The Absence of Consumer Interests in Trade Policy*

Timm Betz†
Amy Pond‡

Forthcoming, *Journal of Politics*

March 30, 2018

Abstract

Why are some countries more open to trade than others? Prominent explanations emphasize differences in the influence of voters as consumers: Consumers benefit from lower prices. Because governments in democracies are more responsive to voters, they should implement lower tariffs. We develop an implication of this line of argument. If lower tariffs are a response to consumer interests, lower tariffs should be concentrated on products most relevant to consumers. Using data on consumption shares across product categories, we report evidence that consumer interests do not account for lower tariffs. Governments place higher tariffs on goods with higher consumption shares, and we find no evidence that this relationship attenuates under more democratic institutions. There may be a variety of reasons why more democratic states are engaged in higher levels of international trade. A larger concern for consumer interests, however, is likely not among them.

*We thank Michael Courtney, Kishore Gawande, Alexandra Guisinger, Haillie Lee, Ed Mansfield, Jennifer Poole, Nita Rudra, three anonymous reviewers, the editor, William Reed, participants at the Global Trade Governance in Transition Conference at the University of Utah, and participants at the annual meetings of the Texas Triangle IR Conference, the Midwest Political Science Association, the European Political Science Association, the American Political Science Association, and the International Studies Association for comments. Alejandro Medina and Austin Mitchell provided excellent research assistance.

†Department of Political Science, Texas A&M University, 2010 Allen Building, 4348 TAMU, College Station, TX 77843. Email: timm.betz@tamu.edu.

‡Department of Political Science, Texas A&M University, 2010 Allen Building, 4348 TAMU, College Station, TX 77843. Email: apond@tamu.edu.

Why are some countries more open to international trade than others? One prominent explanation in the literature emphasizes the influence of voters as consumers. Consumers benefit from lower prices. Where governments are more attentive to the interests of voters, tariff rates therefore should be lower (Rogowski, 1987; Grossman and Helpman, 1994; Nielson, 2003; Ehrlich, 2007; Gawande, Krishna and Olarreaga, 2009). This line of argument has, in particular, been used to link democracy and trade openness. Because policymakers in democracies are commonly thought to be more responsive to the interests of voters, tariff rates in democracies should be lower than in autocracies (e.g., Gerschenkron 1944; Mansfield, Milner and Rosendorff 2002; Mitra, Thomakos and Ulubasoglu 2002; Milner and Kubota 2005; Kono 2006). In this regard, trade politics present a variant of more general arguments: free trade is a public good, and democracies typically provide more public goods (Lake and Baum, 2001; Bueno De Mesquita et al., 2003).

We derive and evaluate a key implication of these theories. If liberal trade policy is explained by the interests of consumers, we should observe lower tariff rates on products that have the largest impact on overall prices and are consumed the most; this relationship should be most pronounced in democracies. Thus, by drawing attention to heterogeneity in consumer interests and tariff rates across products, we explicitly address the micro-foundation of a prominent explanation of liberal trade policies. To evaluate the proposition, we leverage consumer price indices to obtain data on the share of a representative consumer's spending across product categories. Consumer price indices have some attractive features for our purposes. They capture the spending of a representative consumer, who as the median voter is the relevant actor in seminal theories of policy-making. The indices identify products on which higher prices – such as through tariffs – affect consumers the most, even if consumers are only concerned with, or able to identify, overall price levels. We match the data from consumer price indices with two-digit Harmonized System tariff data. This approach allows us to leverage within-country variation in political institutions and across-product variation in consumer interests.

We report evidence that consumer interests are not only not reflected in tariffs, but systematically violated; democratic institutions do little to change that. Products that are consumed more heavily are protected by higher, not lower, tariff rates. A one percentage point increase in a product's consumption share is associated with tariffs that are 25 to 40 percent higher than the average tariff. We find no evidence that this relationship is weakened under democratic institutions. Instead, it becomes stronger. Products that are consumed more heavily are associated with higher tariff rates under democratic institutions. And even where democratic institutions result in lower tariff rates, the effect is confined to products with small consumption shares and a small share of overall consumption. For products that make up a large fraction of consumption, democratic institutions are associated with higher tariff rates.

The findings have broad implications for the literature on trade politics. Most immediately, they raise skepticism about the causal chain between democratic institutions and trade openness and about the sources of liberal trade policy. There might be a variety of reasons why more democratic states are engaged in higher levels of international trade. A larger concern for consumer interests, however, is likely not among them.

By highlighting that consumer interests seem to play little role in determining tariff rates, our results reinforce existing doubts about the ability of consumers to influence trade politics. While voters tend to prefer lower tariffs (Baker, 2005), they do not seem to push for lower tariffs explicitly, as evidenced by the low electoral salience of trade policies (Guisinger, 2009) and expected from collective action arguments (Pareto, 1927). We find that, additionally, governments do not even take consumer interests into account implicitly. On the one hand, these findings are perhaps not too surprising, considering that voters are frequently ill-informed about the distributional consequences of free trade and that the distributional consequences of trade policy may, in the eyes of voters, be offset by ethnocentric and sociotropic concerns (Mansfield and Mutz, 2009). But on the other hand, these findings raise questions about one of the central theoretical claims, and one of the bedrock empirical findings, in the international

political economy literature: that democracies are more open to trade because of the effects of tariffs on voters as consumers.

More generally, the link between democratic governments and trade openness has been interpreted as evidence that democracies provide more public goods than autocracies in response to voter interests. Our results do not support this interpretation. Democracies may well provide more public goods than autocracies. But to account for lower trade barriers in democracies, a different explanation is needed. We propose one such explanation, based on pro-trade lobbying from multinational corporations, exporting firms in the context of trade agreements, and firms in global value chains. These have long been recognized as important supporters of free trade policies on individual products (see, e.g., Milner 1988; Gilligan 1997; Gawande, Krishna and Olarreaga 2012; Betz 2017). Yet, such pro-trade lobbying has not been used to account for systematic differences in trade openness across countries – and, as we elaborate below, doing so requires different assumptions about the role of democratic institutions in mediating between voter interests and special interest groups, and results in different explanations of why democracies are more open to trade than non-democracies.

Consumers and Trade Policy

To derive expectations for consumers' impact on trade policy, we build on a set of stylized assumptions that is standard in political economy models: In setting tariff rates, the government balances the interests of voters as consumers and of import-competing firms; political institutions shape this balance. Voters as consumers, and hence the mass public, benefit from lower prices and therefore lower tariffs. This assumption is standard in formal political economy models (Grossman and Helpman, 1994; Rogowski and Kayser, 2002; Kono, 2006; Ehrlich, 2007), informal accounts of trade politics (Rogowski, 1987; Alt et al., 1996), and empirical applications (Linzer and Rogowski, 2008), and it is supported by survey evidence (Baker, 2003,

2005). This is not to say that consumers always prefer free trade. Consumers are often poorly informed about the benefits of trade liberalization (Mansfield and Mutz, 2009), trade preferences may not be sufficiently salient to affect electoral outcomes (Guisinger, 2009), and consumers may prefer non-tariff barriers in the form of health and safety standards (Charnovitz, 1992). But, especially with respect to tariff barriers, the baseline assumption in the literature has been that consumers are better off with free trade than with protectionism, not least because voters follow their pocketbook (Mansfield, Milner and Rosendorff, 2000). Thus, the assumption that voters prefer lower tariff rates is certainly not true universally, but it serves as an important and plausible assumption in the literature.

While the collective costs of protectionist trade policies are vast, the costs to individual consumers are relatively small and dispersed. By contrast, the benefits of tariffs, which shield import-competing firms from foreign competition, are concentrated (Pareto, 1927). This creates collective action differentials between voters and interest groups, advantaging the latter. Theories of trade politics thus share many characteristics of theories of public goods – free trade benefits the population as a whole, but is under-provided due to its dispersed benefits and non-excludability. Consequently, trade policies exhibit a protectionist bias.

This protectionist bias is not uniform across countries. Political institutions that insulate governments from interest group pressure and that increase their responsiveness to voter interests should be associated with more public goods (Lake and Baum, 2001; Bueno De Mesquita et al., 2003), and consequently less protectionist trade policies. This insight gave rise to a rich literature on the institutional determinants of trade policies. Where governments are more responsive to voter interests, such as in democracies, tariffs should be lower (e.g., Rogowski 1987; Mitra, Thomakos and Ulubasoglu 2002; Rogowski and Kayser 2002; Milner and Kubota 2005; Gawande, Krishna and Olarreaga 2009). The key feature of democracies in these models is open political competition over a large number of votes. This drives policy-makers to provide more public goods and reduces the influence of interest groups. Additionally, political

competition drives policymakers to point out high tariff rates, raising knowledge about trade policy and allowing voters to hold politicians accountable (Kono, 2006).[1]

In sum, this literature presents an intuitive argument: free trade arises because voters, as consumers, are better off with free trade and the resulting lower prices. Where voters have more influence over policy-making, free trade consequently is more likely to occur. This is not to say that other explanations of free trade do not exist. For instance, following Heckscher-Ohlin and Stolper-Samuelson theory, voters (as owners of labor) in developing countries should prefer free trade; because democracies empower voters, democracies in developing countries should be more open to trade (Milner and Kubota, 2005). To stay close to the existing literature on democracy and trade, and to distinguish an explanation based on consumer interests from other explanations, we therefore abstract from these alternative explanations in the following.

We follow the literature's focus on consumers, and democracy's higher regard for consumers as voters, as drivers of more open trade regimes in democratic countries, and derive another implication of this line of argument: If consumers account for liberal trade policies, we should expect systematic differences in trade policies within countries and across products according to the extent to which products matter to consumers. To demonstrate that this implication follows from a standard theoretical framework, we present a simplified model of trade politics that forms the basis of much of the literature. The model necessarily abstracts from many complications, which allows us to focus on the relationship between consumers and trade policies. Based on this model, we first derive the standard result – where policy-makers are more responsive to consumers, average tariffs should be lower – and then derive implications for tariff levels across products.

We represent voter utility from consuming good i as a function $c_i(p_i)$, where the price p_i

[1] By a similar logic, institutional differences within democracies – such as the electoral rule or the distinction between parliamentary and presidential systems – should also account for differences in trade policies (see, e.g., Ehrlich 2007). However, this literature does not suggest that (some types of) democracies should be less responsive to consumers than autocracies and therefore have higher tariffs.

of product $i \in \{1, 2, \ldots, N\}$ is a function of tariff rates, $t_i \geq 0$, such that the domestic price is the global price plus the tariff rate, $p_i = p_i^* + t_i$. To simplify notation, we assume $p_i^* = 0$, such that $p_i = t_i$. Because voters prefer lower prices, it follows that their utility decreases as prices increase, and therefore $c_i'(p_i) < 0$. Additionally, we assume that $c_i''(p_i) \leq 0$, such that the costs of raising prices are increasingly painful to voters, and that $c_i'''(p_i) = 0$.[2]

Producers that compete with imports from abroad prefer protectionist trade policies. Tariffs raise their profits and increase their competitiveness. Producers value profits, $\pi_i(p_i)$. We assume that profits increase in the price of good i at a decreasing rate, such that $\pi_i'(p_i) > 0$, $\pi_i''(p_i) < 0$, and $\pi_i'''(p_i) = 0$, and that the profit function satisfies the usual Inada conditions to guarantee an interior solution. Producers are able to lobby the government for higher tariffs, which is reflected in the government's utility function. Government utility is given by $\Gamma = \alpha \sum_i c_i(p_i) + \sum_i l_i(p_i)$, where $l_i(p_i)$ is firm lobbying for higher tariffs on product i, and α represents the extent to which the government values the interests of the public, or of voters as consumers, relative to lobbying contributions. The larger is α, the more the government is concerned with satisfying voters, and the less dependent it is on individual interest groups relative to the mass public.

This formulation of government preferences makes no presumption that voters lobby for tariffs, that voters cast their ballots solely based on tariff rates on individual products, that voters engage in political activity as a unified group, or that governments give more weight to voter interests than to lobbying. The government utility function only assumes that the government takes consumer interests into account implicitly when setting tariff rates and trades off these consumer interests with lobbying by producer interests. For instance, voters are plausibly concerned with overall price levels and decrease their support for the government as consumer prices go up (Hibbs, 1977; Rogowski and Kayser, 2002); tariffs provide a tool for governments

[2]These assumptions follow, for instance, from a spatial model with quadratic utility functions (Mansfield, Milner and Rosendorff, 2000).

to affect price levels directly and quite easily. Thus, governments have incentives to maintain lower tariffs – even if voters are not able to identify tariff rates on individual products (see, e.g., Mansfield, Milner and Rosendorff 2002).

We restrict the model to truthful equilibria, such that each firm's marginal lobbying contribution corresponds to that firm's marginal profit (Grossman and Helpman, 1994). These strategies produce the same result as the government maximizing a weighted sum of consumer interests and producer profits. It follows that the tariff rate chosen by the government on product i, t_i^*, is implicitly defined by

$$-\alpha c_i'(t_i^*) = \pi_i'(t_i^*). \tag{1}$$

The equilibrium tariff defined in equation (1) replicates two insights from the extant literature discussed above. First, trade policies exhibit a protectionist bias: Tariff rates are higher than consumers prefer, because protectionist interest groups push tariffs upwards through lobbying. Second, this protectionist bias is shaped by the parameter α. The protectionist bias should be most pronounced where concentrated interest groups have more influence over policy-making (where α is small). Conversely, lower tariffs result where voters have more influence and where governments are better insulated from interest group pressure (where α is large). Consequently, and as discussed above, where institutions increase the government's responsiveness to voter interests, such as in democracies, tariffs should be lower.

We highlight a third implication of the model, which yields predictions across products: For products on which price changes have a larger effect on consumers, tariffs should be lower; this effect should be strongest in democracies. This implication is at the core of common explanations of an aggregate association between democracy and free trade. For instance, Nielson (2003, p. 472) links voters to lower tariffs because "free trade produces public goods when it comes to consumption." Similarly, early free trade policies in Germany and England

reflected "primarily the interest of the urban consumers" (Gerschenkron, 1944, p. 35). And Kono (2006, p. 370) emphasizes that the association between democracy and free trade arises because democracy "enfranchises and informs voters-as-consumers and should thus provide a double impetus for trade liberalization."

We therefore leverage the often substantial variation in tariff rates across products and in how these tariffs affect consumers. Formally, the implication follows directly from equation (1). For products that are important to consumers, consumer utility $c_i(t_i)$ is more sensitive to the tariff rate, which implies that $c_i'(t_i)$ is large in absolute value. By contrast, products that are of relatively little value to consumers are characterized by a relatively flat function $c_i(t_i)$.[3] Put differently, for products that are less important to consumers, price changes are likewise less important to consumers. Analogously to producers, the degree to which consumer interests are at stake is represented by the steepness of the function $c_i(t_i)$.

From the equilibrium tariff rate in equation (1), it follows that we should observe lower tariffs on products that affect consumers more. Consider two products, i and j, where product j is more relevant to consumers than product i. Because $c_j'(t_j) < c_i'(t_i)$, equation (1) implies that the equilibrium tariff rate is lower for product j than for product i.[4] This effect is illustrated in Figure 1. The downward-sloping line represents the right-hand side of equation (1), π_i'. The dashed upward-sloping line represents the left-hand side of equation (1), $-\alpha c_i'$. The intersection of the two lines determines the equilibrium tariff rate t_i^* for product i. For products that are more important to consumers, the dashed line shifts upwards, as indicated by the dash-dotted line, $-\alpha c_j'$. This upward shift pushes down the new equilibrium tariff rate. The effect is similar to a change in political institutions (that is, a change in α). The key difference between the two effects is that an increase in α affects all products within a country. Accordingly, the empirical literature has focused on differences in average tariff rates across countries.

[3] To focus only on the change in the slope of $c_i'(t_i)$, we assume that the second derivative remains unchanged.
[4] The left-hand side is larger (in absolute value) for good j than for good i; t_j has to be smaller than t_i.

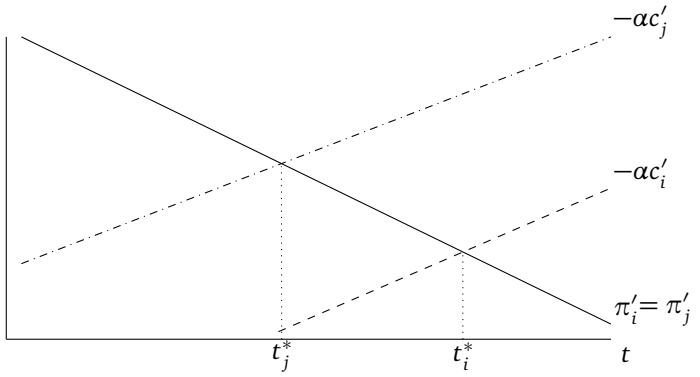

FIGURE 1 Equilibrium tariff rate on product i, as determined by equation (1), and how it is affected by an increase in product i's relevance to consumers. The downward-sloping line represents π_i', the upward-sloping dashed line $-\alpha c_i'$. The equilibrium tariff rate, t_i^*, is determined by the intersection of the two lines. As a price change in a product affects consumers more, the dotted line shifts upwards, pushing down the equilibrium tariff rate to t_j^*.

By contrast, a change in a product's relevance to consumers affects that specific product, such that tariff rates should vary systematically across products.

Hence, tariffs on different goods should affect consumers differently. Substantively, tariffs should have larger effects on consumers for products that make up a larger share of an individual's consumption. Consumption shares reflect consumer interests regardless of whether consumers are able to distinguish tariffs (and prices) on individual products or whether they are more concerned with overall price levels. Both perspectives have the same implication. If consumers pay attention to tariffs on individual products, tariffs on products with larger consumption shares are more salient, because a larger share of spending is affected directly. But even if consumers focus only on aggregate price levels, not prices on individual products, the same implication follows: tariffs on products with larger consumption shares have larger and more direct effects on overall price levels.

This follows from the way common measures of aggregate price levels – such as the widely reported consumer price indices used to determine inflation rates – are calculated. To arrive

at measures of aggregate price levels, central banks or national statistical offices use survey data to obtain the share of a representative consumer's spending on different products. These consumption shares are then used as weights on the prices of individual products to create an aggregate price level. If the government levies a tariff on a product, the effect on the aggregate price level is therefore a function of that product's consumption share: tariffs on products with larger consumption shares have larger and more direct effects on price levels than tariffs on products with smaller consumption shares, and consequently are less attractive tariff targets to policy-makers concerned with consumers. Lower tariffs should be concentrated on products that have the largest effects on prices, which are those products that are consumed the most. This implication is specific to explanations that link overall lower trade barriers to consumer interests: If lower tariffs are not concentrated on products that have the largest effects on prices, democracies may well have overall lower tariffs, but these lower tariffs are not a response to consumer interests.

Of course, any tariff has the potential to increase prices for consumers, including tariffs on intermediate goods that are not part of the consumption basket. We make no claim that consumer interests are only affected by tariffs on goods that are consumed directly. However, if policy-makers respond to consumer interests, they should lower tariffs on both inputs and on goods that are consumed directly, and they should lower tariffs at least as much on consumption goods as on other goods. Maintaining higher tariffs on goods that are consumed directly would defeat the purpose of lowering prices and in particular of lowering aggregate price levels. Additionally, because tariffs on intermediate products affect consumers only indirectly, such tariffs may allow governments to engage in some amount of obfuscation and to reap rents from protecting domestic interest groups without alienating voters (Kono, 2006) – explaining how lower tariffs on intermediate goods achieves lower prices is complex, whereas explaining how higher tariffs on consumption goods drives up costs for citizens is straightforward.

Note that we follow the literature in assuming that tariffs are driven by the political con-

flict between voters and import-competing groups. However, many product tariffs have been affected by international trade negotiations, which encouraged exporter lobbying for domestic trade liberalization in exchange for market access abroad. This effect creates an important constituency that shares consumers' preferences for lower tariffs (Gilligan, 1997). Recognizing this, governments can negotiate trade agreements to tie their hands towards protectionist demands and achieve lower prices for voters. Thus, trade agreements can be an important component of trade liberalization. However, the negotiation of trade agreements should not systematically affect the association between consumption shares and tariff rates across products. If governments negotiate trade agreements to achieve lower prices for voters, trade liberalization is driven by consumer interests, and the same expectation – higher consumption shares should correlate with lower prices – follows. All products may be affected by tariff cuts, but the resulting tariff rates should proportionally correspond with consumer interests.[5]

In sum, common explanations of free trade emphasize that, where consumers are more politically relevant, aggregate price levels and average tariffs should be lower. We emphasize a product-level implication of this same line of argument: products for which tariffs have a larger effect on aggregate price levels and consumers should have lower tariffs, which are products with larger consumption shares. The first proposition follows.

Proposition 1. *Tariffs decrease in the consumption share of a product: Tariffs are lower for products that make up a larger consumption share.*

From equation (1), it further follows that the strength of the association between consumption shares and tariffs is conditional on the institutional environment, α. Where the government has little concern for consumers, the effects of differences in consumer interests across products are muted. Where the government is more invested in the interests of voters,

[5]Moreover, even when taking other motivations for negotiating trade agreements into account, many trade negotiations are initiated with formulaic (such as linear) cuts across most or all product lines that correspond to equivalent concessions; only then are exceptions carved out. This reduces the possibility that trade agreements affect the association between consumption shares and tariff rates systematically.

consumer interests have a larger effect on tariff rates. Governments provide lower tariffs on products with large consumption shares, and this should especially be the case in environments where governments care about consumers. Following extant theories, democracies should be more responsive to consumers. While larger consumption shares should always result in a reduction in tariff rates, this effect should be strongest under democratic institutions, as noted in the following proposition.[6]

Proposition 2. *Democratic institutions reinforce the negative association between tariffs and a product's consumption share: the negative effect of consumption shares on tariffs further decreases as institutions become more democratic.*

The flipside of this argument is that the negative association between democratic institutions and tariff rates should be concentrated on those products that matter the most to consumers. Democratic institutions should result in lower tariff rates, and this effect should be most pronounced for products with large consumption shares.

Empirical Results

To evaluate the propositions, we require disaggregated data on tariff rates and matching data on consumption shares. For our dependent variable, we obtain data on effectively applied tariff rates at the two-digit Harmonized System level from the World Bank's World Integrated Trade Solutions database. The effectively applied tariff rate gives a representation of the impact of tariffs on import prices, and therefore is the relevant tariff for our purposes. The data disaggregate tariffs into 96 broad categories, such as 'coffee, tea, mate, and spices.' The two-digit level has the added advantage of alleviating concerns about substitution across similar products, which could otherwise introduce endogeneity between consumption shares and tariffs.

[6] To see why, note that $\frac{\partial t_i}{\partial \alpha} = -\frac{c_i'(t_i)}{\alpha c_i''(t_i)+\pi_i''(t_i)} < 0$. If c_i' – the extent to which consumer interests are at stake – increases in absolute value, while the other terms remain unchanged, the effect of an increase in α is pushed further down, and the two effects reinforce each other.

While consumers may be able to switch relatively easily from tea to mate, for example, it is more difficult to substitute products at the level of aggregation of two-digit categories.

To obtain a measure of consumption shares of individual products, we leverage data used in the construction of consumer price indices (CPI). The typical use of the CPI is to calculate changes in the overall price level over time to measure inflation. The CPI calculates the current, aggregate price for a basket of goods, with weights on each of the goods in the basket determined by national statistical offices. Products that make up a larger share of consumption obtain larger weights – prices on these goods have more influence on the purchasing power of a representative consumer. The interests of the representative consumer are also crucial for determining tariff rates in theoretical models of trade policy-making, which makes these weights suitable for our purposes. For products that make up a larger share of consumption, higher tariffs affect consumers more. Even if voters are mostly concerned with overall price levels, and do not track prices or tariffs on individual products, the CPI identifies the products for which higher tariffs increase price levels the most.

While statistical offices commonly release the development of price indices over time, they usually do not release data on the weights on specific product categories. Even where weights are available, they often are available only in aggregated, non-standardized categories. Moreover, matching these data to tariff rates is often ambiguous and not immediately comparable across countries. We therefore focus our analyses on a small number of countries where such data are available and where there is within-country variation in domestic institutions.

Our main results focus on Mexico, which has been described as a "prime case" for the argument that democracy and trade liberalization go hand in hand (Milner, 1999, p. 104). Mexico has experienced an increase in political competition and an attendant increase in common measures of democratic governance during the 1990s, with the formerly-dominant Partido Revolucionario Institucional (PRI) losing power for the first time in over seventy years. This is reflected in Mexico's polity score (Marshall and Jaggers, 2006), which captures the extent

of political competition and is a common measure of the strength of voter interests in the empirical literature on trade (e.g., Kono, 2006). The variable takes values from -10 to 10, where higher values denote more democratic countries. Mexico moved gradually from a score of zero in 1991 to a score of eight in 2000, remaining at that score thereafter. Because our main results rely on within-country variation, we avoid problems associated with comparability in cross-country regressions, and our results implicitly control for alternative country-specific explanations of trade flows and trade policies, such as exchange rate regimes and values, financial flows, and membership in international institutions.

In additional results, we draw on data from countries acceding to the European Union (EU) in its fifth round of enlargements – Cyprus, the Czech Republic, Estonia, Hungary, Latvia, Lithuania, Malta, Poland, Slovakia, Slovenia (in 2004), and Bulgaria and Romania (in 2007) – which have the advantage of providing data on consumption shares in a unified, detailed format; some of the countries also experienced democratic transitions during the 1990s. We also provide results from a larger cross-section of up to 73 countries; a dataset of OECD members; and we extrapolate the consumption data from Mexico to Central American countries. While these cross-section datasets are of lower quality, they serve to corroborate the main results. We again control for other determinants of trade policies in these samples or include country-fixed effects to leverage only within-country variation.

Mexico's statistical office, Instituto Nacional de Estadística y Geografía, publishes data on consumption weights on different products. The latest edition of the data is from 2010. To evaluate Proposition 1, we match the consumption share data to 2010 tariff data. The resulting dataset has one observation per product, for a total of 96 observations. We were not able to match 12.9 percent of tradeables, which introduces some measurement error. For many observations, the consumption share is zero, because these products are not consumed by households. Following Proposition 1, we expect lower tariff rates for products with larger consumption shares, and therefore a negative coefficient on the variable on consumption shares.

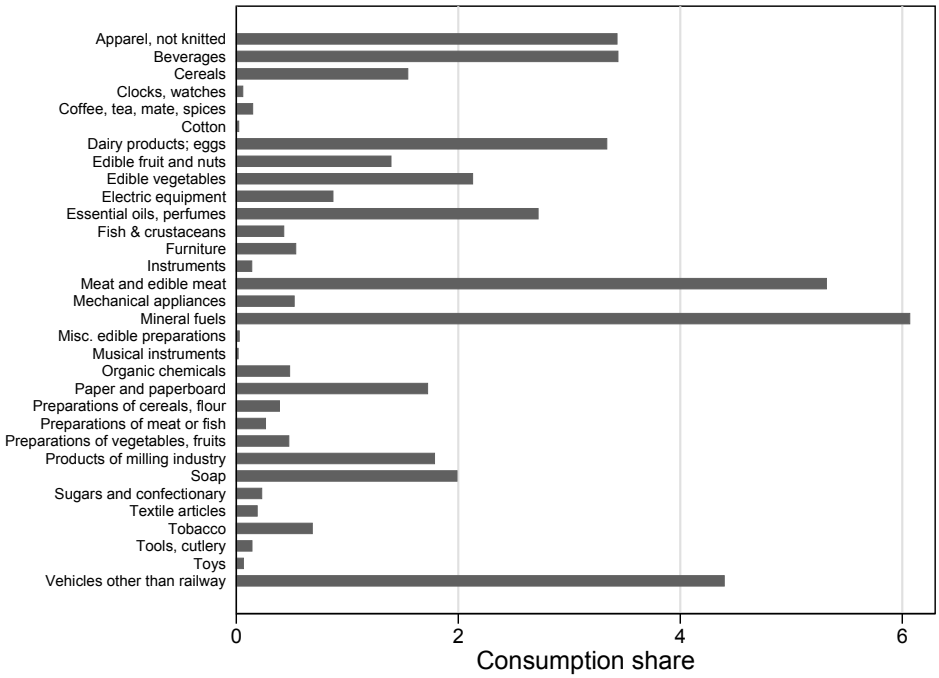

FIGURE 2 Consumption shares across two-digit tariff categories, Mexico 2010, for product categories with positive consumption shares.

Figure 2 displays the consumption shares across all product categories with positive consumption shares. The appendix lists all product categories and their associated consumption shares.

To evaluate Proposition 2, we impose the consumption share data from 2010 to earlier and later years. This allows us to leverage, within a single country, variation across years in political institutions as well as variation in tariffs across product categories. We interact the variable on consumption shares with the polity score (Marshall and Jaggers, 2006). Following Proposition 2, we expect a negative coefficient on the interaction between consumption shares and the polity score: The negative association between consumption shares and tariffs should be reinforced as a country's political system becomes more democratic.

This strategy has two major drawbacks. First, it presumes that consumption shares from 2010 apply equally to earlier and later years. That consumption shares tend to move slowly and are accordingly revised rarely helps alleviate this concern (for instance, the 2010 data for

Mexico are still in use).[7] Second, the movement towards democratic institutions in Mexico during the 1990s coincided with major reforms to Mexico's tariff regime through the implementation of the North American Free Trade Agreement (NAFTA), which entered into force in 1994 and successively eliminated most tariffs with its most important trading partner, the United States. Below, we show that our results also hold when using the most favored nation tariff rate (which was not affected by NAFTA) and when accounting for US export interests.

Mexico: consumption shares and tariff rates

Figure 3 displays Mexican tariff rates and consumption shares on all product categories with positive consumption shares. The graph indicates product categories by two-digit codes. Tariff rates in Mexico range from 0 to about 52 percent. The average tariff rate across all product categories is about 10 percent. The figure points to two potential outliers in the data: product categories 2 (meat products) and 27 (mineral fuels). Figure 3 suggests no obvious negative relationship between consumption shares and tariffs. The Spearman correlation coefficient, which is robust to outliers, instead indicates a statistically significant positive correlation for the full sample ($\rho = .310$; p-value $= .002$).

Table 1 presents coefficient estimates and p-values from regression models evaluating the relationship between tariff rates and consumption shares. The first column reports the estimates from an OLS model, including no other covariates, with standard errors robust to heteroskedasticity. Contrary to expectations, products with higher consumption shares have higher, not lower, tariff rates. The second column, and all models that follow, further controls for log imports (in thousand US dollars) in the specific product category (obtained from WITS/UN Comtrade). Products were imported in all categories, such that no observations drop out after the log transformation. This variable accounts for protectionist interest groups,

[7] While we do not have data from Mexico that goes back in time, data from India suggest stable patterns at the level of aggregation we use. The correlation coefficient between the 2001 weights and the 1982 weights for the Indian CPI is .96. The average difference between the two weights series is less than .12 percentage points. For over 90 percent of product categories the difference is less than 1 percentage point.

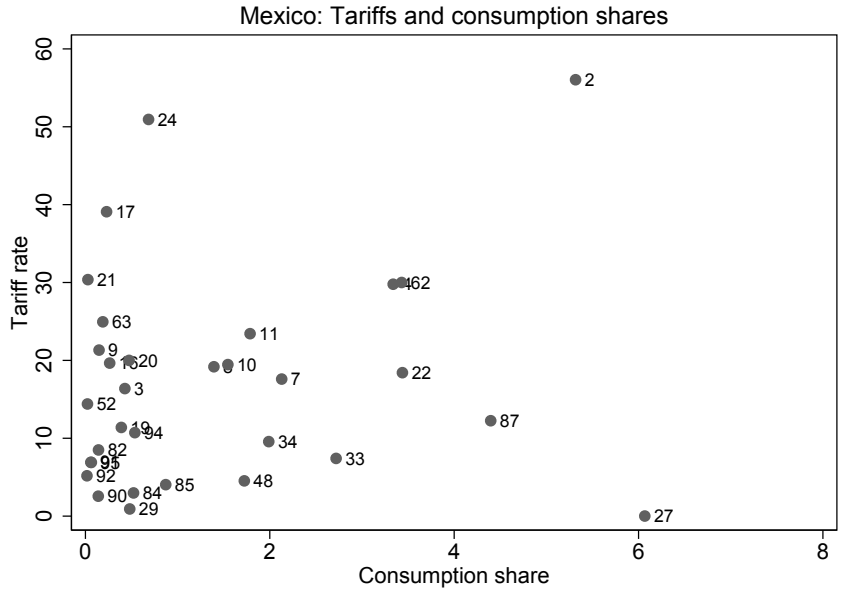

FIGURE 3 Tariff rates and consumption shares for Mexico, 2010. Tariff data from World Integrated Trade Solutions, consumption share data from Mexico's national statistical office. Products with zero consumption share are omitted from the graph.

which should seek protection for goods with substantial import penetration. In our sample, the correlation coefficient between consumption shares and log imports is .340.

Including log imports increases the magnitude and precision of the coefficient on consumption shares, with the overall effect of substantially increasing the statistical significance of the coefficient estimate. A one percentage point increase in the consumption share increases the tariff rate on that product category by 2.76 percentage points, which corresponds to about a 25 percent increase relative to the sample average. A one standard deviation increase in the consumption share increases the tariff rate by nearly 31 percent. In sum, the data show no support for the negative relationship between consumption shares and tariffs, postulated by Proposition 1, that we expect if consumer interests account for liberal trade policies.

In the following, we address a number of empirical challenges and alternative explanations. We report in the appendix that the positive coefficient on consumption shares remains when replacing the dependent variable with the trade-weighted average tariff (which gives a crude

TABLE 1 Mexico – tariffs and consumption shares

	(1)	(2)	(3)	(4)	(5)	(6)
Consumption share	2.02	2.76**	3.55***	2.77**	2.48**	1.01**
	(.119)	(.025)	(.004)	(.027)	(.049)	(.034)
Log imports		-1.34***	-1.26***	-1.36***	-1.25***	-1.70
		(.001)	(.001)	(.002)	(.000)	(.434)
Intra-industry trade				.390		
				(.902)		
Log elasticity					1.67	
					(.103)	
Log output						-1.58
						(.516)
Constant	9.42***	26.9***	25.6***	26.8***	23.3***	72.2
	(.000)	(.000)	(.000)	(.000)	(.000)	(.153)
Number Obs.	96	96	94	96	94	30

Dependent variable: effectively applied tariff rate for Mexico, 2010. Coefficient estimates and *p*-values. Columns 1-6: OLS, robust standard errors. Column 3 drops product codes 2 and 27. Columns 1-5: Two-digit HS categories. Column 6: Two-digit ISIC categories. *** significant at 1%, ** significant at 5%, * significant at 10%.

measure of a category's relevance), with the number of tariff peaks in each product category (which provides a measure of extreme forms of protectionism), or with tariff water (which helps to account for constraints by trade agreements and evaluates whether governments use the permissible policy space).

Extreme tariffs: As shown in Figure 3, product categories 2 (meat products) and 27 (mineral fuels) are potential outliers in the data. Column 3 drops these two categories, which results in an increase in the coefficient on consumption shares. Alternatively, quantile regression at the median is less sensitive to outliers than a linear regression at the mean. The coefficient estimate again increases (reported in the appendix).

Another concern is that the two-digit product categories occasionally include a small number of exceptionally high tariff rates on individual products. In that case, the two-digit average gives a distorted impression of the category average. We disaggregate the tariff data at the

six-digit level to identify individual products with unusually high tariff rates. We then drop observations with tariff rates above 250 percent, above 200 percent, or above 100 percent. In additional results, we drop observations with tariff rates at the zero bound. The positive association between consumption shares and tariff rates remains.

Industry structure: The results may be driven by a correlation between consumption shares and industry characteristics. Intra-industry trade can be a facilitator of trade liberalization (Lipson, 1982). Higher tariffs on products with higher consumption shares may therefore be due to a lack of intra-industry trade. We calculate the standard Grubel-Lloyd index of intra-industry trade, using WITS data on imports and exports, and include the variable in the empirical model in column 4. The positive, significant coefficient on consumption share remains. Intra-industry trade has no significant association with tariffs. In the appendix, we report that the results are also robust to using instead a dummy for intermediate goods or when including a control variable for exports.

Demand elasticities may be an important determinant of tariff rates. If consumption products have a lower demand elasticity, tariffs may be higher on these products to raise revenue. As we report in column 5, the positive association remains after including logged demand elasticity (Kee, Nicita and Olarreaga, 2009). Larger consumption shares may also be correlated with larger industries, which are better able to lobby for protection. Because data on industrial production are not available in the Harmonized System classification and at the level of disaggregation we use, we rematch the data to the International Standard Industrial Classification (ISIC) categorization. Data on industrial production in ISIC format are available from the OECD Structural Analysis Database. Trade data in the ISIC format is available from WITS. Column 6 shows that higher consumption shares remain associated with higher tariffs.

Endogenous imports: Imports are potentially endogenous to the tariff rate, which would result in biased estimates of both coefficients. The appendix presents results from several instrumental variable models, using the exchange rate of the Mexican peso, exchange rate

passthrough at the product level, the two variables and their interaction, or lagged logged imports as instruments for current imports. The coefficient on consumption shares remains positive and statistically significant in all cases.

Food products. Food products constitute a large share of consumption. On the one hand, the incentives to lower tariffs on food products to lower consumer prices should therefore be particularly pressing. On the other hand, trade policy on food products is often subject to strong lobbying pressures from the agricultural sector. Additionally, while consumers benefit from lower prices on food products, they may prefer protectionist measures out of concerns over food quality and safety (as evidenced in recent debates in several European Union countries over trade policy). While most of these demands should translate into non-tariff barriers, rather than tariff barriers (see Athukorala and Jayasuriya 2003), contentious politics over food products may distort the results. An additional concern is presented by international institutions: with the Uruguay Round, governments agreed to tarrify non-tariff barriers, which could then be negotiated analogously to other tariff barriers. We therefore drop food products from the sample; alternatively, we include a control variable for food products. The results, reported in the appendix, are robust to these modifications.

NAFTA: The results could be driven by NAFTA negotiations and power differentials during these negotiations. US negotiators had incentives to push for lower tariffs on product categories with US export interests. If US exports fall predominantly into categories with low consumption shares, the observed correlation may be due to NAFTA. We first replace the dependent variable with the applied most favored nation tariff rate, which does not account for preferential schemes and therefore is not affected by NAFTA. Second, we return to the effectively applied tariff rate as dependent variable and include the share of imports from the US to account for US pressure for tariff reductions. Third, we replace the dependent variable with a weighted average of applied tariff rates and the preferential tariff rate towards the US, with import shares from the US as weights. The positive association between consumption shares

and tariffs remains across these models (reported in the appendix).

We also extend the consumption share data from 2010 to earlier and later years and interact it with a dummy variable for NAFTA, coded zero in years before 1994 and one starting in 1994. Before NAFTA, higher consumption shares had no statistically significant association with tariffs. The relationship becomes stronger and statistically significant after 1994. While NAFTA reduced tariff rates, this effect is confined to products with consumption shares below .527 percent – and products below this category account for less than four percent of consumption. For products with consumption shares above .527 percent, which constitute almost all coded product categories with positive consumption shares, NAFTA resulted in higher tariffs.

Shortcomings of consumption data: The construction of the CPI is based on urban households. If rural and urban populations have different spending patterns, the above results could show that trade politics is biased against urban consumers but perhaps in favor of rural consumers. Given the often stipulated political bias towards urban populations (Bates, 1981), the reported pattern would be even more surprising: A concomitant urban political bias and bias in the construction of the CPI should reinforce the expected negative correlation in the data. Nonetheless, it is plausible that the relative spending of urban and rural consumers differs. We coarsen the variable on consumption shares by coding it zero for product categories with a consumption share of zero and one for product categories with positive consumption shares. If urban and rural consumers purchase products from similar categories, this coarsened measure is applicable to both groups. The results remain robust to this change.

A second concern is that the data fail to capture crucial aspects of consumer behavior. Consumers might be more aware of price changes on products that are purchased frequently. Because we lack data on the frequency of purchases across categories, we use data on the unit value of imports (per item or per kilogram) from WITS. We calculate the product category average and include its logged value as an additional variable. Products with smaller unit values (and presumably higher purchasing frequency) are also associated with higher tariffs; the

coefficient on consumption shares remains positive and significant (reported in the appendix).

Mexico: tariffs, consumption shares, and democracy

Table 2 reports models evaluating Proposition 2. We extend Mexico's 2010 consumption shares from 1991 to 2012 and cluster standard errors by product categories. Column 1 interacts the polity score with the variable on consumption shares; we expect a negative coefficient on the interaction term. The results provide no support for this expectation. The association between consumption shares and tariffs increases, rather than decreases, in Mexico's polity score. The moderating effect of political institutions is statistically significant (the p-value on the interaction term is .032) and substantively notable as well, as shown in Table 3. The effect of an increase in consumption shares on tariff levels doubles from about one percentage point with a polity score of zero to over two percentage points at a polity score of eight. Across all levels of the polity score, tariffs increase in consumption shares, although the effect barely misses significance at the five percent level when Mexico's polity score is zero. The correlation holds when including year and year squared to account for common time trends (column 2).

Consistent with the existing literature, democratic institutions are associated with lower tariffs. However, this negative effect is confined to product categories with small consumption shares and cumulatively accounts for a small share of consumption. For products with a consumption share above .8 percent, the negative effect is no longer statistically significantly different from zero. For products that make up a share of at least 2.5 percent, the effect turns positive (though it is not statistically significantly different from zero).

Not only are the negative effects of democratic institutions confined to products with small consumption shares, but these products cumulatively only account for a small share of consumption. Specifically, the effect is statistically significantly different from zero for only 4.8 percent of cumulative consumption; for another 11.4 percent of cumulative consumption, the effect is negative, but not statistically significantly different from zero. For the remainder of

the consumption basket, the effect of democracy on tariff rates is positive. In sum, democratic institutions appear to be associated with lower tariff rates only for products that are of relatively little value to consumers and that cumulatively account for a small share of consumption. Democratization increases tariffs for the majority of the consumption basket, and in particular on products that are consumed most heavily.

Democratization in Mexico coincided with major reforms to the tariff schedule in the context of NAFTA. Columns 3 through 5 offer models to address this concern. Column 3 includes a control variable for the years 1994 and onwards, when NAFTA was in effect. Column 4 controls for the share of imports from the US to account for US export interests. Column 5 uses the most favored nation tariff rate, which was unaffected by NAFTA. The positive, statistically significant coefficient on the interaction term remains in all models.

In sum, these results provide no support for the notion that liberal trade policy is driven by consumer interests. Likewise, they cast doubt on theoretical arguments that link democratic institutions and political competitiveness to lower tariff rates due to better representation of consumers as voters. The results consistently point in the opposite direction.

Cross-section results

We now turn to several additional results, drawing on data from EU accession countries, a larger sample of low- and middle-income countries, a sample of Central American economies, and a sample of OECD countries. For each of these, we first consider results from a cross-section; we then extend the samples to a cross-section time-series and present results from fixed effects models to exploit within-country variation in political institutions. Marginal effect plots are presented in the appendix. We include several control variables plausibly associated with tariff rates and consumption patterns: log imports, obtained from WITS; the size of the country's market (log GDP), the country's wealth (GDP per capita), the country's population size (log population), log foreign direct investment (log FDI), and a country's exchange rate

TABLE 2 Mexico – tariffs, consumption shares, and democracy

	(1)	(2)	(3)	(4)	(5)
Consumption share	1.04*	.95*	1.03*	1.04*	.74*
	(.057)	(.080)	(.059)	(.057)	(.083)
x Polity	.14**	.13**	.14**	.13**	.33**
	(.032)	(.038)	(.033)	(.033)	(.041)
Polity	-.34***	4.56***	-.72***	-.30***	.11
	(.002)	(.000)	(.000)	(.003)	(.559)
Log imports	-.99***	-.80**	-.98***	-1.05***	-.90**
	(.003)	(.014)	(.003)	(.000)	(.019)
Year		-5.44***			
		(.000)			
Year squared		.12***			
		(.000)			
NAFTA			4.58***		
			(.000)		
US import share				1.11	
				(.694)	
Constant	26.9***	42.5***	25.0***	26.7***	24.5***
	(.000)	(.000)	(.000)	(.000)	(.000)
Number Obs.	1,824	1,824	1,824	1,824	1,824

Coefficient estimates and *p*-values. Columns (1-4) Effectively applied tariff rate. Column (5) Most favored nations tariff rate. Two-digit tariff categories, Mexico, 1991-2012. OLS, robust standard errors clustered on product category. *** significant at 1%, ** significant at 5%, * significant at 10%.

TABLE 3 Mexico – marginal effect consumption share

	Polity score			
	0	4	6	8
Marginal effect	1.04	1.58	1.85	2.12
95% confidence interval	[-.033, 2.11]	[.129, 3.03]	[.187, 3.51]	[.237, 4.01]
p-value	.057	.033	.030	.028
Years	1991	1995-1996	1997-1999	2000-2012

Marginal effect of a one percentage point increase in consumption share, with 95 percent confidence interval and *p*-value, based on column 2, Table 2. Years are the years for which the respective polity score appears in the dataset.

value relative to the US dollar (log xrate), obtained from the World Development Indicators; and the number of trade agreements a country has signed (Dür, Baccini and Elsig, 2014).

European Union accession: We rely on data from the twelve EU accession countries that joined in the fifth enlargement round in the 2000s. Several of these countries experienced political transitions during the 1990s. These countries also had, prior to joining the EU, individual tariff rates towards third countries. Eurostat provides data on consumption shares, specific to each country, in a unified format, which alleviates concerns about the comparability of the data. The Eurostat data covers 2005 and onwards. Because the earliest accessions in this sample occurred in 2004, we rely on the 2005 data for consumption shares. We match the 2005 data on consumption shares with tariff data from the last year before accession for which data are available for each country (between 2001, for Latvia, and 2006, for Bulgaria). For each country, we have one observation per product, which yields a total of 1,148 observation (we lack tariff data for four observations).

The results are similar to those reported for the Mexico sample in terms of direction, robustness, and magnitude. Column 1 shows that a one percentage point increase in the consumption share is associated with an increase in the tariff rate of about 2.6 percentage points, or 41 percent relative to the sample average. When estimating country-specific slopes on consumption shares (obtained from interacting the consumption share with country dummies), the effect is positive and statistically significantly different from zero for all countries but Malta.

Column 2 extends the consumption data to years 1991 to 2006. We interact the variable on consumption shares with the polity score, which in the sample ranges from five to ten. While the coefficient on consumption shares is negative, the smallest marginal effect is .571, because the polity score has a minimum value of five in the sample. Moreover, the association between consumption shares and tariff rates strengthens as a country's domestic political system becomes more democratic, as indicated by the positive interaction term. The marginal effect of the consumption share is positive and statistically insignificant at the lowest levels

of polity scores, and it increases in size and statistical significance towards the upper end of the distribution. Products with higher consumption shares are never associated with statistically significantly lower tariffs and, under democratic institutions (with polity scores of at least seven), are associated with significantly higher tariff rates.

Lower- and middle-income countries: Columns 3 and 4 extend the sample to a larger cross-section of countries. We match data from the World Bank Global Consumption database to 2010 HS tariff data. The advantage is coverage – we have data on 71 lower- and middle-income countries (the sample increases to 73 countries when including fixed effects instead of the control variables). The trade-off is data quality. The consumption categories are coarser, which reduces the ability to find exact matches with the HS categories. The comparability of categories and surveys across countries is also limited.

Column 3 shows that the positive correlation between consumption shares and tariffs weakens in size, but remains. Column 4 imposes the 2010 consumption share data on years from 1988 to 2012. To focus on within-country changes in domestic institutions, we restrict the sample to countries that reached a polity score of at least seven during the sample period, which leaves 39 countries, and again include country fixed effects. The positive, statistically significant interaction term between consumption shares and tariffs remains. Moving from a polity score of zero to a polity score of ten increases the effect of an increase in consumption shares by over 80 percent; the appendix provides a graph with marginal effects. The effect of democratic institutions is negative, but not statistically significant in this sample. The effect remains negative for on average about 12.4 percent of cumulative consumption.

Central American countries: Columns 5 and 6 apply the 2010 Mexican consumption data to Central American countries to years from 1991 to 2012. The positive, statistically significant coefficient on consumption shares remains. The interaction term between consumption shares and polity scores is positive and statistically significant (column 6). By imposing the data from Mexico, we necessarily introduce substantial measurement error. We obtain similar results

when coarsening the data on consumption shares by creating a dummy variable for product categories with positive consumption shares (not reported).

OECD countries: Finally, to assess whether the positive association between consumption shares and tariff rates is evident in developed economies with stable democratic systems, we create a sample restricted to countries that were, by 2010, OECD members. We obtain data on consumption shares across product categories from each country's national statistical office. Because EU member states are subject to the common external tariff, we drop EU members and instead code the European Union as a single entity. We were not able to obtain data for Iceland and South Korea. Column 7 shows that the positive, statistically significant coefficient on consumption shares also obtains in the sample of OECD members.

Discussion

Our results document a striking absence of consumer interests in trade policy. Those goods that are consumed most intensively receive higher, not lower, tariff rates, and the relationship does not weaken as countries become more democratic. It follows that consumers, and a higher regard for consumers in democracies, cannot account for liberal trade policy. This raises two questions: First, why are consumer interests absent from trade policy, particularly in democracies? Second, what accounts for lower trade barriers in democracies if not consumer interests?

The absence of consumer interests may be explained by the challenges to collective action by consumers, which have been identified at least since Pareto (1927). They are reinforced by a lack of voters' awareness of the economic consequenes of trade liberalization and in-group versus out-group dynamics (Mansfield and Mutz, 2009; Guisinger, 2009). Nonetheless, the consensus in the literature has been that democratic policy-makers take consumer interests into account at least implicitly and to a larger extent than autocratic leaders, because they have a larger concern for public goods and the interests of dispersed voters; at a minimum, democratic policy-makers are expected to implement lower tariffs because of the effects on

TABLE 4 Cross-section samples – tariffs and consumption shares

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	EU accession		WB sample		Central America		OECD
Consumption share	2.64***	-2.35	.60***	.47***	1.52***	.56*	3.08***
	(.002)	(.266)	(.000)	(.001)	(.002)	(.094)	(.002)
x Polity		.58*		.038***		.11**	
		(.050)		(.008)		(.010)	
Log imports	-.66**	-.71*	-.40***	-.49***	-.031	-.26**	-1.28**
	(.048)	(.055)	(.000)	(.002)	(.888)	(.028)	(.008)
Log GDP	-10.2**	2.24	-1.42	-1.63	88.8***	1.82	-7.59**
	(.026)	(.635)	(.279)	(.439)	(.000)	(.710)	(.006)
GDP per capita	.69**	-.59	.39	.19	-27.9***	-.39	.26**
	(.016)	(.457)	(.440)	(.850)	(.000)	(.550)	(.028)
Log population	11.5***	18.5	2.11*	-13.8	-96.7***	-21.4	8.98***
	(.006)	(.510)	(.076)	(.158)	(.000)	(.273)	(.007)
Log x-rate	.72	-.73*	.27	-.95**	-.66***	.096	.41
	(.100)	(.064)	(.282)	(.022)	(.000)	(.923)	(.148)
Log FDI	-.049	-1.29**	.047	-.021	50.8***	-.21	.20
	(.897)	(.015)	(.911)	(.978)	(.000)	(.413)	(.781)
PTAs	-.48***	.17	.005	-.35	-6.55***	.051	.042
	(.001)	(.294)	(.963)	(.374)	(.000)	(.825)	(.615)
Polity		.63*		-.067		.066	
		(.064)		(.799)		(.836)	
Constant	82.3*	-304.4	10.3	294.5*	-1403.5***	314.1	57.8**
	(.082)	(.554)	(.361)	(.051)	(.000)	(.122)	(.026)
Number Obs.	1,148	5,990	6,726	49,619	669	11,423	1,344
Country FE	–	yes	–	yes	–	yes	–

Coefficient estimates and *p*-values. Effectively applied tariff rate, two-digit tariff categories. OLS, standard errors clustered by country. Columns (1) and (2): EU accession countries in fifth enlargement round. Columns (3) and (4): Cross-section of low- and middle-income countries. Columns (5) and (6): Mexican consumption data extrapolated to central American countries. Column (7): OECD members. *** significant at 1%, ** significant at 5%, * significant at 10%.

aggregate price levels. This is not the case: Consumer interests are not reflected in trade policy, especially not under democratic institutions.

Autocratic leaders may have a larger concern for consumers than typically assumed, because they derive legitimacy not from the political process but from economic performance (Bates, 1981; Pond, 2018). This effect may be reinforced by the use of tariffs as a revenue source. The combination of intensity and inelasticity of consumer demand makes consumption goods attractive and stable revenue sources. If democracies require more revenue than non-democracies, this explanation accounts for a strengthened association between consumption shares and tariff rates in democracies. In this perspective, governments are more than mediators of political demands. A government's own objectives – raising revenue in order to govern effectively – would have to enter theoretical models of trade politics more prominently than they currently do. While revenue concerns featured prominently in political debates at the beginning of the 20th century, and in academic debates until the 1980s, they all but vanished from recent accounts of trade politics (exceptions are, e.g., Bastiaens and Rudra 2016; Betz and Kerner 2016; Queralt 2017). For instance, the most prominent model of trade politics includes revenue concerns, but they appear only tangentially – they are explicitly not part of the government's political goals (Grossman and Helpman, 1994). However, this explanation would not account for overall lower tariff barriers in democracies, nor would it explain why in autocracies consumption shares do not seem to correlate with lower tariff rates.

An alternative explanation for the results in this paper, and the puzzle they raise, can be found by combining theories of contract enforcement as a source of international trade with theories of pro-trade producer lobbying. Democratic institutions tend to provide, and increase the credibility of, institutions that guarantee property rights and the enforcement of contracts between firms. That democracy is associated with stronger property rights, and the resulting need to distinguish the effects of property rights from the effects of democratic institutions, has long been recognized in the literature on foreign direct investment (Li and Resnick, 2003), but

it has been largely absent from the literature on trade politics. Improved contract enforcement has two consequences for trade policy.

First, stronger contract enforcement institutions encourage the development of competitive markets. Exporting requires internationally competitive industries, and, especially with the rise of intra-industry trade, internationally competitive firms. Additionally, stronger contract enforcement encourages the development of domestic financial markets (Rajan and Zingales, 2003), which increases the availability and reduces the cost of trade financing. Trade financing is frequently a prerequisite for international transactions, and an increased availability of trade financing allows more domestic firms to engage in exporting and importing. Democracies, by providing a more reliable legal framework, are therefore likely to boast more exporting firms, which, in the context of reciprocal trade agreements, support domestic trade liberalization in exchange for lower tariff barriers abroad, and more importing firms that benefit from lower tariffs on inputs in their own production process.

Second, much of international trade requires legal contracts between firms located in different countries (Greif, 1993); and the production of many products requires inputs sourced from several firms. Reliable contract enforcement facilitates the production of complex products that draw on a large number of inputs (Nunn and Trefler, 2015), which encourages the creation of global production networks based on imports from abroad and exports to foreign markets. Firms participating in such production networks benefit from trade liberalization, and this pro-trade lobbying comes from a set of firms that have above-average political influence: multinational firms and exporting firms, which tend to have higher profits and more employees than firms producing for the domestic market only (Bernard and Jensen, 1999).

If pro-trade producer lobbying is concentrated on intermediate goods and non-consumption goods, this explanation may account for the reported assocation between consumption shares and tariff rates. And if democracies have better institutions to secure contract enforcement, they encourage the emergence of more pro-trade interest groups, which explains an association

between democracy and free trade at the aggregate country-level. This theory provides a new explanation of why democracies are more open to international trade. In this account, free trade is no longer a cause of the political incentives created by a democratic electoral process. It is based on the recognition that contract enforcement is an important driver of international economic integration, and that stronger contract enforcement and democratic institutions tend to correlate. Because consumer interests are absent from this explanation, it is not surprising that higher consumption shares are not associated with lower tariff rates.

However, this theory turns the standard explanation of free trade on its head: Democracies are more open to trade not because of the way domestic institutions aggregate the preferences of different actors – indeed, the presence of pro-trade lobbying implies that the effect of domestic institutions on trade policy becomes ambiguous (Betz, 2017). Instead, domestic institutions shape the configuration of domestic actors with a stake in trade policy. If pro-trade producer lobbying explains cross-country differences in trade policy, we observe a systematic association between democracy and free trade not because these institutions insulate governments from interest groups, but because of the presence of interest groups that benefit from and demand trade liberalization. Incorporating lobbying by groups in favor of free trade, and their roots in institutions that ensure effective contract enforcement, into theoretical models of trade politics would therefore have considerable consequences for our understanding of the nexus between democracy and liberal trade policy.

Conclusion

We evaluated the impact of consumer interests on tariff rates and how that relationship is shaped by domestic political institutions. We expected that tariffs would be lower on goods that are consumed more intensely and that this relationship would be strongest in democracies, where governments are thought to be more responsive to consumer interests. We found the opposite. Products on which consumers expend larger shares of their income are charac-

terized by higher, not lower, tariff rates. We found no evidence that representative domestic institutions help translate consumer interests into more favorable trade policies.

These results highlight the tension, and at times inconsistency, between an association between lower average tariff rates under democratic institutions, often argued to be driven by consumer interests, and theories of trade politics leaning on producer interests. On the most fundamental level, the paper raises skepticism about the theoretical link between liberal political systems and liberal trade policies, and casts doubt on the role of broad public interests in influencing economic policy in democratic systems. The findings add to a literature that questions the ability of voters to influence trade politics. Guisinger (2009), for instance, emphasizes the low salience of trade politics in U.S. Congressional elections and points out that voter-driven theories of trade politics struggle with this finding. Our results reinforce this interpretation: some countries have lower tariff rates than others; but consumers, and differences in their influence across political systems, seem to play little role in explaining such patterns.

Finally, the results speak to recent political debates about trade. Trade openness, and economic integration more generally, has received increasing pushback from voters in recent years. One of the most frequently cited arguments in support of free trade is that free trade allows all citizens, in their role as consumers, to benefit from access to cheaper products. While this is certainly true for free trade, trade policy appears to fall short of that promise in a systematic fashion. Voters are far from guaranteed to share the gains from free trade in their role as employees (Dean, 2016), and they may also receive limited gains in their role as consumers.

References

Alt, James, Jeffry A. Frieden, Michael J. Gilligan, Dani Rodrik and Ronald Rogowski. 1996. "The Political Economy of International Trade." *Comparative Political Studies* 29(6):689–717.

Athukorala, Prema-Chandra and Sisira Jayasuriya. 2003. "Food Safety Issues, Trade and WTO Rules: A Developing Country Perspective." *The World Economy* 26(9):1395–1416.

Baker, Andy. 2003. "Why is Trade Reform So Popular in Latin America? A Consumption-Based Theory of Trade Policy Preferences." *World Politics* 55(03):423–455.

Baker, Andy. 2005. "Who Wants to Globalize? Consumer Tastes and Labor Markets in a Theory of Trade Policy Beliefs." *American Journal of Political Science* 49(4):924–938.

Bastiaens, Ida and Nita Rudra. 2016. "Trade Liberalization and the Challenges of Revenue Mobilization: Can International Financial Institutions Make a Difference?" *Review of International Political Economy* 23(2):261–289.

Bates, Robert H. 1981. *Markets and States in Tropical Africa: The Political Basis of Agricultural Policies*. Berkeley and Los Angeles, CA: University of California Press.

Bernard, Andrew B. and J. Bradford Jensen. 1999. "Exceptional Exporter Performance: Cause, Effect, or Both?" *Journal of International Economics* 47(1):1–25.

Betz, Timm. 2017. "Trading Interests: Domestic Institutions, International Negotiations, and the Politics of Trade." *Journal of Politics* 79(4):1237–1252.

Betz, Timm and Andrew Kerner. 2016. "Real Exchange Rate Overvaluation and WTO Dispute Initiation in Developing Countries." *International Organization* 70(4):797–821.

Bueno De Mesquita, Bruce, Alastair Smith, Randolph M. Siverson and James D. Morrow. 2003. *The Logic of Political Survival*. Cambridge, MA: MIT Press.

Charnovitz, Steve. 1992. "Environmental and Labour Standards in Trade." *The World Economy* 15(3):335–356.

Dean, Adam. 2016. *From Conflict to Coalition: Profit-Sharing Institutions and the Political Economy of Trade*. Cambridge, MA: Cambridge University Press.

Dür, Andreas, Leonardo Baccini and Manfred Elsig. 2014. "The Design of International Trade Agreements: Introducing a New Dataset." *Review of International Organizations* 9(3):353–375.

Ehrlich, Sean D. 2007. "Access to Protection: Domestic Institutions and Trade Policy in Democracies." *International Organization* 61(3):571–605.

Gawande, Kishore, Pravin Krishna and Marcelo Olarreaga. 2009. "What Governments Maximize and Why: The View from Trade." *International Organization* 63(3):491–531.

Gawande, Kishore, Pravin Krishna and Marcelo Olarreaga. 2012. "Lobbying Competition over Trade Policy." *International Economic Review* 53(1):115–132.

Gerschenkron, Alexander. 1944. *Bread and Democracy in Germany*. Berkeley, C.A.: University of California Press.

Gilligan, Michael J. 1997. *Empowering Exporters. Reciprocity, Delegation, and Collective Action in American Trade Policy*. Ann Arbor, MI: University of Michigan Press.

Greif, Avner. 1993. "Contract Enforceability and Economic Institutions in Early Trade: The Maghribi Traders' Coalition." *American Economic Review* 83(3):525–548.

Grossman, Gene M. and Elhanan Helpman. 1994. "Protection for Sale." *American Economic Review* 84(4):833–850.

Guisinger, Alexandra. 2009. "Determining Trade Policy: Do Voters Hold Politicians Accountable?" *International Organization* 63(3):533–557.

Hibbs, Douglas A. Jr. 1977. "Political Parties and Macroeconomic Policy." *American Political Science Review* 71(4):1467–1487.

Kee, Hiau Looi, Alessandro Nicita and Marcelo Olarreaga. 2009. "Estimating Trade Restrictiveness Indices." *Economic Journal* 119(534):172–199.

Kono, Daniel Y. 2006. "Optimal Obfuscation: Democracy and Trade Policy Transparency." *American Political Science Review* 100(3):369–384.

Lake, David A. and Matthew A. Baum. 2001. "The Invisible Hand of Democracy." *Comparative Political Studies* 34(6):587–621.

Li, Quan and Adam Resnick. 2003. "Reversal of Fortunes: Democratic Institutions and Foreign Direct Investment Inflows to Developing Countries." *International Organization* 57(1):175–211.

Linzer, Drew A. and Ronald L. Rogowski. 2008. "Lower Prices: The Impact of Majoritarian Systems in Democracies Around the World." *Journal of Politics* 70(1):17–27.

Lipson, Charles. 1982. "The Transformation of Trade: The Sources and Effects of Regime Change." *International Organization* 36(2):417–455.

Mansfield, Edward D. and Diana C. Mutz. 2009. "Support for Free Trade: Self-Interest, Sociotropic Politics, and Out-Group Anxiety." *International Organization* 63:425–457.

Mansfield, Edward D., Helen V. Milner and B. Peter Rosendorff. 2000. "Free to Trade: Democracies, Autocracies, and International Trade." *American Political Science Review* 94(2):305–321.

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.

Marshall, Monty G. and Keith Jaggers. 2006. *Polity IV Dataset*. College Park, MD: Center for International Development and Conflict Management, University of Maryland.

Milner, Helen V. 1988. *Resisting Protectionism*. Princeton, NJ: Princeton University Press.

Milner, Helen V. 1999. "The Political Economy of International Trade." *Annual Review of Political Science* 2:91–114.

Milner, Helen V. and Keiko Kubota. 2005. "Why the Move to Free Trade? Democracy and Trade Policy in the Developing Countries." *International Organization* 59(1):107–143.

Mitra, Devashish, Dimitrios D. Thomakos and Mehmet Ulubasoglu. 2002. ""Protection for Sale" in a Developing Country: Democracy vs. Dictatorship." *Review of Economics and Statistics* 84(3):497–508.

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.

Nunn, Nathan and Daniel Trefler. 2015. Domestic Institutions as a Source of Comparative Advantage. In *Handbook of International Economics*, ed. Gita Gopinath, Elhanan Helpman and Kenneth S. Rogoff. Vol. 4 Amsterdam, Netherlands: Elsevier B.V. chapter 5, pp. 263–315.

Pareto, Vilfredo. 1927. *Manual of Political Economy*. New York, NY: A. M. Kelley.

Pond, Amy. 2018. "Financial Liberalization: Stable Autocracies and Constrained Democracies." *Comparative Political Studies* 51(1):105–135.

Queralt, Didac. 2017. "Protection Not for Sale, But for Tax Compliance." *International Studies Quarterly* 61(3):631–641.

Rajan, Raghuram G. and Luigi Zingales. 2003. "The Great Reversals: The Politics of Financial Development in the Twentieth Century." *Journal of Financial Economics* 69:5–50.

Rogowski, Ronald. 1987. "Trade and the Variety of Democratic Institutions." *International Organization* 41(2):203–223.

Rogowski, Ronald and Mark Andreas Kayser. 2002. "Majoritarian Electoral Systems and Consumer Power: Price-Level Evidence from the OECD Countries." *American Journal of Political Science* 46(3):526–539.