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Consumers and the Sources of US Trade Openness

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Abstract: This essay reviews US trade flows and trade policy from the perspective of consumers. Trade policy shapes the prices and the availability of products sold in the US to, ultimately, voters. Understanding the role of consumers in explaining US trade policy may therefore offer lessons for our understanding of politics beyond trade. International trade has created substantial gains for consumers, both by lowering domestic prices and by increasing access to a wider variety of products. Yet, US trade policy does not appear to reflect consumer interests: tariffs are higher for products with higher consumption shares. This finding is inconsistent with the narrative that open trade is a response to consumer interests, and it is not explained by standard collective action arguments either. Instead, the political influence of pro-trade firms emerges as a driving force of US trade openness. The essay discusses the implications for our understanding of the political and institutional sources of trade openness. If special interest politics explains the opening of trade, it reverses the traditional interpretation of trade openness as an indication of the absence of special interest politics.

Introduction

In August 2019, the administration of US President Donald J. Trump announced a change in its trade policy toward China. It postponed planned tariff increases on imports from China until December 15. The exemption applied to a small set of products, including consumer electronics and Christmas tree ornaments; tariffs on other products, including apparel, lawn mowers, and footwear, remained scheduled to come into effect on September 1. The change came in response to fears that, for US consumers, tariffs on popular consumer products would “ruin Christmas” (Bloomberg 2019).¹

¹ Just one year earlier, similar concerns over a “war on Christmas gifts” had failed to deter the administration from imposing new tariffs (Fortune 2018).

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Walking back the scheduled tariff increases brought consumers as a political constituency to the forefront. Trade policy has predictable effects on voters as consumers: it shapes the variety and the prices of the products that voters purchase on a daily basis. In contrast, the employment effects of trade policy can be quite complex and, from the perspective of individual voters, difficult to predict.² Trade policy shapes the economic fortunes of the firm, the industry, and the geographic area in which voters are employed; the consequences of trade policy choices can be specific to a person's occupation within a firm and the firm's position within larger production networks.³

That tariffs make consumers worse off has long provided a powerful narrative in political debates and the academic literature. In refuting mercantilist arguments, Adam Smith observed that by imposing trade barriers, "the interest of the home consumer is evidently sacrificed to that of the producer" (Smith 1827, p. 274). And US politics has always recognized that tariffs act as taxes on consumers, reaching back to even before the US gained independence. The Boston Tea Party, after all, was a response to tariffs on tea imports. Arguments about the consequences of tariffs for consumers have since pervaded debates in the US Congress. For example, in a hearing over a tariff reform in the 1870s, a Representative remarked that "the duty [on salt] is unnecessarily burdensome to the consumer and ought not to remain" (U.S. Congress 1870, p. 197). In 2019, in debates over US trade policy, Senator Ron Johnson emphasized that "tariffs are a tax on American consumers."⁴ Similar sentiments were shared by members of the House of Representative and the Senate from both political parties.

The sharp dividing line between consumers and producers is also at the core of academic work on the political cleavages over trade policy. In addition to offering an analytical framework for the distributional conflicts over trade policy, it promises lessons for our understanding of democratic accountability and the political influence of interest groups: it allows interpreting trade openness as the result of a government's concern with voter interests. Democracy and free trade, in this interpretation, go hand in hand (Gerschenkron 1943; Mansfield, Milner and Rosendorff 2000; Milner and Kubota 2005; Kono 2006). Analogous arguments apply to research on institutions within democracies (Rogowski 1987;

² Naoi and Kume (2015) emphasize the duality between employment and consumption effects, and demonstrate that priming voters to the consumption effects or the employment effects has different effects on their attitudes toward trade.

³ For a discussion of the labor market effects, see, for example, Chase (2008a), Dancygier and Walter (2015), Helpman et al. (2017), Owen and Johnston (2017), and Feenstra, Ma and Xu (2019).

⁴ <https://www.ronjohnson.senate.gov/public/index.cfm/2019/6/johnson-discusses-trade-border-crisis-on-fox-news-sunday>, last accessed November 2, 2019.

Nielson 2003; Rickard 2015). From this perspective, trade openness reflects constitutional rules that reduce the political power of protectionist producers; trade openness becomes indicative of limited special interest politics. Understanding both the consequences of trade policy for consumers and the role of consumers in explaining trade policy therefore may offer lessons for our understanding of politics beyond trade.

This essay first documents current and historical US trade patterns and reviews the consequences of trade policies for consumers. About 40% of US imports are consumption goods. Consumers benefit from free trade. Lower-income consumers, who spend a larger share of their income on tradeable goods (as opposed to services), benefit especially. Conversely, consumers bear the brunt of some of the tariff increases over the past years. Additionally, the policy uncertainty created by the current administration may have a dampening effect on trade in the long run, compounding the costs of temporary trade policy choices.

The essay then turns to US trade policy: do US tariffs reflect the interests of consumers? In 2019, the US tariff code listed 11,109 products on which distinct tariff rates can be assessed.⁵ Tariffs on some of these products have a direct effect on consumer prices and aggregate price levels, others affect consumers only indirectly. Thus, and holding constant other motivations for trade policy choices, the political incentives to lower tariff levels based on consumer interests are larger for some products than for others. Following the empirical approach of Betz and Pond (2019), using data on consumption shares of individual products from the US Consumer Price Index, I document that US trade policy is systematically biased against consumer interests: consumption products receive higher tariffs than other products, and the more a product is consumed by households the higher is its tariff rate.

That consumers leave a limited footprint on tariff rates is perhaps not too surprising. Consumers face informational and collective action disadvantages, and thus rarely organize and lobby on trade policy; trade policy has for a long

⁵ These products are identified by 8-digit codes. Special classifications and temporary classifications (in particular, those included in Chapter 99), are not included in this number. With those included, the US tariff code comprises 14,646 products. Note that the US tariff code identifies a total of 19,032 individual products using 10-digit codes, but uses this more granular classification only for statistical purposes, not for implementing and assessing tariffs (Item Count, available at https://www.usitc.gov/tariff_affairs/documents/2019_hts_item_count.pdf). The 10-digit codes are in part a response to demands by industry groups to obtain better data on market conditions, and have frustrated both the government agencies tasked with collecting these data and importers that have to correctly classify their products (Lucentini 2000). Goldstein and Gulotty (2014) discuss the politics underlying the creation of such complex tariff schedules; see Betz (2019) for some of the challenges in administering them.

time been of low salience in US elections, and voters have been, perhaps deliberately, left out of trade politics; and consumer concerns may be driven out by other considerations, such as outgroup anxieties, employment prospects, or the framing of trade policy in the context of national security and sovereignty. Examples of consumer influence, such as the delay in tariffs on Chinese imports, are the exception, not the rule.

But in other ways, the relative absence of consumer interests is surprising. A simple collective action argument – free trade provides dispersed benefits for consumers, but concentrated costs for import-competing firms – does not explain the pattern. The benefits of free trade are even more dispersed, and less obvious to consumers, for products with lower consumption shares. Most importantly, the narrative that open trade is a response to consumer interests is inconsistent with this finding. Consumers do benefit from open trade; but government concern with consumer interests does not appear to be the driving force in the opening of trade. Other political forces must account for that.

One explanation is that free trade, just like protectionism, is driven by special interest politics and rent-seeking governments. That pro-trade firms, which tend to be among the largest and most visible firms, enjoy outsized political influence has been a long-standing concern of globalization critics (for a review, see Bhagwati 2004). These firms enjoy concentrated gains from trade openness on individual products, both as exporters of those products and as users of imported parts for the production process (Bernard and Jensen 1999, 2004; Bernard et al. 2007, 2018; Baccini, Pinto and Weymouth 2017), which allows for effective lobbying for trade openness (Milner 1988; Plouffe 2015; Madeira 2016; Betz 2017; Kim 2017; Kim and Osgood 2019). If special interest politics explains the opening of trade, however, it turns on its head the interpretation of trade openness as an indication of the absence of special interest politics (Betz 2017; Betz and Pond 2019). Explaining trade openness no longer requires consumer interests, let alone voter interests more broadly, as the driving force.

Moreover, the finding suggests a new political divide between consumers and pro-trade firms. While pro-trade firms may be the guardians of free trade, they are not the guardians of voter interests – they pursue open trade on products, with trading partners, and at times that may not align with what we would expect from consumers. The influence of pro-trade firms may also extend to policies on which consumer preferences are less clear-cut: behind-the-border measures such as environmental, labor, and health regulations. Privileging pro-trade firms in the political process helped usher in a period of trade liberalization since World War II. But the specific form this liberalization has taken ensured that the benefits of free trade accrue disproportionately to a relatively elite set of firms, not to consumers.

Consumers and International Trade

That international trade and the lowering of trade barriers have the potential of benefiting societies overall has long been a cornerstone in economics and political science. Free trade allows for specialization through comparative advantage, raises the productivity of economies through reallocations across firms and across industries, allows for the fragmentation of production processes across countries, and reduces possibilities for rent-seeking and corruption. When trade barriers are lowered in the context of reciprocal trade agreements, free trade also helps domestic firms gain market access abroad, which may have both economic and national security benefits.

Of course, not everyone gains from the lowering of trade barriers. The losses from free trade are the flipside of the very gains that free trade promises: unproductive firms and industries lose market share and go out of business; and the globalization of production leads to the offshoring of individual jobs and production processes that can be more efficiently completed elsewhere. The concentrated costs of readjustment following trade liberalization, in particular, can pose a substantial burden on individual communities (Autor, Dorn and Hanson 2016; Jensen, Quinn and Weymouth 2017; Owen and Johnston 2017; Dean 2018). And just like some individuals support free trade for non-material reasons (such as an opposition to government interference in the free market more generally), individuals may oppose free trade for non-material reasons, including nationalism, isolationism, ethnocentrism, and in-group favoritism (Mansfield and Mutz 2009, 2013; Pandya and Venkatesan 2016; Guisinger 2017; Mutz and Kim 2017; Mansfield, Mutz and Brackbill 2019). Moreover, as taxes levied at the border, tariffs can be framed relatively easily as issues of national security and, ultimately, sovereignty, which may appeal to voters for non-material reasons.

These distributional conflicts over trade policy notwithstanding, most debates over international trade share a common understanding: Tariffs increase prices and thus distort markets, while free trade lowers prices. This benefits one constituency in particular. Through international trade, consumers gain access to products at lower prices, at different qualities, and in more varieties than what they would have had available in the domestic market alone.⁶ For example, the

⁶ This effect is not necessarily at work for all consumers in all countries if trade liberalization is reciprocal: if other countries lower their trade barriers, increased export demand for some of a country's products (where the country has a revealed comparative advantage) can drive up the prices of those products. Porto (2006) provides an example of that effect, noting the price effects of Mercosur for the poorest households in Argentina.

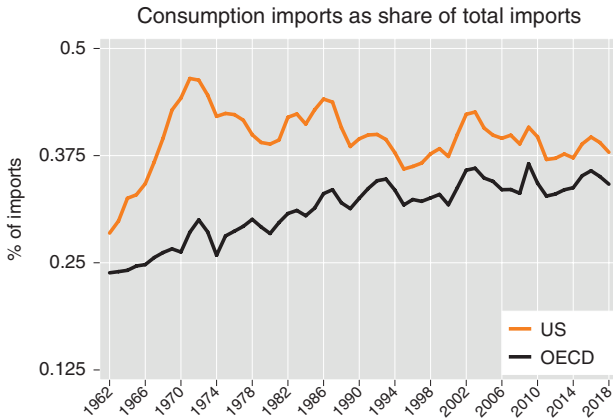


Figure 1: Imports Classified as Consumption Products as a Share of Total Imports, using BEC Classifications, for the US (Orange) and for High-Income OECD Countries (Grey). Data from Comtrade/World Integrated Trade Solution. Fuels and Lubricants Excluded.

office of the U.S. Trade Representative summarizes the benefits of free trade succinctly on its website: Trade “keeps our economy open, dynamic, and competitive,” thus “helping Americans provide for their families with affordable goods and services.”⁷

US Trade and Consumer Products

The composition of US trade flows reflects the close relationship between international trade and consumption. Using the Broad Economic Categories (BEC) classification, traded products can be divided into products for end-point consumption and in products that serve as capital goods or intermediate inputs in the production process.⁸ Figure 1 displays the share of US imports classified as consumption products (in orange). For comparison, it also includes the share of imports classified as consumption products for high-income OECD countries (in grey).⁹

Figure 1 indicates a remarkable stability in the composition of US trade: the share of consumption imports in total imports fluctuates from year to year and

⁷ Office of the U.S. Trade Representative, <https://ustr.gov/about-us/benefits-trade>.

⁸ I treat passenger motor vehicles as consumer goods and exclude fuels and lubricants. Similar results obtain with those included.

⁹ Some of the graphs were created using code from Bischof (2015).

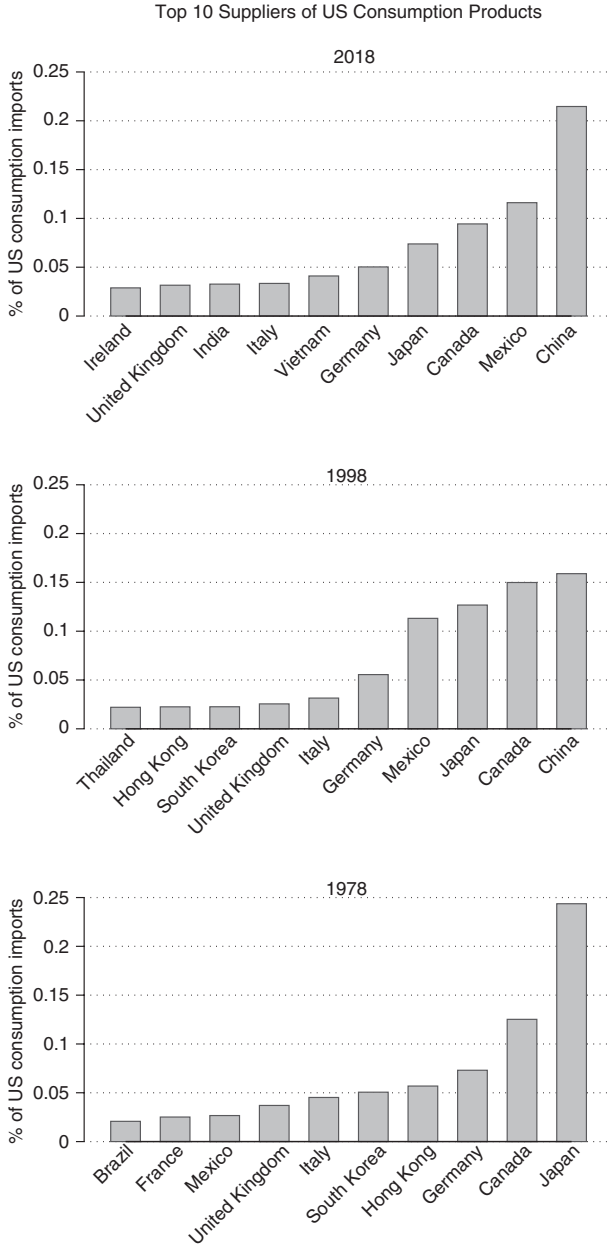


Figure 2: Top 10 Suppliers for US Imports of Consumption Products in 2018, 1998, and 1978, and the Share of US Consumption Imports from each of the Top 10 Suppliers.

ranges from 35% to 44%, but it has no discernible long-term trend. This contrasts with the peer group of high-income OECD countries. For these, the share of consumption goods in total imports has steadily increased since the 1960s, but remained lower than for the US throughout the entire time period.¹⁰

The reliance on imported consumption goods is also evident in absolute numbers. In 2018, the US imported food and beverages valued at almost US\$100 billion, and over US\$300 billion of miscellaneous manufactured consumer goods such as apparel, pharmaceuticals, and consumer electronics. In total, the US imported over US\$600 billion worth of consumption products in 2018. On average, for each of the 127 million households in the US, this implies that imports accounted for about US\$4500 of yearly purchases.

To put this number in perspective, in 2018, annual household spending – after subtracting housing, healthcare costs, insurance payments, and education costs – was US\$25,574 (Bureau of Labor Statistics 2019). Imported consumption goods thus accounted for nearly one fifth of average household spending in 2018. Clearly, international trade is relevant to, and products available through international trade are purchased by, US consumers.

Figure 1 does, however, mask two important changes over time: the composition of imported products within the broad category of consumption products, and the countries from which these products are imported. One noticeable change in the composition of US consumption imports is the increase in the share of pharmaceuticals and personal care products, from just over 1% in 1995 to over 10% in 2018. This period coincides with a slowdown in the rate of inflation in US drug prices.¹¹ Some of the growth in the import share of pharmaceuticals came at the relative expense of apparel, which from a peak of over 20% of imported consumption products dropped to less than 15%.

The source countries of US consumption products have shifted dramatically over the last few decades. Figure 2 displays the top 10 source countries of consumption products with their respective share in US consumption imports. The bottom panel reports the top 10 countries for 1978, the middle panel for 1998, and the top panel for 2018. Figure 2 identifies the increasing importance of China and Mexico as sources of US consumption products. By contrast, Japan, Germany, Hong Kong, and South Korea have successively dropped in this ranking. In 1978,

¹⁰ The pattern flips for exports of consumption products, where the US is lagging behind high-income OECD countries.

¹¹ Like several other countries, the US levies no tariffs on pharmaceutical products and many chemicals used in the production of pharmaceuticals as part of the WTO Pharmaceutical Agreement.

China was just outside the group of top 10 suppliers of consumption products. By 1998, China had become the main source of consumption products. Currently, China occupies a similarly dominant position as supplier of consumption products as Japan did in the 1970s, with nearly twice the market share of the second-ranked country.

Figure 3 displays the share of US consumption products supplied by China, Mexico, Canada, Japan, and Germany – the top 5 suppliers of US consumption products in 2018 – between 1962 and 2018. The figure identifies the sharp increase in China’s share of US consumption imports throughout the 1990s and especially after 2000 (when the US Congress extended “permanent normal trade relations” to China) and 2001 (when China formally joined the World Trade Organization). With these events, US tariffs on imports from China became more predictable, and sudden policy changes were perceived as less likely. In turn, this increased predictability in tariff rates allowed US firms to increase their reliance on imports from China through outsourcing and global sourcing from third parties (Pierce and Schott 2016; Handley and Limão 2017; Quinn and Liu 2019).

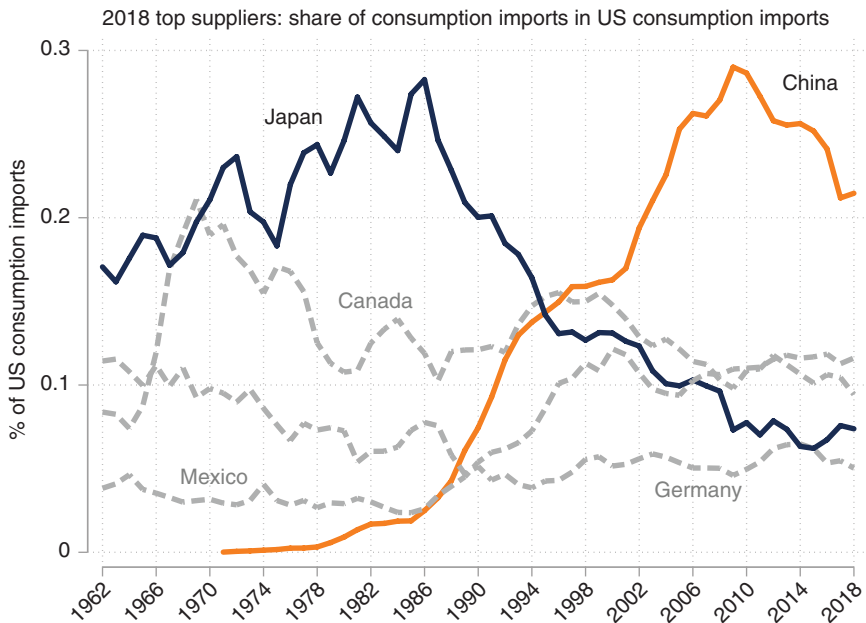


Figure 3: Top 5 Suppliers of US Consumption Imports in 2018: Share of Consumption Imports from each Country in Total US Consumption Imports, 1962–2018. The Figure Emphasizes the Increase in Consumption Imports from China and the Concurrent Decline in Consumption Imports from Japan.

Figure 4 documents this pattern, and the shift in the major suppliers of US consumption products, over the last 50 years for a larger set of countries. The figure displays the rank of each country among the 50 largest suppliers of US consumption products. Darker tiles correspond to a higher rank, and thus a larger share in US consumption imports. The figure points to the steady climb of China as a source country for US consumption imports. But several countries also experienced a noticeable increase in US market shares. Vietnam, Thailand, Indonesia,

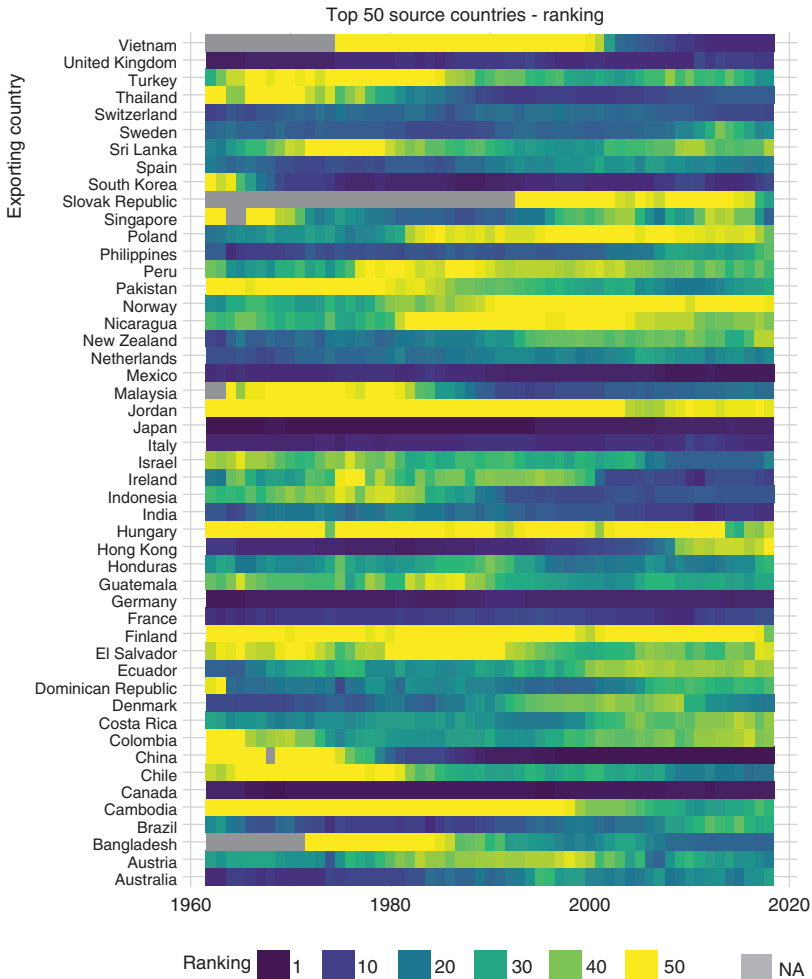


Figure 4: Top 50 Suppliers of US Consumption Imports in 2018: Position in Country Ranking of US Consumption Imports, 1962–2018. Darker Tiles Correspond to more Important Suppliers of Consumption Products.

and Malaysia stand out among those. In contrast, Brazil, Ecuador, and Costa Rica became successively less important as source countries of US consumption imports – reflecting both changes in overall trade flows and in the composition of exports from these countries.

Yet, while China is now the dominant supplier of US consumption products, the share of consumption products in China’s exports to the US has been steadily decreasing. After a peak in the mid-1990s, when over 80% of US imports from China were consumption products, the share dropped to about 40% in recent years. The growth in China’s exports of consumption products has been outpaced by the growth in China’s exports overall. The share of consumption products among China’s exports to the US is now on par with that of high-income countries such as Canada, Germany, and Japan, as is evident from Figure 5.

US consumers may perceive products “made in China” as ubiquitous in the market place, which in turn may shape the average voter’s perception of China’s role in US trade. For example, 70–80% of Wal-Mart’s suppliers – which in turn accounts for about 10% of the US retail market – are located in China (Schell 2011). Chinese manufacturers produce 42% of apparel and 69% of footwear sold

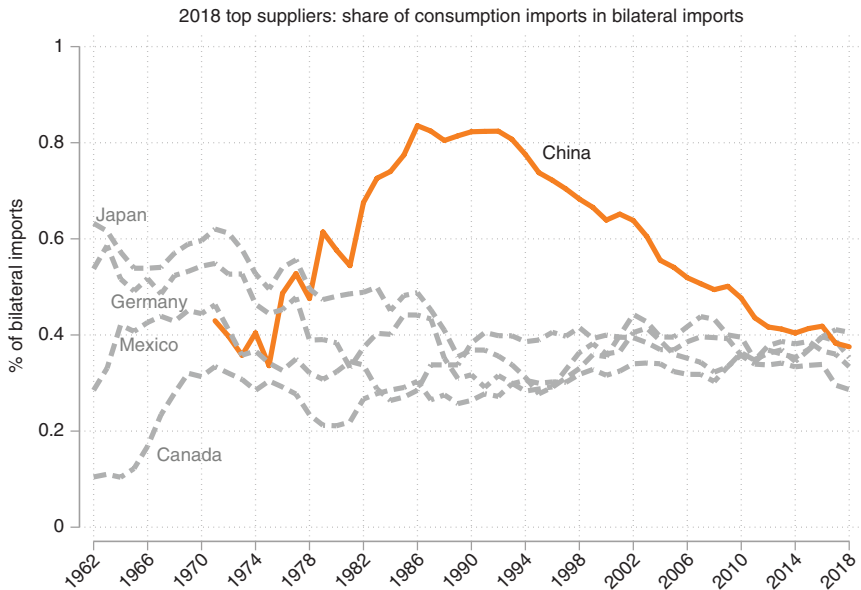


Figure 5: 2018 Top 5 Suppliers of US Consumption Imports: Share of Consumption Imports in Total Imports from each Country, 1962–2018. The Figure Emphasizes the Change in the Share of Consumption Products in Imports from China, which now is on Par with the Shares of High-Income OECD Countries.

in the US market (Calvert 2019). Similarly, across all US retailers, more than 80% of imported dog leashes are produced by Chinese manufacturers, as are more than 85% of imported Christmas tree lights (Meyersohn 2018). At the same time, the manufacturing and export of consumer products is no longer characteristic of China's trade profile. Chinese manufacturers are now much more integrated into US supply chains, providing intermediate goods specific to individual production processes, which are used for final assembly in the US. This implies that even successful "Buy American" campaigns may have limited impact on trade flows: products that are assembled in the US, but rely on imported parts, can still be marketed as "made" in the US. Gaining information on the origins of the parts of such products is difficult for consumers.

The Costs of Trade Barriers to Consumers

Measures to restrict trade have a significant financial impact on households. Compared to a scenario with no imports at all, recent work estimates that the consumption effects alone amount to a 37% increase in real income for the median US consumer, with disproportionate gains falling on poorer consumers. For the bottom ten percent of the income distribution, trade led to a 69% increase in purchasing power, compared to a 4% increase for the top ten percent of the income distribution (Fajgelbaum and Khandelwal 2016, p. 1152).

Additionally, we know that consumers prefer access to different varieties of the same product. Where governments have tried to restrict access to imported products, smuggling is often the consequence (Javorcik and Narciso 2008), and the lowering of trade barriers changes not necessarily total consumption, but the composition of consumption across product varieties (Bursztyn and Cantone 2016). One estimate suggests that international trade has provided consumers with a threefold increase in product varieties. Consumers value the increase in varieties available in 2011, relative to 1972, at 2.6% of their income (Broda and Weinstein 2006, p. 542).

Compared to the substantial gains of trade relative to closing off trade entirely, the gains from removing any remaining tariff barriers are relatively small for the US – especially when setting aside for a moment the trade policies of the current administration. In 2014, the US levied no tariffs on 37% of the 10,514 products listed in its tariff schedule at the time. By value, about 70% of all imports entered without tariffs – even though some products, and imports from some partners, were burdened with very high tariffs, such as sour cream with a tariff rate of 177% (Irwin 2015, p. 80). Given the few remaining trade barriers, in 2017 the US International Trade Commission estimated that removing tariffs would

result in consumption gains for households of between US\$54 and US\$288 per year, depending on the household's income and expenditure level (United States International Trade Commission 2017).

The costs of existing tariffs are often concentrated on individual products. Two examples are tariffs on tires and washing machines. In September 2009, tires imported from China became subject to higher tariff rates under US President Barack Obama. The policy helped retain jobs in the tire manufacturing industry in the US (Irwin 2015, p. 82). However, consumers paid, with an estimated cost of about US\$900,000 per job saved (Hufbauer and Lowry 2012). In January 2018, US President Donald J. Trump levied new tariffs on washing machines, which increased the price of washing machines by about 12 percent. The shift toward washing machines produced in the US created about 1800 jobs, at a cost of US\$815,000 per job (Hortacsu, Tintelnot and Flaaen 2019).

The trade policies since January 2018 continued the targeting of tariffs to individual countries and to individual products. The initial tariff increases were focused on intermediate goods used predominantly by US producers, with only indirect effects on consumers. One interpretation of this pattern is that the administration feared the political fallout from higher consumer prices. Yet, this pattern is also consistent with tariffs aimed at punishing off-shoring behavior by MNCs, trying to induce re-shoring: the relocation of parts of the production process to the US, reversing a trend over the last few decades. What is consistent with this interpretation is that offshoring appears to have had a larger effect on US elections than "standard" import competition, providing a political motive for these tariffs (Quinn and Liu 2019).

The later rounds of tariff increases increasingly targeted consumer products. The trade policies implemented between January 2018 and July 2019 reduced real household income by about US\$580 per year (Congressional Budget Office 2019). The next set of tariffs led to an inflation in these cost estimates. With the tariff increases in September 2019, a JP Morgan study estimated costs to consumers of about US\$1000 per year, and scheduled but not yet implemented tariff increases would drive up that cost to US\$1500 per year – offsetting any of the income gains from the 2017 Tax Cuts and Jobs Act (Telford 2019).

Much of the costs of tariffs has been passed on to consumers, contrary to the administration's narrative. From June 2018 to June 2019, the US government collected over US\$60 billion in tariff revenue, compared to US\$38 billion in the same time period a year prior. The newly imposed tariffs raised taxes of over US\$20 billion (Zumbrun 2019). Little of that additional tax was borne by foreign exporting firms. Instead, virtually all of the increase in tariffs has been paid by US importing firms and, while retailers and individual importers with sufficient market power and profit margins may have absorbed some

of these additional costs, consumers (Amiti, Redding and Weinstein 2018; Cavallo et al. 2019).

The focus on imposed trade barriers ignores another cost of trade policy reforms: the increase in uncertainty over future trade policies. Because much of international trade requires up-front investments, such as the development of supply and distribution networks, uncertainty over future policy dampens trade significantly. For example, when China joined the World Trade Organization in 2001, the reduced uncertainty over US trade policy toward China created gains for US consumers equivalent to a permanent decrease in tariff rates of 13 percentage points (Handley and Limão 2017). Mansfield and Reinhardt (2008) and Pelc (2013), likewise, demonstrate that the reduced uncertainty implied by membership in multilateral trade agreements has sizeable effects on trade flows. This suggests that some of President Trump's actions beyond trade policy – and in particular the aversion to international legal commitments and the willingness to defy existing norms and expectations – carry potentially large costs that endure well beyond temporary trade policy changes.

Consumers and US Trade Policy

This section examines US trade policy over the past decades from the perspective of consumers: Does trade policy reflect consumer interests – does the pattern of tariff rates across individual products correspond to the relevance of these products for household purchases? Like most other countries, the US has continuously reduced its trade barriers since World War II. Some accounts credit a consideration of consumer interests, and the price effects of tariffs on consumers, for this reduction in trade barriers. And in some ways, the US is a place where we might expect consumer interests to be reflected in trade policy: as a “Consumer Society,” access to affordable products has long been important to voters and has driven large parts of the US economy (Glickman 1999) – easy access to consumer products was, not least, a prime contrast to the shortages experienced in the Soviet Union; price levels, which are directly affected by tariff rates, are an important determinant of US election outcomes (Hibbs 1977); and while the political system, with relatively small electoral districts, permissive rules for campaign contributions, and frequent elections might increase the influence of special interest groups in politics, the insulation of trade policy from special interests through fast-track authority and delegation to the executive in principle would allow trade policy to reflect the interests of dispersed groups of voters (Bailey, Goldstein and Weingast 1997; Hiscox 1999), of which consumers are perhaps the prime example.

To assess the relevance of consumer interests for US trade policy, I construct two measures. Both measures capture to what extent individual products are purchased by households directly, and thus reflect to what extent consumer interests are relevant for each product. If consumer interests are accounting for trade liberalization in the US, we should observe lower tariffs on these consumer products than on other products: effectively, for these products policy-makers have an additional incentive to engage in trade liberalization.¹²

The first measure relies on the same categorization of traded products used in the previous section, based on the classification of products into consumption products and all other products by Broad Economic Categories (BEC). I match that data to tariff and trade data at the four-digit level of the Harmonised System, obtained from the Trade Analysis Information System (TRAINS) and UN COMTRADE, available through the World Integrated Trade Solution (WITS) website.

The second measure follows the approach of Betz and Pond (2019), who use data from Consumer Price Indices (CPI) to identify the relative importance of individual products to consumers. This approach exploits that the CPI captures the relationship between prices on individual products and aggregate price levels, which prominent theories of voter behavior identify as salient for voter decisions. Additionally, price levels play a key role in theories of trade politics (Mansfield, Milner and Rosendorff 2000).

The CPI provides the basis for calculating the inflation rate. It reflects the expenses of an average (urban) household in the US. The calculation of inflation rates tracks the evolution of these expenses over time. For capturing consumer interests, the CPI has another advantage: it identifies the products that a typical household purchases as well as the share of those products in a household's overall expenses. It thus provides, for a representative household, the expenses across individual product categories. Moreover, the expenditure shares for individual products in the consumer price index capture to what extent, for a given composition of consumption, a price increase on individual products affects overall price levels. This provides a relatively direct measure of the importance of the prices of individual products for overall price levels and, thus, consumers. Even if voters only pay attention to headline inflation and aggregate price levels, the consumption shares across products from consumer price indices capture the sensitivity of price levels to trade policy choices across products.

¹² This approach assumes that higher tariffs would, at least, eventually, feed into higher consumer prices. I sidestep the question of whether that is the case and to what extent such effects may depend on, for example, market concentration and market power.

Table 1: Consumer Interests and US Tariff Rates – Results I.

	BEC Dummy		CPI Dummy		CPI Continuous	
	(1)	(2)	(3)	(4)	(5)	(6)
BEC Dummy	0.68 (0.096)	0.77 (0.105)				
CPI Dummy			0.76 (0.103)	0.85 (0.112)		
CPI Continuous					0.53 (0.232)	0.48 (0.237)
Log Imports		-0.064 (0.024)		-0.070 (0.024)		-0.026 (0.021)
Elasticity		0.21 (0.043)		0.20 (0.042)		0.20 (0.045)
Constant	1.33 (0.050)	1.67 (0.242)	1.34 (0.044)	1.77 (0.230)	1.54 (0.032)	1.49 (0.230)
Year FE	Yes	Yes	Yes	Yes	Yes	Yes
Number Obs.	28,960	26,437	29,352	26,751	29,352	26,751

Coefficient estimates and standard errors. Standard errors clustered by product. Dependent variable: US applied most-favored nation tariff rates, four digits, Harmonised System.

I obtain data on the consumption shares of individual products in 2015 from the Bureau of Labor Statistics. I match these to applied most-favored nation tariff data from the Harmonised System at the four-digit level, from 1995 through 2018 (tariff data from WITS).¹³ From there, I code a variable that identifies whether a product is included in the consumption basket of households as well as a variable that captures a product's share in the consumption basket. The advantage over the BEC classification is that it is more fine-grained and specific to US consumer behavior; the disadvantage is that the matches are sometimes ambiguous and not one-to-one.

Table 1 presents the association between consumer interests and tariff rates from a series of quasi-maximum likelihood Poisson regression models (Silva and Tenreyro 2006). The table lists coefficient estimates and, in parentheses, standard errors are clustered by products to account for arbitrary non-independence. Positive coefficient estimates indicate that consumption products have higher tariff rates than other products. The size of the coefficient estimates indicates the strength of that relationship, and the standard error indicates the uncertainty about the estimates.

¹³ Where products match several tariff categories, I split the consumption share evenly across those.

For each measure of consumer interests, Table 1 presents one model with no control variables (other than year fixed effects to account for time trends common to all products), and one model with control variables for log imports (from WITS) and the elasticity of substitution for each product (from Broda and Weinstein 2006). Both of these variables play an important role in theoretical models of trade policy (e.g. Grossman and Helpman 1994). The year fixed effects capture all influences that are identical across products and that may vary by year, such as US GDP, GDP growth, and geo-political events. Including these variables allows isolating the effects of the classification as a consumption product from these other effects, which may account for trade policy as well. The first set of columns presents the association between tariff rates and consumption products based on the BEC classification; the second set of columns uses the dummy variable based on the BLS data; and the third set of columns uses the continuous measure based on the BLS data.

The results indicate that products relevant to consumer, and products most relevant to consumers, receive higher tariffs than other products. The estimates in all six models are statistically significant at the 5% level: it is unlikely to obtain coefficient estimates this large by chance if there was no relationship between a product's classification as consumption product and its tariff rate. The size of these effects is substantial. For example, for the BEC identifier of consumption products, based on Model 2 consumption products have tariff rates that are on average 3.2 percentage points higher than non-consumption products. Given the relatively low average tariff rate in the US, this difference is substantial and amounts to an increase of about 116% (that is, more than a doubling in the tariff rate). The size of the effects is larger for the dummy variable based on the consumer price index data in Model 4: consumption products have tariff rates that are on average 3.8 percentage points, or 134% higher. Moreover, the last two columns show that these effects are largest for products that make up a larger share of the consumption basket of households: high tariff rates are especially concentrated on those products most important to consumers.

Table 2 presents a number of additional results. The first three columns remove food products from the analysis. Agricultural products are protected by sometimes exceptionally powerful political constituencies (Davis 2005; Jensen 2007), which may account for the relationship between consumption products and tariff rates. Table 2 shows that this is not the case: the positive relationship between consumption products and tariff rates remains after removing food products from the data. In only one case, in column 3, is the relationship no longer statistically significant at the 5% level; it remains significant, however, at the 10% level.

Table 2: Consumer Interests and US Tariff Rates – Results II.

	Drop Food Products			Tariff Revenue		
	(1)	(2)	(3)	(4)	(5)	(6)
BEC Dummy	0.74 (0.133)			1.19 (0.323)		
CPI Dummy		0.84 (0.157)			1.64 (0.296)	
CPI Continuous			0.43 (0.240)			1.20 (0.132)
Log Imports	-0.055 (0.026)	-0.066 (0.027)	-0.021 (0.023)			
Elasticity	0.20 (0.052)	0.19 (0.050)	0.18 (0.052)	0.62 (0.124)	0.62 (0.137)	0.52 (0.114)
Constant	1.61 (0.255)	1.75 (0.249)	1.44 (0.238)	1.48 (0.199)	1.27 (0.335)	2.04 (0.226)
Year FE	Yes	Yes	Yes	Yes	Yes	Yes
Number Obs.	22,763	23,064	23,064	26,437	26,751	26,751

Coefficient estimates and standard errors. Standard errors clustered by product. Dependent variable: US applied most-favored nation tariff rates, four digits, Harmonised System (columns 1–3); tariff revenue, four-digits, Harmonised System (columns 4–6).

The second set of columns uses total tariff revenue instead of tariff rates as the dependent variable. The results show that consumption products account for a significantly larger share of tariff revenue than other products. On average, each consumption product creates about US\$75 million in tariff revenue per year, compared to US\$22 million for other products. Differences in tariff rates translate into substantial monetary differences. Products predominantly purchased by households, as opposed to intermediate products imported by firms for the production process, are imported in sufficiently large amounts for tariffs to have a significant impact. Put differently, the tax burden imposed by the structure of US tariff rates across products places a disproportionate burden on consumers relative to other users of imported products.

What does this say about (Trade) Policy and Politics?

While voters as consumers do appear to pay significant attention to overall price levels (Hibbs 1977; Tufte 1978; Campbell 1985), the connection between price

levels and trade policy is not reflected in trade policy. Instead, trade policy contributes to systematically higher prices for consumers. A number of factors might explain why tariffs are higher on consumption products than other products. Most obviously, consumers are a dispersed group, and perhaps the prime example of such a group. Consumption is not concentrated within specific groups of voters, nor is it concentrated geographically. This makes it difficult for voters to organize around tariff rates.

Additionally, the US has now enjoyed a relatively long period of macroeconomic stability, with modest – and, increasingly, surprisingly modest – levels of inflation. The relatively low levels of tariff rates together with the globalization of value chains (which has decoupled local labor markets from price levels) may have contributed to this development at least in part (Auer, Borio and Filardo 2017), together with successful macroeconomic management on the national and international level. As Bearce and Moya (2017) point out, one consequence is that consumers no longer acknowledge and appreciate the benefits of trade. In a sense, the success of international trade in creating a stable macroeconomic environment and access to a wide variety of affordable products defeated itself, leading voters to take the status quo for granted and to underappreciate the benefits of stable prices. With the stabilization of price levels, support for free trade based on consumer gains has waned over the past decades (Bearce and Moya 2017).

Developments in the structure of global markets may have further contributed to a decline in awareness of the gains from trade. Modern production processes within global value chains not only allow for a separation between the geographic points of consumption and production. The “second unbundling” also separates the steps of the production process geographically (Baldwin 2016). This fragmentation of production processes across countries makes it more difficult for voters as consumers to identify the benefits of trade. A household fan or a bicycle sold at Walmart might be labeled as “made in America,” even if most or all of its components are imported from abroad.

This implies that the collective action difficulties for consumers are reinforced by informational problems (see, e.g. Guisinger 2009; Rho and Tomz 2017; Schaffer and Spilker 2019). Voters may thus turn to evaluations of trade based on non-material metrics (Mansfield and Mutz 2013; Kerner and Sumner 2019). These informational shortcomings, in turn, might explain why policymakers do not even implicitly take consumer interests, through the link to aggregate price levels, into account.

There are some indications that the most recent tariff increases under President Trump have started to raise an awareness of the benefits of trade among consumers. For example, in August 2019, in the University of Michigan’s Surveys

of Consumers, US consumer confidence fell by 8.7%. About one third of respondents pointed to tariff rates as the cause for the decline in consumer confidence – and these references were not prompted, but spontaneously mentioned. Those who identified tariffs as a concern also expected higher inflation rates, higher unemployment rates, and smaller gains in household income for the next year (Curtin 2019). While the outlook of consumers strengthened since, these numbers do suggest that the trade policies of the current administration have placed the connection between tariffs and consumer prices back on the political agenda. This effect is consistent with work on economic voting that points to the political salience of unexpected changes to price levels (Palmer and Whitten 1999). And it resonates with findings that priming voters to think of consumer purchases can substantially increase support for free trade, even for those voters that are most likely to experience negative employment effects – and a recognition of these consumer effects, in turn, might restrain the backlash to globalization and the movements away from open markets (Naoi and Kume 2015).

Firms and industry associations that support free trade also increasingly point to the consumer benefits of trade to justify their opposition to tariff increases. For example, in August 2019, a coalition of industry groups published a letter asking for a delay in scheduled tariff increases, noting that “Tariffs are taxes that cost American jobs and hurt consumers, creating a problem for the entire US economy” (Baker 2019). Similar statements have been issued by a number of firms and business groups. Even if the ultimate concern of these firms is with their bottom line, the reference to the consumer benefits of free trade suggests that those issues are regaining traction with both the public and policy-makers.

The contrast with, for example, the politics surrounding the North American Free Trade Agreement (NAFTA) in the 1990s is striking. When signing NAFTA in 1993, President Clinton pointed to the creation of a large consumer base for US companies in Mexico, and the associated benefits for US exports, the US economy as a whole, and US national security as key benefits of NAFTA – with a whole paragraph in the written speech devoted to the importance of consumers in Mexico as a market for US firms. Any reference to the benefits for US consumers was notably absent (Clinton 1993).¹⁴

One implication is that trade liberalization in the US is largely driven by the political activities of firms and interest groups in support of free trade. The gains from trade openness are concentrated on a relatively small set of firms, both when looking at the gains from exporting and the gains from the ability to reorganize

¹⁴ Relatedly, McKibben and Taylor (2019) note that elite discussions of trade might be geared toward the effects on production and labor markets, not so much toward the effects for consumers.

production globally through offshoring and integration into value chains. In the US, “In 2000, 2.6 percent of firms export, 1.7 percent of firms import, and 0.9 percent of firms both import and export. Fewer than a quarter of exporters or importers are multinationals” (Bernard, Jensen and Schott 2005, p. 9). These percentages still amount to a substantial number of firms that engage in international trade – around 300,000 US firms are exporters, and about 400,000 US firms engage in international trade (U.S. Census Bureau 2018). Yet, even among these already relatively elite firms, the gains from trade are skewed toward the largest individual firms (Bernard et al. 2007). Ninety two percent of exports come from firms that export five or more products to five or more countries (Bernard et al. 2007, p. 118).

Figure 6 graphs the share of total US exports accounted for by the largest US exporting firms (data from U.S. Census Bureau 2018). The graph displays data for only the top percentile of all exporting firms, which account for over 75% of all US exports. The four largest exporting firms account for 8% of US exports; the 20 largest exporting firms account for over 20% of all US exports. Over half of all US exports fall onto just 250 firms. This corresponds to less than 0.2% of all *exporting* firms, which are already an elite set of all firms. The concentration of exporting activity is even more pronounced for manufacturing firms, where the largest 100

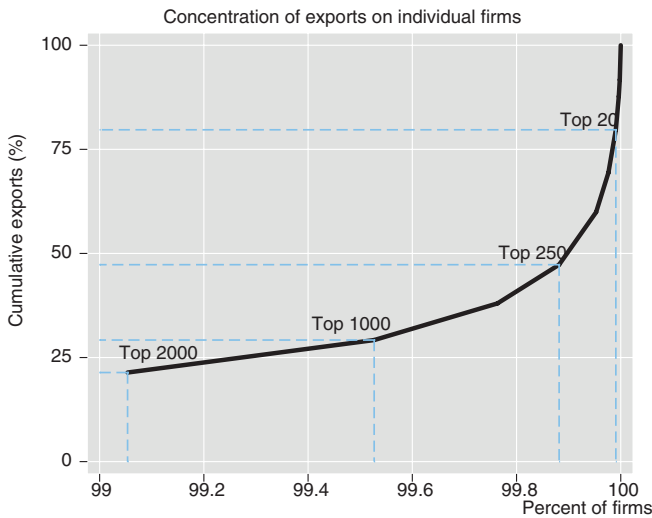


Figure 6: Shares of US Exports among US Exporting Firms in 2016. Only shown are the Largest 1% of all Exporting Firms. Over 75% of all US Exports come from the Largest 1% of Exporting Firms, which Corresponds to less than 2000 Firms. The 20 Largest Firms Account for Over 20% of all US Exports.

exporting firms account for over half of US exports. Similar numbers apply to importing firms.

These concentrated gains have several implications for trade politics. Most importantly, the concentrated gains from trade openness imply that firms can effectively lobby for trade liberalization, either on imports or, in the context of reciprocal trade agreements, in exchange for trade liberalization abroad – contrasting with the long-standing assumption that collective action advantages benefit protectionist firms that lobby for higher tariffs. Based on collective action considerations, pro-trade firms should have an easier time than protectionist firms to organize politically and to lobby for trade liberalization (Betz 2017; Kim 2017), reversing the collective action logic underpinning our common understanding of trade politics. With pro-trade firms driving trade liberalization, explaining trade openness no longer requires voters as consumers to support free trade.

Recognizing these concentrated benefits of trade openness is especially relevant in the context of US politics. Since the Smoot-Hawley Tariff Act in 1930, US politics has been characterized by attempts to insulate trade politics from interest group influence and, in some ways, to depoliticize it (Bailey, Goldstein and Weingast 1997; Hiscox 1999). Raising the barriers for influencing politics, however, has distributional effects: for the largest and most productive firms – which tend to be exporting firms and multinationals – political involvement remains feasible. This institutional design was successful in ushering in a period of trade liberalization, as it allowed US Presidents to piece together viable political coalitions (Goldstein and Gulotty 2014); but by magnifying the voices of pro-trade firms, it also may have contributed to trade liberalization that deviated from what voters may have wanted and tolerated.

That consumers do not appear to account for trade liberalization in the US – just like in many other countries (Betz and Pond 2019) – leads to a different perspective on the normative interpretation of trade openness and the influence of pro-trade firms. Commonly, trade openness is attributed to policy-makers concerned with public goods and the relative absence of interest group influence in politics. Conversely, trade openness is interpreted as evidence of responsiveness to voters and muted interest group influence (see, e.g. Rogowski 1987; Nielson 2003).

Yet, if trade liberalization, just like protectionism, is driven by firm influence, muted firm influence and increased voter influence is no longer a condition for openness. Instead, increased firm influence has ambiguous effects: Given their collective action advantages, firms are more effective than voters at driving openness, which indirectly assists voters as consumers; but these effects are concentrated on products, at times, and on issues that benefit voters at best secondarily and at worst contrast with voter preferences. Conversely, and given the growing

discontent with globalization among voters since at least the mid-1990s perhaps most importantly, this framework allows for a political explanation of trade openness without requiring the assumption that the majority of voters prefers free trade.

This contrast is most clearly visible for non-tariff barriers – content requirements, regulatory standards, and other behind-the-border measures, which are increasingly important tools to protect markets and addressed in many contemporary trade agreements (Mansfield and Busch 1995; Mattli and Büthe 2003; Chase 2008b; Manger 2009). The assumption that most voters prefer lower product prices is largely uncontroversial. By contrast, consumer preferences about non-tariff barriers are more divisive. For example, negotiations between the US and the European Union over the Transatlantic Trade and Investment Partnership led to protests by consumers over demands by the US that the European Union facilitate the import of chlorinated chicken and hormone-treated beef; the treatment of genetically modified food has also been a persistent point of contention. The line between protectionism in disguise and legitimate health and safety concerns is thin for many of these issues (Kono 2006). Consequently, firm lobbying for trade openness on these issues may no longer be the boon to consumers, not even indirectly, that pro-trade lobbying implies for tariffs.

Moreover, the politics over non-tariff barriers are likely distinct from tariffs on a host of other issues. Not only are voters, even in their role as consumers, likely more divided over non-tariff barriers than over tariff rates; firms are as well. While the largest firms generally benefit from trade openness, because they are in the best position to take advantage of international markets, the largest firms may also benefit from non-tariff barriers, because they are in the best position to overcome the costs of adjusting to them (Gulotty 2020); additionally, they may lobby for restrictive content requirements that reduce the entry of new competitors (Chase 2008b; Manger 2009). This suggests that an extension of the previous discussion to non-tariff barriers is not straightforward, and yet important for an understanding of the future governance of international trade flows.

Conclusion

This essay offers three conclusions: international trade plays a large role for US consumers and in increasing their purchasing power; US trade policies have been systematically biased against consumer interests, levying the highest tariffs on products most important to consumers; and, consequently, while consumers benefit from international trade, consumer interests cannot account

for contemporary trade policies in the US. Instead, trade openness appears to be driven predominantly by special interest politics, contrary to a long tradition in political science and economics that associates protectionism, not openness, with the influence of special interest groups. This perspective is consistent with narratives about contemporary trade politics. But it implies a different interpretation of trade openness, which is no longer the consequence of responsiveness to voters. Indeed, the past few years have shown that voters may be quite supportive of higher tariffs.

This perspective on trade policy also speaks to the political roots of trade policy. Trade policy has frequently been used as a redistributive tool, providing protection for some groups and liberalizing trade for others (Schattschneider 1935). In addition to the consumption effects of international trade, some voters may also benefit from the income effects of trade. Yet, these gains are unevenly distributed across voters based on their employment in different industries and, within industries, in different firms (Helpman et al. 2017). And even where their employers gain from trade policy, these gains from trade need not accrue to voters (Dean 2016; Sung, Owen and Li N.d.).

One consequence has been a decoupling between aggregate economic growth and firm profits as well as a decline in the labor share of total income (De Loecker and Eeckhout 2017). With advancements in automation, the continued growth of global supply chains, and the fragmentation of labor associations, these trends are likely to continue, with a premium for capital owners and mobile, high-skilled labor. The distributional consequences of globalization suggest new challenges for public policy. For example, the expansion of stock ownership, which lets voters participate in the gains from trade for firms beyond their immediate employer and beyond the consumption effects, is one possible response – which, in turn, might increase support for globalization among voters and feed back to government policies (Kerner N.d.; Pond and Zafeiridou 2019). Yet, despite the increasing privatization of social security systems, stock ownership in the US remains concentrated: almost half of all US households own stocks, but over 80% of all stocks are owned by the wealthiest 10% of US households (Wolff 2017).

Additionally, if markets are increasingly dominated by individual firms, trade policy may lose its effects on aggregate prices, at least temporarily: individual firms with excess profits may be able to absorb the additional costs of tariffs instead of passing them on to consumers. This reinforces the reciprocal relationship between market structure and trade policy. Free trade may contribute to the reallocation of economic activity across firms and lead to increased market concentration; market concentration may help explain trade policy choices; and market structure, in turn, may matter for the effects of trade policy on domestic price levels.

Finally, an underlying assumption of this essay was that voters prefer lower prices, and thus appreciate at least the consumption effects of international trade. Yet, voters may value non-material aspects of trade policy as well (Mansfield and Mutz 2009; Pandya and Venkatesan 2016; Mansfield, Mutz and Brackbill 2019) – and might be either willing to, effectively, pay for these nonmaterial goals with higher price levels on everyday products, or might be unaware of the material benefits of free trade. Improving our understanding of how voters are affected by and respond to different dimensions of trade policy, and how those beliefs are shaped by elite rhetoric and peer networks, remains an important topic for understanding political debates over globalization.

This will be particularly relevant for the policies of the current administration. President Trump has publicly articulated three core beliefs: that trade is a zero-sum game with no joint gains; that trade deficits, just like fiscal deficits, are “bad” and need to be avoided; and that other countries, and firms from other countries, will absorb the costs of higher US tariffs.¹⁵ These beliefs, and the policies based on them, present a sharp break with previous administrations. Moreover, none of these beliefs is consistent with established economic theories, nor are they supported by data. The experience even over the past year contrasts with these beliefs: US trade policies have been a drag on both the US and the global economy; the US deficit increased in 2018 and the first half of 2019; and US firms and consumers absorbed nearly all of the cost of US tariffs. Nonetheless, these beliefs have presumably facilitated the administration’s turn against free trade. And regardless of whether voters share these underlying beliefs, at least temporarily voters appear to be willing to accept the trade-off between higher prices and other goals, such as attempts to reverse the globalization of production (“re-shoring”) and a leveling of market access conditions globally. Whether this support continues, and to what extent voters share the beliefs about international trade espoused by President Trump, will be crucial for the direction of future US trade policy and politics.

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¹⁵ See various Tweets and public remarks over the last year (e.g. a Tweet on May 5, 2019 and an event in Ohio on August 1, 2019).

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