

Apart from the regime type, understood as the institutional characteristics of the political system, we also categorize governments according to their ideological characteristics. Recent empirical studies show that government ideology is another potentially important determinant of overall economic institutions and regulation (e.g. Besley and Case, 2003). In an analysis of OECD countries, Potrafke (2010) finds that the political orientation of governments has had a strong influence on the deregulation process of markets. In a similar study on the Canadian provinces, Bjørnskov and Potrafke (2012) examine the role of government ideology for economic freedom at the provincial level. They find that administrations of right- and left-wing ideology exert a different impact on size of government and the regulatory environment.

Measures of government ideology are available for developed countries, but this is not the case for most of the developing world. Nonetheless, we are able to use an extended version of the Database of Political institutions by Beck et al. (2001), where many of the missing data points for developing countries have been included by Bjørnskov and Potrafke (2011). The indicator ranges from -1 to 1, with -1 representing a totally left-wing government and 1 a totally right-wing government; the omitted category when we dichotomize this index is thus populist and other non-programmatic parties (cf. Keefer and Khemani, 2009). Intermediate scores are given to different types of coalition governments, depending on who leads the coalition and its relative composition where the ideological position of each party in government is weighted by its seat share in parliament. Finally, we also include an extended measure of the fractionalization of the legislature from the same source, taking it to be an overall measure of the presence of veto players. It ranges between 0 and 1, with higher scores representing a higher concentration of veto players, and thus serves to proxy for the likelihood of reforms *per se* and the necessity of log-rolling to achieve policy change.⁵

⁵ This indicator is based on a Herfinahl index of all parties in the legislature, which is subtracted from one.

Generally, democratization is expected to exert a positive influence on freedom to trade and its sub-indicators, while unstable democracies and unstable autocracies are expected to exert a negative effect. The presence of intra- or inter-state war should also be negatively related to change in freedom to trade. Following literature on the effect of government ideology, we would expect more left-wing governments to actively restrict freedom to trade and more right-wing governments to promote it while trade theory yields rather different predictions.

In principle, trade policy could also affect the probability of observing regime change and, in particular, democratization or be accompanied by regime change in a whole-sale institutional reform. If so, all estimates in the following would suffer from endogeneity or simultaneity bias. Given the specific lag structure of our main data, these problems are nevertheless logically unlikely. Since we estimate a change in trade policy as a potential cause of a regime change in the preceding period, any effect of what is effectively *future* changes to trade policy on democratization would have to rest on the ability of central political actors to rationally expect future democratization and act upon such expectations. We believe this is highly unlikely and therefore argue that our estimates in the following ought to be approximately unbiased.

Obviously, the main association between regime change and trade policy should be highly dependent on the overall level of development, whether captured by having a high income or a high capital-labour ratio, as we argue above. To separate the effects within labour abundant (poor) and capital abundant (rich) countries, as suggested by the Heckscher-Ohlin model and our theoretical arguments, we calculate the capital-labour ratio, K/L . We follow standard practice in development accounting by using the perpetual inventory method to estimate the average capital stock per worker in each period (e.g. Caselli, 2005; Hall and Jones, 1999). We employ a depreciation rate of six percent and a capital share of income of .4 throughout and calculate K/L relative to the within-period level of the US for each period. We use these data to generate a dummy that splits the sample

at the median level of the K/L ratio, which enables us to estimate effects separately for the labour rich and capital rich sample halves.⁶

To estimate the combined effects of regime change and partisan interests in the following, we employ a similar strategy to Milner and Kubota (2005), O'Rourke and Taylor (2006), Milner and Mukherjee (2009), and Bjørnskov and Rode (2014) to derive empirical estimates of democratization effects for trade policy. We use the change in area 4, freedom to trade internationally, as dependent variable, further introducing the initial area value as a primary control variable. An inverse relationship is expected between the initial area value and the change, indicating that countries with a lower freedom to trade are likely to liberalize their trade policies more rapidly in subsequent periods, in particular when the international trend is in that direction.

These same studies also utilize per capita income as a control variable in their models, finding that initial GDP is a fundamental determinant of changes in freedom to trade. Therefore, the logarithm of initial GDP per capita in purchasing power parity terms is also included in our basic model. This data is taken from the Penn World Tables, mark 7.1, and it is measured in constant 2005 US dollars (Heston et al., 2011).

Politically motivated violence and armed conflict are also examined as potential sources for unstable transitions to democracy. As reported by Rode and Gwartney (2012), the presence of armed conflict will *ceteris paribus* have a substantially negative impact on overall liberalization, independent of the political regime that is in power. Based on the Correlates of War (COW) data by

⁶ As noted, we split the sample according to the K/L ratio, as suggested by the Heckscher-Ohlin model. Both more advanced versions of Heckscher-Ohlin as well as a number of contributions to suggest that a split along low- and high-skilled labour or along educational lines may be more relevant. Yet, while some theories lead to the implication that it is more the relative abundance of human capital than labour, which drives results, we note that the high-K/L observations also overwhelmingly tend to be those with better educated populations. The sample separation would therefore be very similar if we were to use educational attainment instead of K/L.

Sarkees and Wayman (2010) a dummy is added to the model, taking the value of one in the event of an intra- or inter-state war, and zero otherwise.

The panel datasets that we establish allow us to empirically analyse shifts from authoritarian to democratic political decision-making, within the framework of a fixed effects model. The dependent variable is the change in freedom to trade, or alternatively the sub-areas that measure tariffs and regulatory barriers, for five-year intervals following shifts to democracy during the 1976-2010 observation period. The initial area value, a war dummy, the logarithm of initial GDP per capita, government ideology, and the fractionalization measure are further included as primary control variables. Moreover, the model specifies a one period time lag between political transitions and changes in the dependent variables.⁷ All variables are summarized in Table 1.

Insert Table 1 about here

Results are estimated with a GLS technique for panel data, using robust standard errors as suggested by Alvarez and Arellano (2003) and Stock and Watson (2008). A model that controls for period and country fixed effects is employed to control for unobserved country heterogeneity and possible world-wide trends towards economic liberalization, which are independent of democratizations. Within the framework of such a fixed effects model, our dummy variable, which considers stable democracy and transitions to democracy jointly, will only reflect the impact of shifts to democracy. Thus, we can correctly refer to the variable as capturing a democratic transition, because this is precisely what it identifies in this model. In order to separate effects of

⁷ For example, the dependent variable will begin with the change in EFW area 4 between 1980 and 1985. The independent variables are: The area value in 1980, wars between 1976 and 1980, per capita GDP in 1980, government ideology and fractionalization between 1976 and 1980, democracy and democratizations between 1976 and 1980, and unstable democracies or autocracies between 1970 and 1985 (reflecting the political structures both five years before and after the observation period for a shift to democracy). The next sequence relates the change in EFW area 4 between 1985 and 1990, to the initial area value in 1985, and so forth.

ideology conditional on regime type, and regime transitions conditional on ideology, we introduce a set of interaction terms between three regime types – stable democracy, unstable democracy, and unstable autocracy – which allows us to calculate marginal effects of either conditional and the status of the other interacting variable. We present these marginal effects in separate tables with their conditional standard errors, following the delta method (cf. Brambor et al., 2006).

4. Results

In Table 2a, we present the estimates of determinants of trade reform, using either the full area 4 index, which also includes actual trade flows, or the specific part 4a measuring trade policy. As in the following tables, we report results using the full sample in columns 1 and 4, the sample containing only observations with a below-median capital-labour ratio in columns 2 and 5, and a sample including those with an above-median ratio in columns 3 and 6. The accompanying Tables 2b and 2c provide marginal effects of regime types and ideological orientation, given the other interacting factors.

Insert Table 2a about here

Insert Table 2b about here

Insert Table 2c about here

As expected, we first find that countries with relatively open trade policies are less likely to reform. We also find larger trade changes in poor countries, but not larger reforms of trade *policy*, as reflected in Area 4a. On the other hand, we find consistently negative effects of war, but only in capital abundant societies.

Turning to the effects of regime change, we find significantly larger trade liberalization in countries with low capital-labour ratios with unstable democracies and left-wing governments. We observe this effect both as a consequence of changing regime type (in Table 2b) and as a

consequence of changing regime ideology (as in Table 2c). Given the theoretical conditions for finding any clear effects, these results are entirely consistent with the standard implications of the Stolper-Samuelson Theorem. In capital abundant societies, on the other hand, we find relatively little evidence of any simple influence of regime types. While we observe negative effects of non-ideological (non-programmatic) regimes in unstable democracies and strongly positive effects of programmatic governments in unstable autocracies, the former is driven by only one country (Argentina in the late 1980s under Raúl Alfonsín) and the latter by only three unstable autocracies (Algeria, Iran and Tunisia). In other words, we find precious little robust evidence of any effects of regime change in the comparatively richer, capital abundant part of the sample.

In Tables 3a, 3b and 3c, we turn to evaluating the most visible element of trade policy – the mean tariff rate, which implies that we exclude any non-tariff barriers and capital controls – as well as a set of alternative policies with which policy-makers may reach the same effective policy outcome as with trade policy: direct market regulations. We again find that countries with lower tariffs reform less, on average, as those with less market regulation. While GDP per capita only matters for regulations, and to the same degree for the two sub-samples, it is again an insignificant determinant of tariff reform. Conversely, we find that the fractionalization of the legislature is an important determinant of reforms in both areas in relatively rich countries. Countries with more fractionalized legislatures (a higher value of the index) tend to reduce tariffs and market regulations more (i.e. obtain a higher value of the regulations index).

Turning to the potential effects of regime change, we find more evidence in favour of the standard Stolper-Samuelson implications in labour abundant societies, as left-wing governments liberalize tariff policy substantially more in unstable democracies (Table 3b), and countries moving towards unstable democracy with an incumbent left-wing government do likewise (Table 3c). However, we also find that in unstable autocracies, left-wing governments in general seem to do the

opposite while non-programmatic, unstable autocracies have tended to liberalize tariff policy. These effects are qualitatively reflected in Table 3c, although with relatively smaller relative effect sizes. We also observe that the backlash to trade reform in left-wing, unstable autocracies is reflected in a one-point increase in regulatory activity. As in previous tables, the only result among capital abundant countries is an apparent effect of unstable, non-programmatic regimes, of which there is only the Alfonsín regime in Argentina.

In summary, we find that the combination of regime type and regime ideology strongly affects trade policy reforms in countries characterized by relatively low capital-labour ratios. The regime effects are only significantly observable under unstable political institutions, in which the political incentive structure is more favourable to policy-making driven by ideological factors and the direct interest of core constituencies. Contrary, we find no clear evidence of any regime effects in capital abundant countries. As these findings are robust to excluding outliers, single countries and changes to the specification, and are in line with the underlying inequality effects, as we show in the appendix, we proceed to discuss them in the final section.

5. Discussion and conclusions

The question of how exactly the recent waves of democratization are related to expanding international trade has been investigated by several authors in recent years. This strand of literature generally finds evidence that democratization has fostered higher levels of trade and that trade policy outcomes are dependent on underlying factor endowments, as predicted by the Stolper-Samuelson Theorem. However, most of these studies have explored trade flows instead of trade policies, have implicitly assumed that democratization is a stable political transformation, and have operated within classical trade theory.

In this paper, we therefore expand on the topic by studying how democratization affects trade policy, dependent on the stability of political change, the ideology of government, and factor endowments of the local economy that may influence voter preferences for trade policies. To do so, we combine both classical and new trade theory with a number of recent insights from public choice and political economy. Combining the political logic of democratization with new trade theory in particular yields the theoretical expectation that the determinants of trade reform in relatively richer, capital abundant countries, are likely to be very diverse and inconsistent with implications from either classical trade theory or the literature on partisan politics.

Our main finding is that, in combination, regime type and government ideology strongly affect trade policy in countries with a relatively low capital-labour ratio. In particular, recent democracies with unstable political institutions and left-wing governments are characterized by significant increases in their freedom to trade. Likewise, stable and unstable autocracies with left-wing regimes generally prevent trade reform. Both results drastically show how political incentive structures are especially driven by ideological factors and the interests of core constituencies, when the political-institutional framework is weak. In recent democracies, where the core constituency of left-wing parties is the abundant factor of production (i.e. labour), it leads to a significant liberalization of trade, as suggested by the Stolper-Samuelson Theorem. In autocracies with a left-wing government on the other hand, the political elite or party itself probably owns a significant share of capital, meaning that they generally try to prevent trade reforms in order to protect their assets. In both cases, the observed reform behaviour matches the interests of the core constituency in accordance with classical trade theory.

On the contrary, we find no clear evidence of any regime effects in capital abundant countries, regardless of the ideological position of the incumbent government, meaning that stable democratizations in high-income societies will not significantly alter the existing trade policies.

First, data reveal that trade regulations in those countries are already comparatively liberal at the onset of democratization, making a shift to democracy and the ideology of government practically irrelevant for following changes in trade policy. Second, the median voter in these societies has already benefitted from comparatively liberal trade policies, meaning that she will not support any drastic changes to it, regardless of her political ideology. In addition, depending on institutional specifics such as labour market regulations, educational levels and industrial structure, new trade theory predicts very diverse interests of the median voter in different, rich societies. Finally, one must acknowledge that trade policy in the form of tariff rates and structures are limited by a web of international agreements for OECD countries in particular. As so often, political realities in the developed world are more complicated than most simple theorizing allows.

Appendix

While classical trade theory in particular holds distributional implications, the evidence for a general connection between trade or globalization and inequality remains precarious. Harrison et al. (2011) note how studies starting in the 1990s in general reject the main implications of the Heckscher-Ohlin model on the distribution of individual or household incomes or wages. Instead, recent studies tend to find that trade primarily affects the dispersion of within-sector and even within-firm wages, which can leave the overall income distribution unaffected (e.g. Helpman et al., 2014).

However, focusing on a broader measure of globalization, Dreher and Gaston (2008) find significant effects although only for wage inequality and not an inequality measure based on a broader definition of income. Likewise, a number of cross-country studies have failed to find any clear effects on the inequality of household incomes, consistent with the complication that standard

trade effects assume that the distribution of factor incomes must map onto the distribution of household incomes.

In Table A1a, we therefore repeat our exercises in this paper, distinguishing between countries with high and low capital-labour ratios, and between different regime types and government ideologies; marginal effects of trade reform given government ideology are reported in Table A2b. However, the dependent variables are measures of market and net (post-tax and transfer) income inequality, expressed as Gini coefficients from the fourth edition of the Standardized World Income Inequality Database (Solt, 2009).

Insert Table A1a about here

Insert Table A1b about here

As is evident, we find that income inequality exhibits strong persistence, and that wars create inequality. We also observe some evidence that democratization in low-K/L countries, i.e. relatively poor countries, may tend to lead to a more equal distribution of market incomes, but not net incomes. Most pertinently to our present questions, the marginal effects show that trade reform in *poor* left-wing regimes tends to lead to more equal market and net distributions. Deleting the absolute (10 %) tails of changes of the Gini coefficients (not shown) reconfirms these effects and renders them significant at $p < .05$. We note that this effect is entirely consistent with left-wing regimes in unstable poor democracies behaving in a manner that benefits their core constituency. Likewise, it is consistent with unstable and autocratic left-wing regimes – where a political elite or the party presumably owns a significant share of capital – in general prevent trade reform. Finding that inequality effects of trade reform are heterogeneous in a way consistent with political behaviour thus provides more evidence that the main findings can be interpreted in a direct way.

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Table 1. Descriptive statistics

Variable	Mean	Mean, low K/L	Mean, high K/L	Std. dev.	Observations
Δ Area 4	.258	.457	-.025	1.286	588
Initial area 4	6.365	5.376	7.779	2.299	593
War	.100	.153	.024	.300	600
Log GDP per capita	8.632	7.776	9.873	1.338	598
Fractionalization, legislature	.452	.398	.530	.284	598
Stable democracy	.578	.444	.772	.494	600
Unstable democracy	.052	.085	.004	.222	600
Unstable autocracy	.077	.099	.045	.266	600
Left-wing	.325	.218	.085	.469	600
Right-wing	.467	.229	.463	.468	600
K/L relative	.467	.129	.954	.468	600
Gini, market	44.638	47.052	41.521	10.231	504
Gini, net	39.511	45.060	32.348	7.769	504

Table 2a. Overall trade policy

	Area 4			Area 4a		
	All	Low K/L	High K/L	All	Low K/L	High K/L
Initial Policy	-.516*** (.042)	-.566*** (.063)	-.634*** (.062)	-.599*** (.044)	-.721*** (.067)	-.809*** (.069)
War	-.267 (.223)	-.033 (.263)	-2.108*** (.503)	-.182 (.264)	-.288 (.319)	-1.120** (.564)
Log GDP per capita	-1.027*** (.271)	-.674* (.403)	-1.103** (.447)	-.378 (.317)	.655 (.477)	-.149 (.488)
Fractionalization, legislature	.489 (.322)	-.034 (.414)	.513 (.666)	.640* (.374)	-.025 (.491)	1.794** (.710)
Stable democracy	.414* (.245)	-.022 (.319)	1.215** (.562)	.403 (.291)	.298 (.384)	.179 (.618)
Unstable democracy	-.640* (.334)	-.596 (.386)	-1.942* (1.001)	-.436 (.393)	-.274 (.468)	-2.996*** (1.072)
Unstable autocracy	-.604* (.347)	-1.016 (.622)	-.047 (.421)	.371 (.416)	.393 (.771)	.270 (.462)
Left-wing	.054 (.350)	.1078 (.473)	-.035 (.568)	-.182 (.404)	-.015 (.552)	-.253 (.612)
Right-wing	.078 (.270)	-.183 (.345)	1.269** (.535)	-.101 (.323)	-.232 (.422)	.685 (.585)
Left * stable democracy	-.078 (.402)	.079 (.547)	-.189 (.639)	.383 (.469)	.077 (.649)	.388 (.695)
Right * stable democracy	-.072 (.299)	.177 (.421)	-1.128** (.551)	.230 (.357)	.377 (.517)	-.436 (.603)
Left * unstable democracy	1.889*** (.619)	1.637** (.678)	-	1.715** (.739)	1.884*** (.835)	-
Right * unstable democracy	.619 (.438)	.816 (.497)	-	.278 (.524)	.391 (.615)	-
Left * unstable autocracy	1.356** (.566)	.817 (.939)	2.999** (.765)	.047 (.675)	-1.265 (1.149)	1.600* (.830)
Right * unstable autocracy	.756 (.742)	1.104 (1.152)	-.854 (.958)	-.119 (.889)	-1.615 (1.418)	.1370 (1.047)
Period FE	Yes	Yes	Yes	Yes	Yes	Yes
Observations	474	234	240	485	243	242
Countries	87	52	48	89	54	48
Within R squared	.484	.533	.582	.411	.485	.569
F statistic	17.22	9.24	13.44	13.10	7.95	12.92

Note: *** (**) [*] denote significance at $p < .01$ ($p < .05$) [$p < .10$]. All regressions also include country fixed effects.

Table 2b. Overall trade policy, marginal effects of government ideology

	Stable Democracy	Area 4 Unstable Democracy	Unstable Autocracy	Stable Democracy	Area 4a Unstable Democracy	Unstable Autocracy
Low K/L						
Left-wing	.187 (.277)	1.745** (.834)	.924 (.891)	.062 (.341)	1.869* (.999)	-1.280 (.1089)
Non-ideological	-.022 (.319)	-.596 (.386)	-1.016 (.622)	.298 (.384)	-.274 (.468)	.393 (.771)
Right-wing	-.005 (.247)	.634 (.604)	.969 (1.171)	.145 (.306)	.159 (.740)	1.186 (1.441)
High K/L						
Left-wing	-.224 (.272)	-	2.965*** (.797)	.136 (.299)	-	1.347 (.872)
Non-ideological	1.215** (.562)	-1.942* (1.001)	-.047 (.421)	.179 (.618)	-2.996*** (1.072)	.270 (.462)
Right-wing	.142 (.134)	-	2.228** (1.082)	.249* (.147)	-	1.733 (1.182)

Note: *** (**) [*] denote significance at $p < .01$ ($p < .05$) [$p < .10$]. All regressions also include country fixed effects.

Table 2c. Overall trade policy, marginal effects of regime types

	Left-wing	Area 4 Non- ideological	Right-wing	Left-wing	Area 4a Non- ideological	Right-wing
Low K/L						
Stable Democracy	.057 (.493)	-.022 (.319)	.156 (.347)	.375 (.594)	.298 (.383)	.674 (.425)
Unstable Democracy	1.041* (.627)	-.596 (.386)	.221 (.453)	1.609** (.767)	-.274 (.468)	.117 (.563)
Unstable Autocracy	-.199 (.714)	-1.016 (.622)	.088 (.980)	-.873 (.879)	.393 (.771)	-1.223 (1.208)
High K/L						
Stable Democracy	1.025 (.677)	1.215** (.562)	.086 (.478)	.567 (.738)	.179 (.618)	-.257 (.526)
Unstable Democracy	-	-1.942* (1.001)	-	-	-2.996*** (1.072)	-
Unstable Autocracy	2.953*** (.687)	-.047 (.421)	-.901 (.849)	1.870** (.750)	.270 (.462)	.407 (.928)

Note: *** (**) [*] denote significance at $p < .01$ ($p < .05$) [$p < .10$]. All regressions also include country fixed effects.

Table 3a. Tariff policy and market regulations

	Mean tariff			Regulations		
	All	Low K/L	High K/L	All	Low K/L	High K/L
Initial Policy	-.496*** (.047)	-.582*** (.075)	-.704*** (.108)	-.580*** (.045)	-.631*** (.061)	-.573*** (.071)
War	-.547 (1.708)	-.128 (2.432)	1.416 (2.863)	-.218* (.122)	-.162 (.129)	-.969*** (.326)
Log GDP per capita	-2.481 (2.390)	-4.688 (4.098)	-2.965 (2.926)	-.588*** (.147)	-.683*** (.192)	-.582** (.278)
Fractionalization, legislature	-.578 (2.728)	3.835 (4.2349)	-11.365*** (3.829)	.234 (.176)	.092 (.205)	.886** (.408)
Stable democracy	1.012 (2.066)	2.206 (3.208)	-3.216 (3.254)	.081 (.138)	-.104 (.158)	.163 (.376)
Unstable democracy	.235 (2.684)	-1.055 (3.743)	9.688* (5.316)	-.291 (.179)	.010 (.189)	-2.767*** (.611)
Unstable autocracy	-5.219 (3.365)	-15.385* (7.834)	.3845 (2.663)	-.202 (.201)	-.201 (.381)	.149 (.265)
Left-wing	-4.894* (2.923)	-5.865 (4.453)	-3.693 (4.469)	-.337* (.200)	-.232 (.226)	-.497 (.521)
Right-wing	2.409 (2.215)	5.028 (3.399)	-5.382* (3.241)	.076 (.152)	.118 (.169)	.038 (.359)
Left * stable democracy	3.915 (3.286)	4.773 (5.124)	4.905 (4.806)	.309 (.229)	.299 (.263)	.495 (.556)
Right * stable democracy	-2.089 (2.423)	-4.411 (3.999)	5.701* (3.323)	-.075 (.167)	.084 (.205)	-.084 (.371)
Left * unstable democracy	-11.130** (4.785)	-10.972* (6.356)	-	.160 (.339)	-.095 (.335)	-
Right * unstable democracy	-1.528 (3.381)	-1.189 (4.648)	-	.203 (.241)	-.138 (.245)	-
Left * unstable autocracy	14.368*** (4.766)	33.759*** (9.948)	3.285 (4.323)	-.061 (.338)	-.959* (.547)	.528 (.484)
Right * unstable autocracy	2.820 (7.789)	16.250 (11.832)	-	.337 (.413)	.509 (.609)	.051 (.597)
Period FE	Yes	Yes	Yes	Yes	Yes	Yes
Observations	428	212	215	482	240	242
Countries	87	52	46	89	54	48
Within R squared	.416	.515	.391	.378	.492	.425
F statistic	11.39	7.43	5.75	11.32	8.03	7.23

Note: *** (**) [*] denote significance at $p < .01$ ($p < .05$) [$p < .10$]. All regressions also include country fixed effects.

Table 3b. Tariff policy and regulations, marginal effects of government ideology

	Mean tariff			Regulations		
	Stable Democracy	Unstable Democracy	Unstable Autocracy	Stable Democracy	Unstable Democracy	Unstable Autocracy
Low K/L						
Left-wing	-1.092 (2.604)	-16.837** (7.719)	27.895*** (9.474)	.067 (.138)	-.327 (.401)	-1.192** (.531)
Non-ideological	2.206 (3.208)	-1.055 (3.743)	-15.385** (7.834)	-.104 (.156)	.010 (.189)	-.201 (.381)
Right-wing	.617 (2.315)	3.839 (5.652)	16.860 (11.818)	.202* (.121)	-.019 (.296)	.727 (.619)
High K/L						
Left-wing	1.213 (1.536)	-	-.408 (5.169)	-.003 (.171)	-	.031 (.688)
Non-ideological	-3.216 (3.254)	9.688* (5.316)	.384 (2.663)	.163 (.376)	-2.767*** (.611)	.149 (.265)
Right-wing	.319 (.766)	-	-	-0.46 (.084)	-	.635 (.690)

Note: *** (**) [*] denote significance at $p < .01$ ($p < .05$) [$p < .10$]. All regressions also include country fixed effects.

Table 3c. Tariff policy and regulations, marginal effects of regime types

	Left-wing	Mean tariff Non- ideological	Right	Left-wing	Regulations Non- ideological	Right-wing
Low K/L						
Stable Democracy	6.979 (4.577)	2.206 (3.208)	-2.206 (3.235)	.195 (.239)	-.104 (.156)	-.020 (.166)
Unstable Democracy	-12.028** (5.773)	-1.055 (3.743)	-2.244 (4.286)	-.084 (.308)	.010 (.189)	-.127 (.222)
Unstable Autocracy	18.375*** (6.610)	-15.385** (7.834)	.865 (9.080)	-1.160*** (.387)	-.201 (.381)	.308 (.482)
High K/L						
Stable Democracy	1.689 (5.766)	-3.216 (3.254)	2.484 (2.835)	.658 (.497)	.163 (.376)	.079 (.299)
Unstable Democracy	-	9.688* (5.316)	-	-	-2.767*** (.611)	-
Unstable Autocracy	3.669 (3.784)	.384 (2.663)	-	.678 (.436)	.149 (.265)	.200 (.533)

Note: *** (**) [*] denote significance at $p < .01$ ($p < .05$) [$p < .10$]. All regressions also include country fixed effects.

Table A1a. Inequality effects

	Net income inequality		Market income inequality	
	Low K/L	High K/L	Low K/L	High K/L
Initial inequality	.222*** (.070)	.366*** (.061)	.198*** (.062)	.323*** (.060)
War	2.474* (1.425)	4.173** (1.651)	.971 (1.251)	4.999** (2.291)
Log GDP per capita	4.569* (2.476)	.009 (1.264)	1.831 (2.164)	1.586 (1.776)
Fractionalization, legislature	-.579 (2.460)	1.739 (1.829)	-.194 (2.176)	1.232 (2.568)
Stable democracy	-.835 (1.409)	-.454 (1.307)	-2.385* (1.216)	-1.297 (1.837)
Unstable democracy	-1.314 (1.713)	4.344 (2.670)	-.103 (1.493)	4.006 (3.754)
Unstable autocracy	-.660 (2.651)	-.518 (.917)	-.047 (2.309)	-1.258 (1.296)
Left-wing	2.558* (1.419)	.139 (.709)	1.996 (1.244)	-.913 (1.006)
Right-wing	.661 (.998)	.567 (.367)	.397 (.873)	.808 (.517)
Trade reform	.332 (.563)	-.252 (.242)	.129 (.490)	-.227 (.339)
Left * trade reform	-1.697* (.904)	-.094 (.527)	-1.465* (.787)	-.495 (.740)
Right * trade reform	-.254 (.728)	.372 (.316)	-.143 (.636)	.104 (.445)
Period FE	Yes	Yes	Yes	Yes
Observations	191	215	191	215
Countries	46	45	46	45
Within R squared	.231	.397	.247	.475
F statistic	2.31	5.88	2.47	8.10

Note: *** (**) [*] denote significance at $p < .01$ ($p < .05$) [$p < .10$]. All regressions also include country fixed effects.

Table A1b. Overall trade policy, marginal effects of ideology

	Net income inequality		Market income inequality	
	Low K/L	High K/L	Low K/L	High K/L
Left-wing	-1.365*	-.346	-1.336*	-.722
	(.783)	(.470)	(.682)	(.661)
Non-ideological	.332	-.252	.129	-.227
	(.563)	(.242)	(.490)	(.339)
Right-wing	.078	.121	-.014	-.123
	(.502)	(.228)	(.438)	(.320)

Note: *** (**) [*] denote significance at $p < .01$ ($p < .05$) [$p < .10$]. All regressions also include country fixed effects.

Figure 1. Conceptual framework

