

Why Does Import Competition Favor Republicans?*

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Abstract

Evidence that local exposure to Chinese import competition favors right-wing parties has often been attributed to the success of economic nationalism. We advance an alternative account. Trade shocks catalyze cultural backlash, which drives support for conservative candidates, as they compete electorally by targeting out-groups. We test this hypothesis in the 2008-2016 U.S. Presidential elections. First, a quantitative text analysis of campaign speeches shows that Republican candidates moved from support of free trade to protectionism, but they consistently assumed harsher stances on immigration and minority inclusion. Second, using individual-level survey data, we provide evidence that Chinese import shocks drive negative attitudes towards immigrants and minorities. Opinions about free trade are not affected. Finally, a causal mediation analysis highlights that attitudes towards out-groups mediate the effect of localized trade shocks on voting behavior. Altogether, these results point to the role played by trade-induced cultural backlash in shaping political outcomes in the U.S.

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1 Introduction

In recent years, right-wing populism has become a salient feature of several Western democracies. In this context, economists and political scientists have debated whether cultural backlash or economic insecurity explains the rise of anti-globalization movements in Europe and the U.S. The “cultural backlash” side has stressed resentment among mostly white, non-college-educated voters towards immigrants and minorities, citing the fear of losing status as the main factor driving the rise of populism (e.g., [Inglehart and Norris 2016](#); [Gidron and Hall 2017](#)). Conversely, the “economics” side of the debate has focused on the role played by individual economic insecurity (e.g., [Guiso et al. 2017](#)) and exposure to different types of globalization shocks, ranging from migrants and refugees to international trade and capital flows (e.g., [Rodrik 2018](#)). A strand of this literature has assessed the extent to which the local labor market effects of competition with foreign imports, especially from China, have favored the rise of protectionist and radical candidates in Europe and the U.S. (e.g., [Feigenbaum and Hall 2015](#); [Autor et al. 2017](#); [Dippel, Heblich and Gold 2016](#); [Colantone and Stanig 2018a](#); [Colantone and Stanig 2018c](#); [Ballard-Rosa et al. 2017](#)).

This paper aims at reconciling the two aforementioned perspectives by addressing the following puzzle. Studies focusing on the political consequences of Chinese import competition have consistently showed that trade exposure favors candidates and parties at the right end of the political spectrum. However, it is not entirely clear why this occurs. Does this happen because right-wing parties campaign on nationalist economic platforms? Why do not import-exposed voters turn to the left and demand greater redistribution and social insurance, consistent with the “compensation hypothesis” ([Cameron 1978](#); [Rodrik 1998](#); [Walter 2010](#))? U.S. Presidential elections are particularly interesting in this regard. Previous research has documented that import-exposed regions have been disproportionately more likely to support Republican candidates over the past decade. This evidence does not appear surprising in the 2016 election, as the Republican candidate, Trump, ran a harsh protectionist campaign. However, the success of relatively more pro-trade GOP candidates, such as Romney and McCain, in the same areas seems harder to explain in light of international trade stances. Then why does import competition consistently favor Republicans?

Combining insights from different disciplines, we advance the following hypothesis. Since

the distributional implications of trade integration may be difficult to grasp ([Hainmueller and Hiscox 2006](#); [Rho and Tomz 2015](#); [Rho and Tomz 2017](#)), voters may not often clearly identify the source of the local economic threat posed by trade shocks. However, the labor market effects of Chinese competition are sizable, persistent and cut across the board ([Autor, Dorn and Hanson 2013a](#); [Autor, Dorn and Hanson 2013b](#); [Autor et al. 2014](#); [Acemoglu et al. 2016](#)). As suggested by [Inglehart and Norris \(2017\)](#) and [Inglehart \(2018\)](#), resulting economic insecurity may catalyze cultural backlash and trigger social resentment towards out-groups, such as immigrants and ethnic, racial, and religious minorities. In turn, this may drive support for right-wing candidates, who compete electorally by targeting these groups.

In line with previous studies on populism (e.g., [Guiso et al. 2017](#)), we investigate the relevance of our argument by assessing supply- and demand-side factors in the context of U.S. Presidential elections between 2008 and 2016. On the supply side, we use quantitative text analysis tools to study communication in campaign speeches. We draw text data from the American Presidency Project, and identify and scale specific sub-dimensions of political communication about international trade, immigrants, and ethnic minorities. First, we use Support Vector Machines (SVM) classification models to identify speech excerpts related to each topic of interest. Second, we scale Republican and Democratic candidates' stances along these dimensions using the Wordfish scaling model ([Slapin and Proksch 2008](#)). Results show that Republican candidates consistently campaigned on relatively harsher anti-immigration stances and were more inclined to linking minorities to issues of criminal justice. Also, they often targeted Islam. Instead, Democratic candidates were more prone to advocating social inclusion for immigrants and minorities. Conversely, GOP candidates radically shifted from tenacious support of free trade to protectionism. We conclude that it is difficult to account for the systematic pro-Republican effect of import competition in light of candidates' trade policy stances. Instead, Republicans' rhetoric might have matched social resentment towards immigrants and minorities in import-exposed communities.

On the demand side, we draw data on voting behavior and attitudes towards immigrants, minorities, and free trade policies from the 2008-2016 American National Election Studies (ANES). We also construct a measure of local exposure to Chinese import competition following [Autor, Dorn and Hanson \(2013a\)](#). In the 2008-2016 Presidential elections, individuals in trade-exposed districts are disproportionately more likely to exhibit negative attitudes to-

wards immigrants and racial and ethnic minorities, among which Latinos and Asians are the most targeted. Moreover, they are more likely to take polarized stances in favor of religious in-groups (Christian fundamentalists) and against religious out-groups (Muslims). Conversely, Chinese import penetration does not significantly affect attitudes towards international trade. Finally, building on the approach proposed by [Dippel et al. \(2018\)](#), we perform a causal mediation analysis and show that attitudes towards minorities and religious groups mediate the effect of localized trade shocks on electoral support for Republicans.

The paper is organized as follows. Section 2 reviews the relevant literature. In section 3, we provide a conceptual framework for our analysis. In section 4, we analyze Presidential campaign speeches with a focus on issues related to international trade, immigration, and ethnic minorities. In section 5, we describe data and estimate the effect of regional exposure to Chinese import competition on individual attitudes towards minorities, immigrants, and international trade, and we perform the causal mediation analysis. The final section draws conclusions and points to further avenues of research.

2 Literature Review

The increasing success of right-wing populist candidates has stimulated a lively debate about the causes of this major turn in the political landscape of Western democracies. The discussion has focused on whether the rise of right-wing populism has cultural or economic roots.

One perspective emphasizes that populist support can be explained as a social psychological phenomenon, reflecting a nostalgic reaction against long-term processes of value change ([Inglehart and Norris 2016](#)) and subjective perceptions of social status loss ([Gidron and Hall 2017](#)). The “cultural backlash” hypothesis predicts that support for populist parties is strongest among men, the elderly, those with poor educational attainment, and traditionalists who see their relative social status decline. In favor of this argument, [Inglehart and Norris \(2016\)](#) show that anti-immigrant attitudes, mistrust of global and national governance, support for authoritarian values, and left-right ideological self-placement are consistent predictors of voting populist parties. Analogously, [Gidron and Hall \(2017\)](#) find that lower self-attributed social status is consistently associated with electoral support for radical

right-wing parties. Furthermore, [Kaufmann \(2017\)](#) shows that authoritarian attitudes have leverage in explaining American and British voters' support for Trump and Brexit, respectively. Also, [Hooghe and Dassonneville \(2018\)](#) point to attitudes towards immigration and ethnic minorities as the most important predictor of choosing Trump in the 2016 Presidential election.

Another perspective emphasizes the role of economic factors, focusing on the electoral consequences of secular changes to post-industrial societies, such as trade integration, globalization of finance and migration ([Rodrik 2018](#)), and automation ([Acemoglu and Restrepo 2017](#)). Compressed real wages and fewer employment opportunities in selected industries result in economic insecurity, especially among the most vulnerable strata of society. The “economics” argument predicts that individual economic insecurity (e.g., [Guiso et al. 2017](#)) and exposure to different types of globalization shocks ([Rodrik 2018](#)) are the most important predictors of support for populist candidates and movements. For instance, [Guiso et al. \(2017\)](#) show that, once turnout effects are taken into account, economic insecurity drives propensity to support populist parties.

Scholars have increasingly focused on how electoral behavior is shaped by exposure to international trade shocks. [Walter \(2010\)](#) claims that higher individual exposure is associated with greater demand for welfare transfers, which, in turn, drives support for left-wing parties in Europe. [Margalit \(2011\)](#) shows that trade-related job losses in the U.S. made it harder for incumbents to win elections in 2000 and 2004. [Jensen, Quinn and Weymouth \(2017\)](#) point out that incumbent parties are more likely to lose votes when imports increase and exports decrease, particularly in swing states where low-skilled manufacturing workers face competition from imports. Moreover, [Owen and Quinn \(2016\)](#) provide evidence that trade flows affect aggregate policy mood towards the role and size of government in the U.S.

Within this literature, research has built on the seminal article by [Autor, Dorn and Hanson \(2013a\)](#). They provide evidence that Chinese import competition caused costly adjustments in U.S. local labor markets in terms of higher unemployment, lower labor force participation, and compressed wages in regions that house import-competing manufacturing firms. [Feigenbaum and Hall \(2015\)](#) show that members of Congress elected in import-exposed districts are more inclined to support protectionist bills. Also, [Autor et al. \(2017\)](#) show that rising Chinese import penetration is associated with substantial Republican vote gains in

Presidential elections and more polarized stances in Congress, both among Republicans and Democrats. Using a panel of fifteen European countries between 1988 and 2007, [Colantone and Stanig \(2018c\)](#) uncover that voters in import-exposed areas are more likely to support extreme right-wing parties. [Dippel, Hebllich and Gold \(2016\)](#) and [Malgouyres \(2017\)](#) point to the same relationship in Germany and France, respectively. [Colantone and Stanig \(2018a\)](#) show that voters in import-exposed British regions were disproportionately more likely to vote in favor of in the 2016 Referendum to leave the European Union.

Overall, studies focusing on Chinese import exposure across Western countries have provided much fodder for “economics” arguments on the origins of right-wing populism and are consistent in highlighting a pro-conservative effect¹. However, these studies have not entirely clarified why this occurs. According to the “compensation hypothesis” ([Cameron 1978](#); [Rodrik 1998](#); [Walter 2010](#)), import competition should induce net losers from globalization to choose left-wing parties through greater demand for redistribution and social insurance. Yet, studies that find a pro-conservative effect in Europe underscore that losers from globalization might prefer protection over compensation, thereby demanding trade restrictions rather than greater welfare transfers ([Colantone and Stanig 2018c](#)). While this argument seems to apply well to European countries, it is more difficult to understand why import exposure is associated with Republican vote gains in the U.S. Indeed, [Autor et al. \(2017\)](#) document a significant pro-Republican effect in the 2008 and 2016 Presidential elections. Trump’s protectionist campaign in 2016 is consistent with the claim that import exposure fosters demand for economic nationalism, but this is hardly the case for McCain’s campaign in 2008, as his policy platform was starkly in favor of free trade. Thus, we are left with a puzzle: why do import-exposed voters turn to right-wing candidates and parties?

Some of the studies cited above attempt to address this question, though not providing a unifying framework. [Autor et al. \(2017\)](#) concede that economic adversity can increase support for nativist politicians, and that wedge issues, as opposed to trade policy stances, seem to drive support for Republican candidates. In support of this claim, they show that

¹A notable exception is [Che et al. \(2016\)](#), who document that from 1992 to 2010 U.S. counties exposed to tighter Chinese import competition experienced larger increases in vote shares for Democratic congressional candidates. However, [Autor et al. \(2017\)](#) notice that gerrymandering leaves many counties fractured across districts, which makes county vote shares a noisy predictor for who wins congressional elections, and that candidates within parties vary widely in their ideology, which makes congressional vote shares an imperfect indicator of voter ideological preferences.

extreme Republican congressional candidates are more likely to be elected in trade-exposed districts with an initial majority white population. [Colantone and Stanig \(2018a\)](#) show that exposure to import competition negatively affects attitudes towards immigration in the U.K., which, in turn, are correlated with the vote in favor of Brexit. Hence, they suggest that Brexit was driven by trade-induced discontent with immigration rather than anti-globalization sentiments. Furthermore, [Ballard-Rosa et al. \(2017\)](#) provide evidence that localized trade shocks from import competition increase the likelihood of positive attitudes towards authoritarian values among British individuals. Finally, two very recent studies scrutinize the relationship between import competition and nativist attitudes in Europe and the U.S., and are closely related to our paper. [Colantone and Stanig \(2018b\)](#) show that tighter import competition in European regions makes respondents less supportive of democracy, more in favor of strong leaders, and particularly concerned with immigration, especially with its cultural threat. [Bisbee \(2018\)](#) documents that U.S. voters subject to localized trade shocks exhibit more negative attitudes towards free trade and immigration.

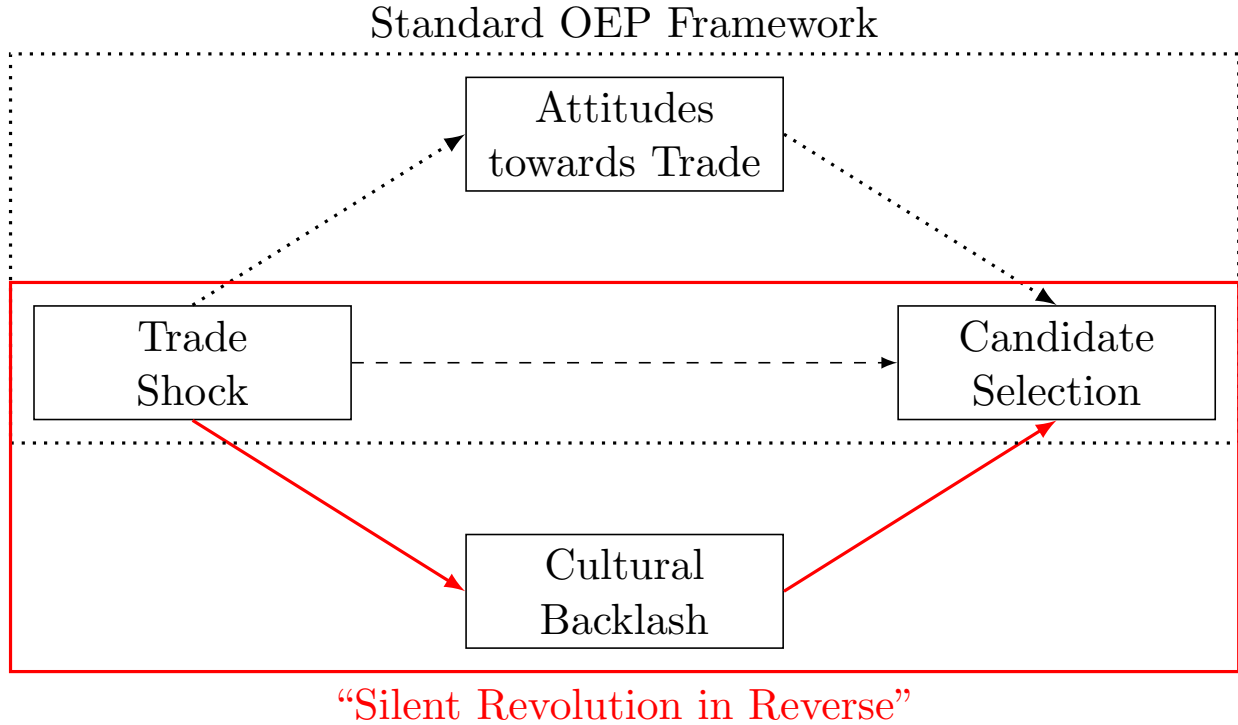
Building on this evidence, we address the puzzle outlined above through a comprehensive framework that reconciles the “economics” and “cultural backlash” perspectives. Following some of the studies discussed in this section (e.g., [Guiso et al. 2017](#)), we consider both supply- and demand-side factors that may help explain the relationship between import exposure and support for Republicans.

3 Conceptual Framework

How do trade shocks influence voting behavior? Addressing this question from a theoretical standpoint is key to explaining the link between import competition and support for Republican Presidential candidates. At least two mechanisms can account for this fact.

The first mechanism is in line with a standard open economy politics (OEP) perspective, as the one proposed in [Feigenbaum and Hall \(2015\)](#). This view assumes that economic shocks affect individual attitudes towards international trade and increase their demand for protectionist policy. As a consequence, in a two-party competition, voters in import-exposed areas will prefer the relatively more protectionist candidate. Also, when competitors’ stances on trade policy are similar, no significant relationship between trade exposure and voting

Figure 1: Alternative Causal Pathways Linking Trade Shocks and Candidate Selection



is to be expected. In line with this view, [Colantone and Stanig \(2018c\)](#) identify economic nationalism – defined as a combination of opposition to free trade and isolationism; laissez-faire on domestic economic issues; and a strong nationalist stance – as the key feature explaining the link between import competition and radical right-wing parties in Europe. In sum, import-exposed individuals will exhibit more negative attitudes towards international trade and choose candidates who match their demand for protectionism.

The second mechanism stems from the “cultural backlash” hypothesis, in reconciliation with the “economics” perspective. As mentioned by [Inglehart and Norris \(2016\)](#) and [Gidron and Hall \(2017\)](#), and further developed in [Inglehart and Norris \(2017\)](#) and [Inglehart \(2018\)](#), the analytical distinction drawn between economic insecurity and cultural backlash theories may be partly artificial. These factors may be linked by an interactive process, if structural changes in the workforce and social trends in integrated markets sharpen economic insecurity, and if this, in turn, triggers a negative backlash among traditionalists towards cultural shifts. It may not be an either/or question, but one of relative emphasis with interactive effects. [Inglehart and Norris \(2017\)](#) and [Inglehart \(2018\)](#) define this interactive process

as “the Silent Revolution in Reverse”. They argue that cultural backlash explains why some individuals support right-wing populist movements, while declining economic security – which catalyzes cultural backlash – explains why support for these movements is greater now than it was thirty years ago. To summarize, import-exposed individuals will exhibit more nativist attitudes and choose candidates who target out-groups, such as immigrants and ethnic, racial, and religious minorities.

There are several reasons to believe that “the Silent Revolution in Reverse” hypothesis has analytical leverage in explaining how import competition affects voting behavior in Western democracies. First, the distributional consequences of trade integration are not easily grasped by the majority of population. As showed by [Hainmueller and Hiscox \(2006\)](#) and [Rho and Tomz \(2015\)](#), there is little evidence that opinions on trade policy are consistent with the predictions of standard economic models. One reason why this might happen is that ordinary citizens may not be fully aware of the mechanisms explaining how trade affects their material welfare. As they disregard the distributional effects of trade, they express policy preferences that may not fit standard models ([Rho and Tomz 2017](#)). Yet, if the relationship between material self-interest and trade preferences is weak, it seems unreasonable that individuals living in import-exposed areas would choose their most preferred candidate based on her trade policy stance.

Nonetheless, Chinese import competition triggers sizable general equilibrium effects. [Autor, Dorn and Hanson \(2013a\)](#) and [Autor, Dorn and Hanson \(2013b\)](#) find that increased import exposure causes negative local demand spillovers that reduce low-skilled employment in non-manufacturing industries. This evidence is corroborated by [Acemoglu et al. \(2016\)](#), who investigate whether negative shocks to trade-exposed industries also affect sheltered sectors. They find that lower demand for nontraded goods and services amplifies the employment effect of import penetration in local economies. Despite partial reallocation, this effect is negative overall.

The complexity of this chain of events, paired with the breadth and strength of its impact, may fuel scapegoating behavior, thus resulting in “cultural backlash”. Research in political science and sociology has already highlighted how economic adversity catalyzes scapegoating. Specifically, racial prejudice and negative attitudes towards immigrants have been linked to individual (e.g., [Citrin et al. 1997](#); [Burns and Gimpel 2000](#)) and aggregate

economic conditions (e.g., [Quillian 1995](#); [Jackman and Volpert 1996](#); [Wilson 2001](#); [Golder 2003](#); [Semyonov, Rajzman and Gorodzeisky 2006](#)). A recent study by [Cochrane and Nevitte \(2014\)](#) provides evidence that anti-immigrant sentiments are systematically associated with high unemployment, but only when a radical right party runs for office. Also, research on ethnic collective action (e.g., [Hechter, Friedman and Appelbaum 1982](#); [Olzak 1992](#)) theorizes that increasing resource competition triggers political mobilization along ethnic lines.

If trade shocks catalyze cultural backlash and social resentment towards out-groups, individuals will be more prone to voting along ethnic lines and for candidates whose stances on immigration, rather than international trade, are harsher. Oftentimes, candidates campaigning on immigration restrictions and targeting minorities also have protectionist platforms. This is especially true for far right parties in Europe, as well as Trump in the U.S. Yet, this does not always happen. U.S. Presidential elections constitute a perfect case to assess the relevance of our argument. Indeed, before the 2016 election, the two-party system ruled out the possibility that a candidate’s platform could be both protectionist and against immigration.

Our empirical analysis sheds light on three patterns. First, Republican Presidential candidates moved from stark support of free trade to protectionism, while their stances on immigration and minorities were relatively stable. Indeed, Republican candidates systematically campaigned on harsher stances towards immigration and the inclusion of minorities. Second, individuals in trade-exposed districts are more likely to exhibit negative attitudes towards immigrants and minorities. Conversely, attitudes towards international trade are not significantly affected. Finally, attitudes towards minorities and religious groups mediate the impact of import competition on voting behavior.

4 Supply

4.1 Data and Methodology

We use quantitative text analysis tools to analyze campaign communication in the 2008-2016 Presidential elections. Specifically, we employ a two-step method that combines automated text classification with unsupervised scaling.

While several analyses of policy scaling exploit party manifestos or legislative speeches

(e.g. [Laver and Garry 2000](#); [Laver, Benoit and Garry 2003](#); [Slapin and Proksch 2008](#); [Lauderdale and Herzog 2016](#)), campaign speeches provide greater analytical leverage to assess our hypotheses. However, campaign speeches are generally less tractable. Unlike party manifestos, they are not organized into policy sections; unlike legislative speeches, they often address a wide range of topics simultaneously. To tackle these issues, we exploit Support Vector Machine (SVM) models to select text excerpts that are related to topics of interest. Then, we use the Wordfish scaling model from [Slapin and Proksch \(2008\)](#) to estimate the position of each speaker along these dimensions.

We focus on Presidential candidates’ stances on wedge issues such as international trade, immigration and ethnic minorities². We draw text data from the American Presidency Project, the leading online source of U.S. Presidential documents. This non-profit organization has provided extensive coverage of Presidential campaign speeches since the 2008 election. Our initial corpus of texts consists of 700 documents, which include remarks and interviews spanning the entire campaign season, from primaries to election day.

4.2 Classification Model

Our main challenge is to separate communication on international trade, immigration and ethnic minorities from any other campaign topic. We proceed as follows. When parsing text data from the American Presidency Project, we maintain the same paragraph structure as raw HTML documents. Speech subdivision into short paragraphs proves beneficial. While single sentences might miss out relevant information, full speeches typically encompass multiple themes and are not well suited for analyses focused on a single dimension. Hence, paragraphs allow us to maximize the likelihood of selecting all relevant passages while minimizing the overlap with nonrelevant topics.

The first step in our methodology is to identify paragraphs of interest. To do so, we build on the literature that analyzes text data with supervised learning methods (e.g., [Hopkins and King 2010](#); [Diermeier et al. 2012](#); [D’Orazio et al. 2014](#); [Peterson and Spirling 2018](#); for reviews, see [Grimmer and Stewart 2013](#) and [Gentzkow, Kelly and Taddy 2017](#)). Drawing

²We decide not to isolate candidates’ communication on religious minorities living in the U.S., as the extent to which candidates address this topic in campaign speeches is far more limited. However, in our analysis of how candidates talk about immigration and minorities, we will show that harsh communication on immigration and ethnic minorities often targets Muslim minorities.

on insights from computer science (e.g., [Sebastiani 2002](#)), this literature has identified SVM models as one of the most efficient tools to address binary classification problems. The procedure to apply the SVM classifier is described in detail in Appendix A, which also provides evaluation criteria to assess the performance of our classifier. This procedure allows us to identify the paragraphs addressing the topics of interest with high accuracy.

After applying automated classification to our text corpus, we subset the relevant paragraphs. Table 1 reports candidate-by-election summary statistics. This table presents the volume of communication for each topic of interest, i.e., the number of paragraphs selected by the SVM classifier as a share of total paragraphs, by candidate and election. This statistic is rather balanced across candidates and elections, with the exception of Trump, who addresses the three topics in a large number of speeches.

Table 1: Summary Statistics of Presidential Candidates’ Communication

Candidate	Year	Documents	Paragraphs	Immigration Vol. (‰)	Ethn. Minor. Vol. (‰)	Trade Vol. (‰)
Clinton	2016	76	5589	13.6	12.3	3.2
McCain	2008	160	6212	8.2	5.5	7.2
Obama	2008	206	9462	7.4	12.3	5.5
Obama	2012	85	5831	6.5	2	2.9
Romney	2012	100	4833	6.6	4.3	14.5
Trump	2016	73	7590	70.4	22.4	30.3

NOTES: This table presents candidate-by-election summary statistics for the text corpus of Presidential campaign speeches. Volume is defined as the ratio of topic-specific paragraphs over all paragraphs by candidate and election.

4.3 Scaling Model

We now estimate candidates’ stances. We implement the Wordfish scaling model from [Slapin and Proksch \(2008\)](#), which retrieves position estimates for each speaker on a latent dimension:

$$y_{ij} \sim \text{Poisson}(\lambda_{ij})$$

$$\lambda_{ij} = \exp(\alpha_i + \psi_j + \beta_j \cdot \omega_i)$$

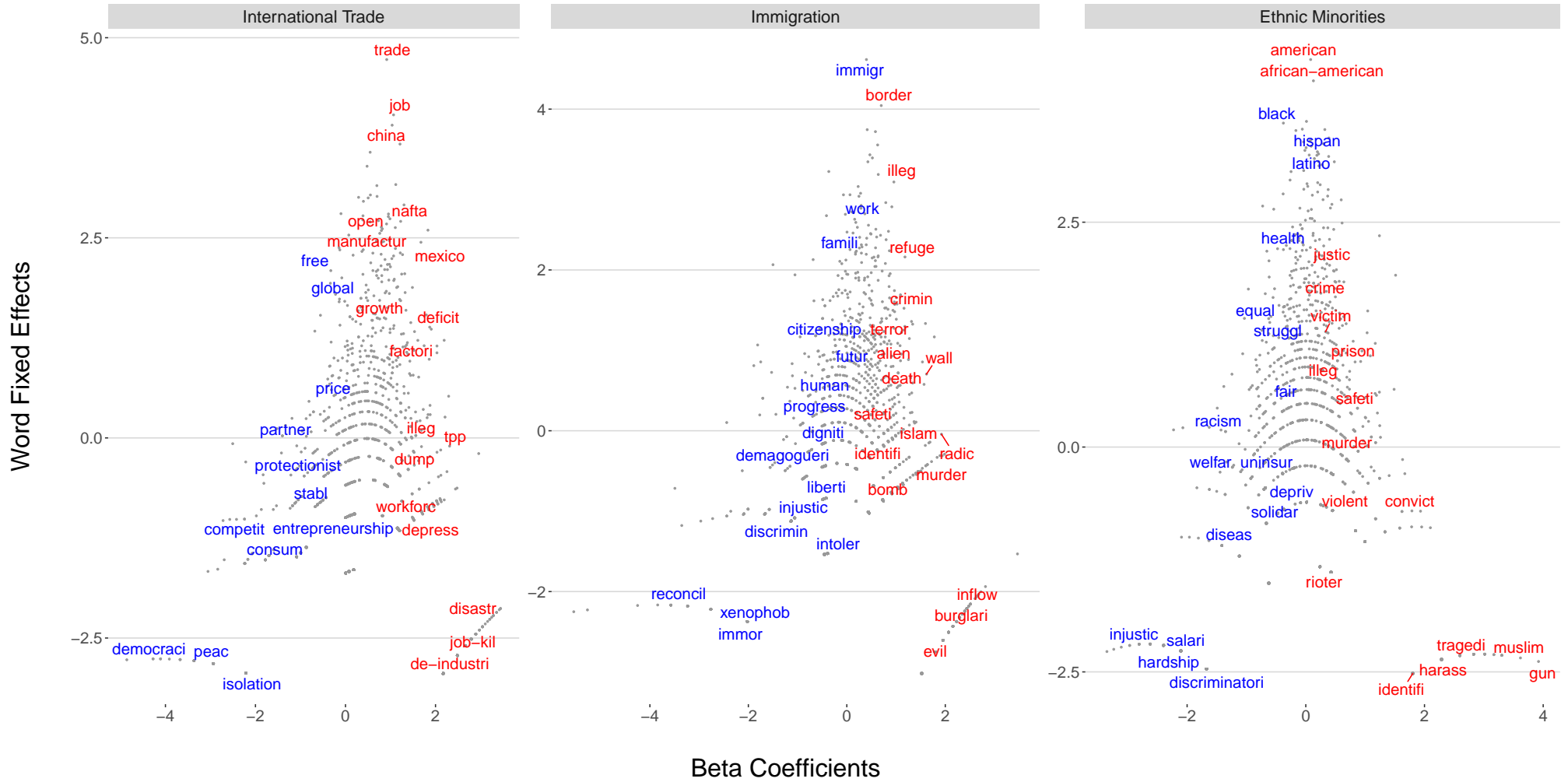
where y_{ij} is the count of word j in candidate i ’s document, α is a set of candidate fixed effects, ψ is a set of word fixed effects, β is an estimate of word-specific weights capturing the importance of word j in discriminating between candidate positions, and ω is the estimate of candidate i ’s position. Notably, Wordfish provides estimates on a single dimension.

Slapin and Proksch (2008) manually select text passages related to a given policy issue and then apply their method to quantify the latent ideal point in each sub-dimension. Thus, in order to attain reliable estimates, it is essential that input documents pertain to only one topic. Wordfish estimates also provide word discrimination parameters that can validate our classification approach. If words that contribute most to discriminating among candidates' positions are related to the topics of interest, one can infer that our classifier performs reasonably well. After building document-term matrices, we automatically stem words by removing morphological and inflexional endings, and exclude stop-words (e.g. the, of, at, etc.) from each matrix to improve estimation efficiency (Proksch and Slapin 2009). Our results are robust to different text pre-processing decisions. In particular, we obtain qualitatively identical estimates if we do not stem words, or if we remove words mentioned in less than 20 percent of texts.

Figure 2 plots words' beta coefficients and fixed effects for international trade, immigration and ethnic minorities, respectively. Stemmed words are distributed along the latent dimensions identified by Wordfish. High-beta words (i.e., those at the extremes of the x-axis) are associated with greater discriminating weights. In the first box of Figure 2, terms on the left-hand side of the spectrum point to a rhetoric praising the values of liberalism and efficiency (e.g., "peace", "democracy", "stability", "competition", "consumption"), and criticizing the opposite side as "isolationist" and "protectionist". Instead, words on the right denote a protectionist stance, as candidates campaign on promises to gain greater national control (e.g., "sovereignty"), and condemn labor market dislocations caused by trade integration (e.g. "destruction", "relocation", "offshoring", "violation", "dumping", "workforce", "manufacturing"). Terms located closer to the center of the distribution identify the main topic as "trade", "job", "China", "Mexico", "free", "open". Interestingly, the term "TPP" is closer to the protectionist end, while "NAFTA" is assigned a less extreme value.

Furthermore, we consider candidates' communication on immigration. Wordfish estimates are displayed in the second box of Figure 2. Terms on the left-hand side of the spectrum can be associated with a rhetoric praising the values of social inclusion (e.g., "reconcile", "liberty", "progress", "human", "citizenship") and criticizing the opposite side as "immoral", "xenophobic", and "intolerant". These terms indicate a pro-immigration stance. Conversely, words at the other end denote an anti-immigration stance. Indeed, they highlight

Figure 2: Communication on International Trade, Immigration and Ethnic Minorities: Word Weights vs. Word Fixed Effects



NOTES: The three graphs in this figure present Wordfish estimates of word-specific weights and fixed effects from 2008-2016 Presidential candidates' communication on international trade, immigration and ethnic minorities, respectively. Weights on the x-axis are plotted against fixed effects on the y-axis.

the alleged negative consequences of immigration, especially in terms of safety (e.g., “terror”, “death”, “radical”, “islam”, “bomb”, “burglary”). Moreover, some words underscore the need to restrict immigration (e.g., “illegal”, “wall”), while others generally paint a negative picture of immigrants (e.g., “alien”, “inflow”). Terms closer to the center of the distribution identify the main topic as “immigration” and “border”.

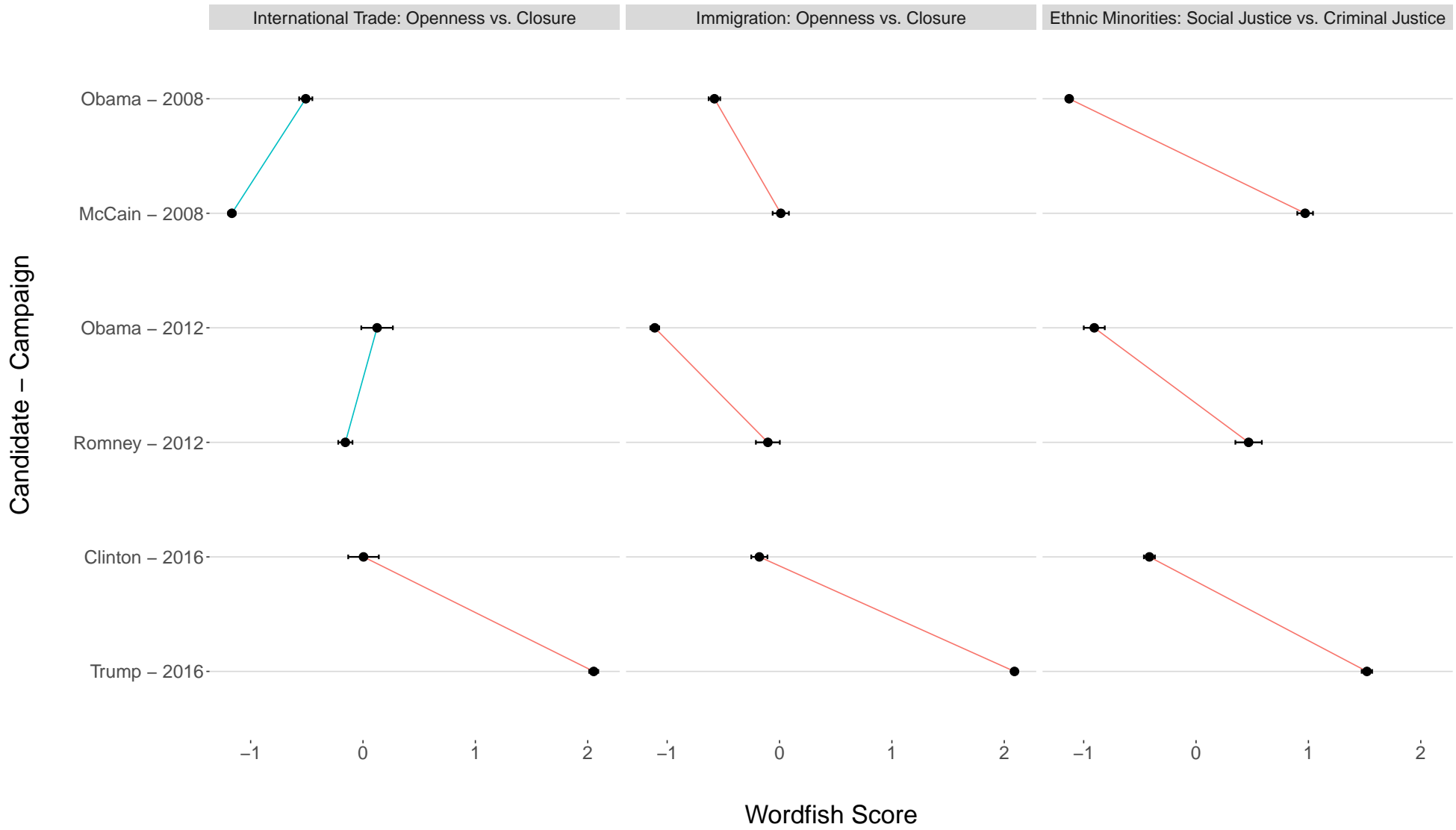
Finally, communication on ethnic minorities is not generally characterized by pro- vs. anti- stances. In fact, the main pattern emerging from the third box of Figure 2 is a contrast between social and criminal justice. Terms on the left-hand side of the spectrum denote concerns about social marginalization either through explicit “racism” and “discrimination”, or via financial “hardship” and poor access to healthcare. Instead, terms on the right point to issues of “crime”, “violence” and “illegality”, thus linking minority communities to (lack of) safety. This rhetoric is often linked to campaign promises to bring greater “protection”. In the central part of the spectrum, terms identify the main topic as “latino”, “hispanic”, “african-american”, “community”, and “justice”. Taken together, this implies that candidates either advocate social inclusion for immigrants and ethnic minorities, or refer to these groups by evoking threat, rejection, and danger.

4.4 Results

Based on words’ beta coefficients and fixed effects showed in the previous figures, we can assess Presidential candidates’ relative positions on each topic. Figure 3 presents estimates by candidate and campaign. The figure also displays differences in candidates’ positions by election: when Democratic candidates exhibit a relatively harsher stance on the considered topic, the difference is represented by a blue line; otherwise, a red line indicates that Republican candidates’ communication was characterized by a more negative tone.

First, we investigate whether stances on international trade offer further insights on the relationship between exposure to import competition and vote for Republicans. The first graph in Figure 3 shows that Republicans were significantly more favorable to trade openness than Democrats before the 2016 Presidential election. The GOP’s platform shifted from support for free trade with McCain to a median stance with Romney. Significantly, estimates show that Romney’s campaign was more favorable to free trade than Obama’s in 2012. Then, Trump’s protectionist claims induced a radical change in 2016.

Figure 3: Estimates of Communication on International Trade, Immigration and Ethnic Minorities by Candidate-Campaign



NOTES: The three graphs in this figure present Wordfish estimates of 2008-2016 Presidential candidates' communication on international trade, immigration and ethnic minorities, respectively. Plotted lines denote differences in candidates' positions by election. Blue (Red) lines indicate that Democratic (Republican) candidates exhibit a relatively harsher stance on a given topic. In the first graph, the left and right ends of the spectrum indicate pro- and anti-trade stances, respectively. In the second graph, the left and right ends of the spectrum indicate pro- and anti-immigration stances, respectively. In the third graph, the left and right ends of the spectrum indicate pro-social justice and pro-criminal justice stances, respectively.

Stances on immigration are displayed in the second graph of Figure 3. The left and right ends of the spectrum indicate pro- and anti-immigration stances, respectively. Two elements are worth noticing. First, Republican candidates oppose immigration more than Democratic Presidential nominees in every election. Indeed, Obama has a more favorable stance towards immigrants than both McCain and Romney, and Clinton is far more pro-immigration compared to Trump. Second, between-party differentiation increases over time.

A similar picture emerges from the third graph of Figure 3, which displays estimates of candidate communication on ethnic minorities. Republican candidates tend to address issues of criminal justice, while Democratic candidates campaign on social justice. Again, polarization increases election after election.

Overall, these results indicate that Republican candidates have consistently campaigned on harsher stances towards immigration over the past decade. Also, while Democrats advocated greater social inclusion for out-groups, Republicans depicted them as a threat for in-groups. Furthermore, evidence of increasing between-party differentiation on wedge issues is consistent with the findings of [Gentzkow, Shapiro and Taddy \(2017\)](#), who analyze congressional speeches and document a sharp increase in political polarization in recent years.

The evidence of the shift in trade-related communication suggests that trade policy platforms have little leverage in explaining why import exposure has a systematic pro-Republican effect in Presidential elections, as documented by [Autor et al. \(2017\)](#). Conversely, when communities experience negative economic shocks, such as disruptive global competition, out-groups might become easily identifiable targets and cultural backlash might play a more prominent role. As a consequence, candidates' cues on out-groups may bear more relevance to voting behavior than cues pointing to the actual cause of economic hardship. The next section investigates whether attitudes towards target groups are affected by import competition and tests the link between import exposure and individual voting behavior.

5 Demand

5.1 Data

Exposure to Import Competition Our main independent variable is the index of import competition exposure first introduced by [Autor, Dorn and Hanson \(2013a\)](#). We collect

county-level data on employment in 4-digit SIC manufacturing industries from County Business Patterns (CBP). Since county-industry employment levels are often non-disclosed for confidentiality reasons, we use the publicly available fixed-point algorithm developed by David Dorn to impute missing values.

We draw international trade data from UN Comtrade. In particular, we collect data on Chinese imports at the HS-6 product level for years 1991 through 2016. In order to match HS-6 codes from Comtrade to 4-digit SIC codes from County Business Patterns, we replicate the methodology developed by [Autor, Dorn and Hanson \(2013a\)](#) and group manufacturing industries to 397 SIC87dd identifiers. In addition, we draw data on the value of shipments by 4-digit SIC industry from the NBER-CES Manufacturing Industry Database.

Using these data, we construct an index of exposure to import competition by U.S. commuting zone, a widely used geographical unit that proxies the boundaries of a local labor market ([Tolbert and Sizer 1996](#)). This index is computed as follows:

$$\Delta IP_c = \sum_k \frac{L_{c,k,91}}{L_{c,91}} \frac{\Delta M_{\text{CH-US},k,91-\tau}}{Y_{k,91} + M_{k,91} - X_{k,91}}$$

where c denotes U.S. commuting zones, k denotes manufacturing industries, L denotes employment, $\Delta M_{\text{CH-US},k,91-\tau}$ is the change in U.S. price-constant³ imports from China in sector k from 1991 to end year $\tau \in \{2008, 2012, 2016\}$, and $Y_{k,1991} + M_{k,1991} - X_{k,1991}$ is beginning-of-period industry absorption, i.e., the value of shipments plus net imports. We choose 1991 as the base year to capture most of the variation in Chinese import competition after World War II, in particular after China’s access to the World Trade Organization in 2001. This index combines local industry composition in the base year with the variation in national imports from China during a given period.

Our goal is to estimate the effect of Chinese import competition on individual attitudes towards minorities and immigrants in the U.S. However, realized U.S. imports from China are likely to be correlated with local demand shocks that also affect the outcome variables. In order to isolate the effect driven by the increase in Chinese manufacturing supply since the early 90s, we follow [Autor, Dorn and Hanson \(2013a\)](#) and adopt an instrumental-variables

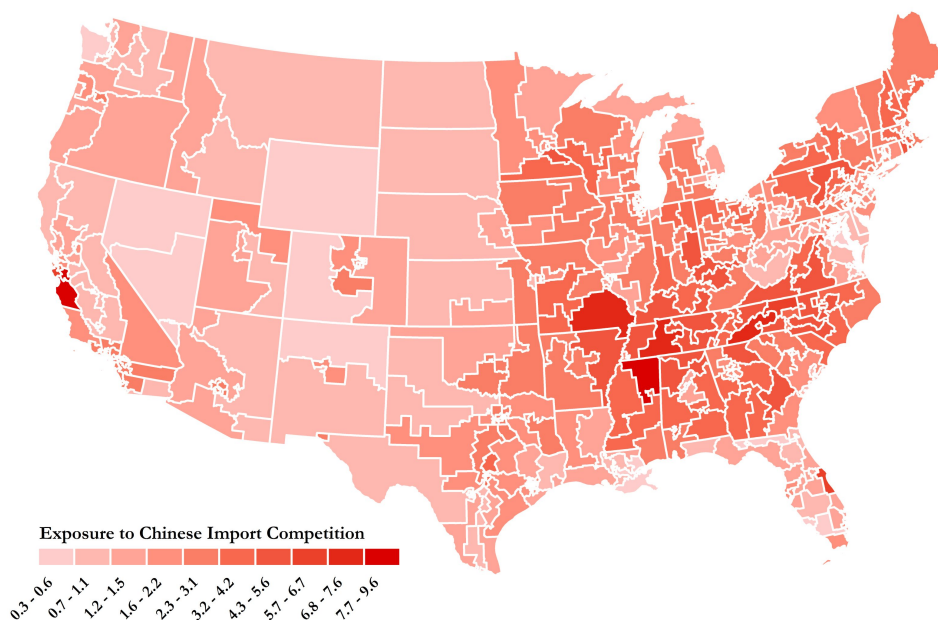
³Imports are deflated using the Personal Consumption Expenditure (PCE) index.

approach. Thus, we define the following instrumental variable:

$$\Delta IP_c^{IV} = \sum_k \frac{L_{c,k,91}}{L_{c,91}} \frac{\Delta M_{\text{CH-HI},k,91-\tau}}{Y_{k,88} + M_{k,88} - X_{k,88}}$$

where $\Delta M_{\text{CH-HI},k,91-\tau}$ denotes the sectoral variation in imports from China for a group of eight high-income economies⁴ whose trade patterns are comparable to the U.S. In fact, these countries experienced substantial growth in import flows from China over the last quarter century, thus ensuring instrument relevance. Instrument exogeneity holds if shifts in demand for Chinese products in the U.S. are uncorrelated with shifts in demand for Chinese products in the eight economies above. Plausibly, an unprecedented expansion in the Chinese manufacturing capacity caused a disproportionate increase in exports towards advanced economies in Western Europe and America.

Figure 4: Congressional District Exposure to Chinese Import Competition (1991-2016)



NOTES: This figure shows exposure to Chinese import competition by congressional district, as measured by ΔIP_d , from 1991 to 2016.

We combine commuting zone exposure levels to obtain an equivalent measure by congressional district. While commuting zones are clusters of counties, congressional districts

⁴The eight high-income economies are Australia, Denmark, Finland, Germany, Japan, New Zealand, Spain, and Switzerland.

often have irregular boundaries and span multiple local labor markets. Thus, we follow [Feigenbaum and Hall \(2015\)](#) and construct congressional district exposure as an average of commuting zone import penetration, weighted by the share of district land area that belongs to each commuting zone.

$$\Delta IP_d = \sum_c \frac{A_{d(c)}}{A_d} \Delta IP_c$$

where A_d is the total land area of congressional district d , and $A_{c(d)}$ is the land area of district d that belongs to commuting zone c .

American National Election Studies (ANES) Furthermore, we collect data on U.S. voting and political attitudes from the 2008-2016 Time Series American National Election Studies (ANES), three extensive surveys covering a sample of 12,342 individuals overall. Each of these repeated cross sections was conducted around November Presidential elections, spanning four months from early September through early January. ANES Time Series surveys are representative of the U.S. population at the national level. We use data from ANES surveys to construct dependent variables and a rich set of demographic controls, including gender, age, three race dummies, a dummy for Hispanics, and three education dummies (less than high school diploma, high school diploma, and at least bachelor’s degree).

First, we analyze attitudes towards immigration and ethnic, racial, and religious minorities. We perform our analysis primarily relying on a set of variables called “feeling thermometers”. In this case, each respondent is asked to provide a score in the 0-100 range to express individual appreciation towards immigrants and various minorities. Other survey questions allow for three or more answers, such as “Strongly agree”, “Agree somewhat”, “Neither agree nor disagree”, “Disagree somewhat”, and “Strongly disagree”. Because our main instrumental-variables specification includes fixed effects, we dichotomize these dependent variables rather than estimate IV-ordered probit models. Specifically, we create dummy variables that take value 1 if a respondent exhibits a negative attitude towards a given group by either disagreeing or agreeing with a statement in the survey. For example, a dummy equals 1 if a respondent disagrees or strongly disagrees with the statement “Immigrants are generally good for America’s economy”. Also, another dummy takes value 1 if a respondent agrees or strongly agrees with the statement “Immigrants increase crime rates in the U.S.”.

In the second part, we investigate the extent to which attitudes towards out-groups me-

diate the electoral effect of import competition. Our main outcome variable is the individual appreciation for Republican Presidential candidates, as measured by a feeling thermometer. This variable allows us to measure respondents’ preferences irrespective of their election participation and/or candidate choice, which provide information only through a discrete outcome. In the Appendix, we also consider the individual vote cast in Presidential elections. Within each survey, we create two dummy variables taking value 1 if a respondent chose the Republican or the Democratic candidate, respectively. We set both dummies to 0 if a respondent abstained or chose a third-party candidate, and we drop individuals who either refused to answer or stated “Don’t know”.

Geographic Controls We also construct beginning-of-period regional controls to address potential concerns about confounding factors in all of our specifications. Specifically, we collect demographic data from the 1990 U.S. Decennial Census and construct the share of white and foreign born population in each district. In addition, we draw election data from the CQ Voting and Elections Collection and compute the two-party Republican vote share by state in the 1992 Presidential election.

5.2 Import Exposure and Individual Attitudes

The first part of our empirical analysis focuses on the relationship between district-level import penetration and attitudes towards specific target groups, such as racial, ethnic, and religious minorities and immigrants. In our main specification, we stack ANES election surveys and estimate the following model:

$$S_{it} = \alpha + \beta \Delta IP_{d(i),t} + \mathbf{X}'_{it} \boldsymbol{\Gamma} + \mathbf{G}'_{d(i)} \boldsymbol{\Lambda} + \delta_t + \varepsilon_{it} \quad (1)$$

where $\Delta IP_{d(i),t}$, the change in Chinese import penetration in congressional district d from 1991 to year $t \in \{2008, 2012, 2016\}$, is instrumented with $\Delta IP_{d(i),t}^{IV}$, a similar measure that replaces U.S. imports with Chinese manufacturing exports to 8 high-income countries. \mathbf{X}_{it} is a vector of demographic controls including gender, age, education, race, and ethnicity. $\mathbf{G}_{d(i)}$ is a vector of geographic controls that comprise the 1990 district share of white and foreign born population, as well as the two-party state Republican vote share in the 1992 Presidential election. δ_t indicates election year fixed effects. S_{it} denotes alternative outcome

variables, capturing attitudes towards target groups. S_{it} can take the form of a dummy variable or a continuous variable, therefore implying a linear probability model or a linear regression model, respectively.

Table 2 reports estimates from three specifications. Respondents express their feelings towards Hispanics, African Americans, and Asians by choosing a score in the 0-100 range. These scores are used as dependent variables in panels A, B, and C, respectively. The baseline OLS estimate in column (1) implies that regional exposure is a strong predictor of negative attitudes towards Hispanics and Asians, while sentiments towards African Americans are weakly affected and the effect is imprecisely estimated. Consistent with [Autor et al. \(2017\)](#), the two-stage least squares estimate is larger in magnitude, reflecting the notion that unobserved demand shocks may mitigate the supply-driven effect of increasing Chinese import competition. In column (3), demographic controls attenuate the magnitude of the coefficient. In Column (4), we add geographic controls to address potential concerns about regional confounding factors. Thus, we condition on the 1990 district share of white and foreign born population, as well as the state-level two-party Republican vote share in the 1992 Presidential election. Adding these controls does not substantially alter the magnitude and significance of our estimates.

The results shown in Table 2 are consistent with the view that “recent” minorities are more likely to be the target of prejudice, discrimination, political opposition, and violence in both the U.S. and Europe ([Pettigrew 1998](#)). In fact, the number of Hispanics and Asians as a share of the U.S. population has grown disproportionately in the last quarter century, while the fraction of African Americans has been roughly stable. Attitudes towards “recent” minorities may be negatively affected by the perception of increased competition in the labor market, higher crime rates, or any other source of insecurity within import-exposed communities.

Stemming from the argument that mainly recent minorities are targeted, a natural follow-up question is whether regional exposure affects sentiments towards immigrants. In Table 3, we report estimates from specifications that explore these attitudes. In panel A, the dependent variable is a dummy that takes value 1 if a respondent believes that immigration levels in the U.S. should decrease a lot or decrease a little. Our estimates imply that a one standard deviation increase in import penetration is associated with a 1.7 percentage point

Table 2: Import Exposure and Sentiments towards Ethnic and Racial Minorities

	(1)	(2)	(3)	(4)
	OLS	TSLS	TSLS	TSLS
Panel A: Dep. Var.: Feeling Thermometer - Hispanics				
ΔIP	-1.32*** (0.24)	-1.57*** (0.26)	-1.14*** (0.26)	-1.02*** (0.26)
Mean Outcome	65.3	65.3	65.3	65.3
Observations	10,922	10,922	10,633	10,633
R^2	0.013	0.013	0.092	0.097
Panel B: Dep. Var.: Feeling Thermometer - African Americans				
ΔIP	-0.20 (0.23)	-0.21 (0.25)	-0.07 (0.24)	-0.03 (0.24)
Mean Outcome	66.9	66.9	66.9	66.9
Observations	10,926	10,926	10,637	10,637
R^2	0.009	0.009	0.109	0.110
Panel C: Dep. Var.: Feeling Thermometer - Asians				
ΔIP	-0.67*** (0.22)	-0.82*** (0.24)	-0.74*** (0.24)	-0.62*** (0.24)
Mean Outcome	66.0	66.0	65.9	65.9
Observations	10,880	10,880	10,595	10,595
R^2	0.009	0.009	0.039	0.042
Demo Controls			✓	✓
Geo Controls				✓

NOTES: This table presents the estimated effects of district-level exposure to import competition on sentiments towards Hispanics, African Americans, and Asians. All models allow for election year fixed effects. Observations are weighted by ANES sampling weights. Column (1) reports OLS estimates. In columns (2) through (4), ΔIP_d is instrumented with ΔIP_d^{IV} , a similar measure that replaces U.S. imports from China with Chinese manufacturing exports to 8 high-income countries. The model in column (3) controls for gender, age, education, race, and ethnicity. The model in column (4) controls for the 1990 district share of white and foreign born population, as well as the two-party Republican vote share in the 1992 Presidential election. Robust standard errors are in parentheses, and *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

Table 3: Import Exposure and Sentiments towards Immigrants

	(1)	(2)	(3)	(4)
	OLS	TSLS	TSLS	TSLS
Panel A: Dep. Var.: Immigration Levels Should Decrease = 1				
ΔIP	0.020*** (0.005)	0.022*** (0.006)	0.017*** (0.006)	0.014** (0.006)
Mean Outcome	0.44	0.44	0.44	0.44
Observations	10,923	10,923	10,633	10,633
R^2	0.002	0.002	0.053	0.061
Panel B: Dep. Var.: Immigration Will Take Away Jobs = 1				
ΔIP	0.019*** (0.007)	0.022*** (0.007)	0.018** (0.007)	0.015** (0.007)
Mean Outcome	0.41	0.41	0.41	0.41
Observations	7,394	7,394	7,254	7,254
R^2	0.004	0.004	0.059	0.065
Panel C: Dep. Var.: Feeling Thermometer - Illegal Immigrants				
ΔIP	-1.17*** (0.27)	-1.18*** (0.30)	-0.61** (0.30)	-0.39 (0.29)
Mean Outcome	39.5	39.5	39.6	39.6
Observations	10,936	10,936	10,645	10,645
R^2	0.007	0.007	0.121	0.136
Demo Controls			✓	✓
Geo Controls				✓

NOTES: Panel A presents the estimated effects of district-level import penetration on opposition to higher levels of immigration. Similarly, Panel B presents the effects on the probability that a respondent agrees with the statement “Immigration will take away jobs in the U.S.”. Panel C presents the effects on sentiments towards illegal immigrants, as measured by a “feeling thermometer”. All models allow for election year fixed effects. Observations are weighted by ANES sampling weights. Column (1) reports OLS estimates. In columns (2) through (4), ΔIP_d is instrumented with ΔIP_d^{IV} , a similar measure that replaces U.S. imports from China with Chinese manufacturing exports to 8 high-income countries. The model in column (3) controls for gender, age, education, race, and ethnicity. The model in column (4) controls for the 1990 district share of white and foreign born population, and the two-party Republican vote share in the 1992 Presidential election. Robust standard errors are in parentheses, and *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

increase in the probability of opposing equal or more immigration. In panel B, the dependent variable is a dummy that takes value 1 if a respondent thinks that immigration will take away jobs in the U.S. Results are similar to panel A. Finally, panel C reports estimates from a model in which feelings towards illegal immigrants are regressed onto our usual set of explanatory variables. Point estimates are still negative, but weaker in magnitude as more controls are added. Our results imply that labor market competition may play a role in fostering anti-immigration sentiments in import-exposed districts.

While attitudes towards immigrants and fast-growing ethnic minorities may be driven by both labor market concerns and social resentment, sentiments towards religious out-groups and in-groups can provide us with suggestive evidence that trade-induced regional shocks trigger pure cultural backlash. We test this hypothesis by considering an easily identifiable religious minority (Muslims) as well as an extreme movement related to Christianity, i.e., the most prominent religious in-group in the U.S.

Table 4 reports estimates from our usual specification. The dependent variables are appreciation for Muslims in column (1) and appreciation for Christian fundamentalists in column (2). The estimates are far from negligible and have opposite sign. Specifically, individuals living in import-exposed districts exhibit more positive attitudes towards Christian fundamentalists (religious in-group) and express less favorable opinions about Muslims (religious out-group). Interestingly, the share of Muslim population in the U.S. has historically been lower than 1%, while Christians add up to roughly 80%. This makes it harder to argue that individuals living in high import penetration areas express negative attitudes towards Muslims because of competition for scarce resources, such as labor market opportunities. Furthermore, individual preferences in import-exposed communities seem to cluster around more extreme stances within their religious in-group.

Finally, we test whether attitudes towards international trade are affected by localized import shocks. One would expect import-exposed individuals to oppose stances in favor of increased openness to international trade. Table 5 presents the estimated effects of import penetration on three outcome variables that capture opinions about trade. In both panels, coefficients are imprecisely estimated. Moreover, point estimates have opposite sign, thus suggesting that import exposure does not significantly affect attitudes towards international trade. This is consistent with the view that individuals have difficulty identifying sources of

Table 4: Import Exposure and Sentiments towards Muslims and Christian Fundamentalists

	(1)	(2)
	Muslims	Christian Fundamentalists
ΔIP	-1.16*** (0.28)	1.39*** (0.29)
Mean Outcome	48.8	42.9
Observations	10,506	10,475
R^2	0.100	0.282
Demo Controls	✓	✓
Geo Controls	✓	✓

NOTES: This table presents the estimated effects of district-level exposure to import competition on sentiments towards Muslims and Christian fundamentalists, as measured by “feeling thermometers”. In both specifications, ΔIP_d is instrumented with ΔIP_d^{IV} , a similar measure that replaces U.S. imports from China with Chinese manufacturing exports to 8 high-income countries. All models allow for election year fixed effects and include the full set of controls from Table 2. Observations are weighted by ANES sampling weights. Robust standard errors are in parentheses, and *** p<0.01, ** p<0.05, * p<0.1.

Table 5: Import Exposure and Attitudes towards International Trade

	(1)	(2)	(3)
	Favor Limit on Imports = 1	Oppose More Trade = 1	Oppose Trade Agreements = 1
ΔIP	0.001 (0.006)	-0.004 (0.007)	-0.000 (0.007)
Mean Outcome	0.39	0.20	0.21
Observations	10,676	3,433	3,435
R^2	0.029	0.022	0.018
Demo Controls	✓	✓	✓
Geo Controls	✓	✓	✓

NOTES: This table presents the estimated effects of district-level exposure to import competition on favorability to limits to foreign imports in the U.S., unfavorable opinions about increased international trade, and opposition to free trade agreements in the U.S. In both specifications, ΔIP_d is instrumented with ΔIP_d^{IV} , a similar measure that replaces U.S. imports from China with Chinese manufacturing exports to 8 high-income countries. All models allow for election year fixed effects and include the full set of controls from Table 2. Observations are weighted by ANES sampling weights. Robust standard errors are in parentheses, and *** p<0.01, ** p<0.05, * p<0.1.

economic adversity as well as the distributional implications of free trade (Rho and Tomz 2017).

Taken together, these results point to a nonnegligible role played by trade-induced economic hardship in triggering cultural backlash. In Appendix C, consistent with previous research, we also provide evidence of a positive relationship between local import competition and individual-level support for Republicans. In the next section, we explore whether the relationship between import competition and individual voting behavior is mediated by attitudes towards immigrants and minorities.

5.3 Causal Mediation Analysis

Building on the approach proposed by Dippel et al. (2018), we perform a Causal Mediation Analysis (CMA) to test the hypothesis that cultural backlash drives the pro-Republican effect of localized trade shocks. Specifically, we implement a Restricted Mediation Model with instrumental variables. In our setting, the treatment T is district exposure to import competition, the mediators M are individual sentiments towards racial and ethnic minorities and religious groups, and the outcome variable Y is individual appreciation for Republican candidates, as measured by a feeling thermometer. The main advantage of the Restricted Mediation Model is that, under specific assumptions, it allows us to identify the effect of a treatment T through a mediator M on an outcome Y using only one instrumental variable Z . The assumptions required by the model are more restrictive than the ones that apply to a traditional instrumental variables model, and can be summarized as follows:

- (i) Relevance with respect to treatment T : $Z \not\perp T$;
- (ii) Exclusion restriction with respect to outcome Y : $Z \perp Y$;
- (iii) Exclusion restriction with respect to mediator M : $Z \perp M$;
- (iv) Conditional relevance with respect to mediator M : $Z \not\perp M|T$;
- (v) Conditional exclusion restriction with respect to outcome Y when mediator M is fixed: $Z \perp Y(m)|T$, where $m \in \text{supp}(M)$.

Assumptions (i)-(iii) characterize two IV models with Y and M as outcome variables. Indeed, assumptions (ii) and (iii) stem from the requirement that the instrumental variable Z be independent of any unobservable variable that contemporaneously affects either M and T or Y and T . Assumptions (iv) and (v) are additional requirements needed to specify the Restricted Mediation Model. They imply that there should not be any unobservable confounder of T , M , and Y at the same time. In our setting, this means that we assume that no unobservable variable is contemporaneously affecting district exposure to import competition, individual sentiments towards out-groups, and individual voting behavior.

The Restricted Mediation Model in our setting is defined by two equations:

$$S_{it} = \alpha_S + \beta_S \Delta IP_{d(i),t} + \mathbf{X}'_{it} \boldsymbol{\Gamma}_S + \mathbf{G}'_{d(i)} \boldsymbol{\Lambda}_S + \delta_{S,t} + \varepsilon_{S,it} \quad (2)$$

$$Y_{it} = \kappa + \theta S_{it} + \eta \Delta IP_{d(i),t} + \mathbf{X}'_{it} \boldsymbol{\Phi} + \mathbf{G}'_{d(i)} \boldsymbol{\Psi} + v_t + \epsilon_{it} \quad (3)$$

In equation 2, S_{it} denotes individual i 's sentiments towards ethnic and racial minorities and religious groups at time $t \in \{2008, 2012, 2016\}$; ΔIP_d is the change in Chinese import penetration in congressional district d from 1991 to year t (instrumented with a similar measure that replaces U.S. imports with Chinese manufacturing exports to 8 high-income countries, ΔIP_d^{IV}); X_{it} is a vector of demographic controls including gender, age, education, race, and ethnicity; G_d is a vector of geographic controls including the 1990 district-level share of white and foreign born population, as well as the 1992 two-party Republican vote share at the state level; $\delta_{S,t}$ indicates election year fixed effects. In equation 3, Y_{it} denotes individual appreciation for Republican candidates in year t , as measured by a feeling thermometer, while all other variables are defined analogously to equation 2. Following [Dippel et al. \(2018\)](#), the coefficient capturing the effect of import penetration on voting behavior through sentiments towards ethnic minorities and immigrants is $\beta_S \times \theta$.

We do not test the Restricted Mediation Model using sentiments towards African Americans and illegal immigrants because the effect of import penetration on these potential mediators is not statistically significant, as shown in Tables 2 and 3. In addition, we do not test this model using dummies capturing sentiments towards immigrants because ΔIP_d^{IV} is a weak instrument, i.e., the first stage of equation 3 is not significant. Thus, our Restricted Mediation Model is not suitable to test the role of these attitudes as mediators, despite the fact that they are significantly affected by local import penetration, as shown in Table 3.

This does not imply that sentiments towards immigrants do not channel the effect of import penetration on individual appreciation for Republican candidates, but that our model is not able to test this hypothesis. Table 6 presents results for the CMA. The table displays four columns for each mediator (i.e., sentiments towards Hispanics, Asians, Muslims, and Christian fundamentalists). The first column shows the reduced-form effect of import penetration on the outcome variable (i.e., preference for Republican candidates). The estimated model is described by equation 4. This specification is similar to the one in equation 2, but the dependent variable is Y_{it} rather than S_{it} .

$$Y_{it} = \alpha_Y + \beta_Y \Delta IP_{d(i),t} + \mathbf{X}'_{it} \boldsymbol{\Gamma}_Y + \mathbf{G}'_{d(i)} \boldsymbol{\Lambda}_Y + \delta_{Y,t} + \varepsilon_{Y,it} \quad (4)$$

Differences in the estimated coefficients in column (1) across the four panels stem exclusively from differences in samples. Indeed, when estimating the mediated effect of import penetration on appreciation for Republicans, we restrict our sample to respondents for whom neither the outcome variable nor the mediator are missing. Column (2) presents the reduced-form effect of import penetration on each mediator, using the model specified by equation 2. Column (3) displays estimates from equation 3, i.e., an IV model that regresses preferences for Republican candidates on each mediator, which is instrumented with ΔIP_d^{IV} , controlling for district import penetration, ΔIP_d . Column (4) reports the coefficients that capture the effect of import penetration on appreciation for Republican candidates channeled through each mediator. If the coefficient in column (4) is larger than the coefficient in column (1), then the partial effect of import penetration through a mediator on the outcome variable is larger than its total effect. This implies that other mediators (whose influence is not investigated in this paper) contribute to alleviating the pro-Republican effect of import competition. [Dippel et al. \(2018\)](#) suggest that beneficial economic consequences of trade integration could at least partially mitigate the preference for social closure that several voters in import-exposed areas express by choosing Republican candidates.

Taken together, these results point to the role played by trade-induced cultural backlash in affecting political outcomes in the U.S., and support the argument put forward in [Inglehart and Norris \(2017\)](#) and [Inglehart \(2018\)](#). Consistent with “the Silent Revolution in Reverse” framework, international trade shocks catalyze cultural backlash, which in turn favors the success of candidates and parties at the right end of the political spectrum.

Table 6: Causal Mediation Analysis

	(1)	(2)	(3)	(4)
	$\hat{\beta}_Y$	$\hat{\beta}_S$	$\hat{\theta}$	$\hat{\beta}_S \times \hat{\theta}$
Panel A: Mediator: Feeling Thermometer - Hispanics				
ΔIP	0.74** (0.34)	-1.48* (0.73)		1.43* (0.85)
Mediator			-0.97*** (0.26)	
Panel B: Mediator: Feeling Thermometer - Asians				
ΔIP	0.73** (0.34)	-0.56** (0.24)		1.47 (1.24)
Mediator			-2.65 (1.93)	
Panel C: Mediator: Feeling Thermometer - Muslims				
ΔIP	0.62* (0.34)	-1.15*** (0.28)		1.75* (0.95)
Mediator			-1.52** (0.73)	
Panel D: Mediator: Feeling Thermometer - Christian Fundamentalists				
ΔIP	0.61* (0.34)	1.40*** (0.29)		1.91** (0.90)
Mediator			1.37** (0.58)	

NOTES: This table presents results of a Causal Mediation Analysis in which the outcome variable is individual appreciation for Republican candidates, as measured by a feeling thermometer, and the mediators are sentiments towards racial and ethnic minorities and religious groups. Column (1) shows the reduced-form effect of import penetration on appreciation for Republican candidates. Column (2) shows the reduced-form effect of import penetration on each mediator. In both specifications, ΔIP_d is instrumented with ΔIP_d^{IV} . Column (3) shows the second stage of a model that regresses preference for Republicans on each mediator instrumented with ΔIP_d^{IV} , controlling for district import penetration, ΔIP_d . Column (4) shows the effect of import penetration on sentiments towards Republican candidates channeled through each mediator, i.e., the product of the coefficients displayed in column (2) and column (3). All specifications include the full set of controls from Table 2. Robust standard errors are in parentheses, and *** p<0.01, ** p<0.05, * p<0.1.

6 Conclusion

This paper has attempted to offer a reconciliation between the “economics” and “cultural backlash” perspectives on the rise of right-wing populism, by investigating the mechanism linking localized trade shocks from Chinese import competition to the success of conservative candidates. Building on the “the Silent Revolution in Reverse” framework ([Inglehart and Norris 2017](#); [Inglehart 2018](#)), we have argued that trade-induced economic insecurity catalyzes cultural backlash and triggers social resentment towards immigrants and minorities. In turn, this drives support for right-wing candidates, who compete electorally by targeting out-groups. We have explored the relevance of our argument in the 2008-2016 U.S. Presidential elections. First, we have analyzed Presidential campaign speeches with a combination of automated text classification and unsupervised scaling methods. We have showed that Republican candidates consistently assumed harsher stances on immigration and minority inclusion, while they moved from support of free trade to protectionism. Second, we have provided evidence that local competition with Chinese imports drives negative attitudes towards immigrants, ethnic, and racial minorities. Fast-growing groups (Hispanics and Asians) are especially targeted. Individuals living in import-exposed areas are more likely to take polarized stances in favor of religious in-groups (Christian fundamentalists) and against religious out-groups (Muslims). Conversely, local import exposure does not significantly affect attitudes towards trade integration. Finally, we have showed that the pro-conservative effect of import exposure is mediated by individual attitudes towards ethnic minorities and religious groups.

Overall, this framework sheds light on the ties that bind import competition and voting behavior in the U.S. Our analysis suggests that individual cultural beliefs, and especially attitudes towards immigrants and minorities, are affected by trade-induced economic hardship. Thus, candidates may have an incentive to compete electorally by targeting out-groups in import-exposed communities. While we cannot conclude whether candidates accommodate pre-existing political demands or fuel social resentment in import-exposed areas, future research will have to explore the timing of campaign communication and its effect on individual attitudes towards targeted groups.

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Online Appendix

A SVM, Coding Scheme, and Evaluation Criteria

Support Vector Machine (SVM) models automatically search for patterns in text documents to select words with high discriminative power. The output is a linear model where each word is assigned a weight in favor of class 1 or class 0. In our case, class 1 contains documents related to a relevant topic (i.e., immigration, ethnic minorities, or trade) and class 0 contains nonrelevant topics.

First, we select a random sample of 3000 paragraphs from our text corpus. Second, we develop a coding scheme to identify the paragraphs of interest. The coding scheme is the following:

(1) **Immigration:**

- Statements on immigration policy. May include references to promoting or contesting immigration restriction.
- Mentions to the positive and negative economic and social consequences of both legal and illegal immigration.

(2) **Ethnic Minorities:**

- Statements on ethnic integration policy. May include references to promoting or contesting social inclusion of ethnic minorities living in the U.S.
- Mentions to the life conditions, opportunities, social engagement of ethnic minorities living in the U.S.

(3) **International Trade:**

- Statements on international trade policy. May include references to extending or abolishing the protection of internal markets, including tariffs, quota restrictions, and export subsidies.
- Mentions to the economic, political and social costs and benefits from free trade, open markets, and the globalization of production.

Third, based on this codebook, we label paragraphs in our sample as being relevant to one of the three topics or nonrelevant. Fourth, we convert text into a structured form. We rely on the classic “bag-of-words” approach and convert each paragraph into a vector $[t_0, t_1, \dots, t_j, \dots, t_n]$ that contains all of the n unique words in the sample. t_j denotes the number of times word j is mentioned in the paragraph. We use this vector to build a term-frequency matrix $tf(M, n)$, where M is the number of paragraphs and n is the number of words. Thus, each cell ij in the term-frequency matrix indicates $t_{i,j}$, i.e. the number of times term j occurs in paragraph i . Then, we multiply term counts by the inverse document frequency in order to downweigh words that are likely to have low discriminative power. The inverse document frequency measures the frequency of occurrence of a term across all documents:

$$idf_j = \log \frac{M}{m : j \in m}$$

where m is the number of paragraphs containing term j . The resulting tf-idf matrix is an input to the SVM algorithm. SVM looks for the decision boundary that maximizes the margin between the two classes and solves the following unconstrained optimization problem (Fan et al. 2008):

$$\min_w \left\{ \frac{1}{2} w^T w + C \sum_i \max(1 - y_i w^T x_i, 0)^2 \right\}$$

Vector w contains model weights, while x_i and y_i are the input vector and the label of paragraph i , respectively. $\max(1 - y_i w^T x_i, 0)^2$ is the squared hinge-loss function and C is the cost parameter, whose optimal value has been chosen with an out-of-sample grid search. The classification model takes the following form:

$$f(x_i) = w_0 + w_1 x_{i1} + w_2 x_{i2} + \dots + w_j x_{ij} + \dots + w_n x_{in}$$

where w_j denotes weights and x_{ij} is the occurrence of unique term j in the training set in paragraph i . The resulting decision value $f(x_i)$ indicates the predicted class a paragraph belongs to. If the value is close to 1, then the paragraph is relevant for the topic of interest; otherwise, it is nonrelevant. For binary classification problems, the most useful evaluation criteria are accuracy and average precision and recall⁵ (Diermeier et al. 2012). The latter is

⁵Accuracy is the proportion of correct predictions among all predictions. Precision and recall are the proportions of documents correctly assigned to a category among all of the documents assigned to that category, and among all of the documents that truly belong to that category, respectively.

often used in datasets with unbalanced classes, in which one category has fewer examples than the other, as in our case. We train our classifier on a subsample of 2000 paragraphs and test it on 1000 paragraphs. Table A1 reports these measures.

Table A1: Evaluation Criteria of SVM Classification by Topic

Topic	Accuracy	Precision	Recall	Average Precision and Recall
Immigration	0.9950	0.9286	0.7650	0.8466
Ethnic Minorities	0.9960	0.5714	0.8000	0.6857
International Trade	0.9830	0.9969	0.9858	0.9913

NOTES: This table presents results of performance evaluation of the SVM classifier for immigration, ethnic minorities, and international trade.

Our SVM classifier performs very well with immigration and trade. In both cases, nearly all of the relevant paragraphs are identified. Performance is poorer with ethnic minorities, but the classifier can select more than two thirds of the paragraphs of interest. This may be due to the lower number of minority-related documents in the training set. Results from the scaling model also contribute to validating the performance of the classifier.

B ANES Summary Statistics

Table A2: Summary Statistics - Discrete Variables

Variables	Pooled	2008	2012	2016
Observations	12,342	2,322	5,763	4,257
Gender				
Female	52.6	54.9	52.1	52.0
Age				
17-24	11.4	11.2	10.8	12.3
25-34	17.9	18.6	18.4	16.9
35-44	16.1	16.0	16.8	15.3
45-54	18.1	21.8	17.0	17.6
55-64	18.6	15.5	18.1	20.9
65-74	11.2	9.3	12.5	10.5
75+	6.6	7.6	6.2	6.6
Ethnic/Racial Group				
White, Non-Hispanic	71.0	74.6	70.8	69.2
Black, Non-Hispanic	11.7	11.7	12.2	11.0
Asian	6.3	4.6	5.8	7.9
Hispanic	11.1	9.1	11.2	11.9
Education				
No High School	10.1	11.9	10.1	9.2
High School	60.1	60.1	60.3	59.9
Bachelor's Degree	29.8	28.0	29.6	31.0
Labor Market Status				
Employed	58.0	64.2	54.0	60.0
Unemployed or Temporarily Laid Off	7.0	6.1	7.2	7.3
Out of the Labor Force	34.9	29.7	38.7	32.6
One-digit SIC Industries				
A. Agriculture, Forestry, Fishing	1.7	2.3	1.2	2.1
B. Mining	0.8	1.1	0.5	1.1
C. Construction	5.0	6.4	3.7	6.1
D. Manufacturing	10.9	12.2	10.2	11.2
E. Transportation, Commun., Utilities	7.4	8.5	7.1	7.2
F. Wholesale Trade	1.5	0.5	1.8	1.7
G. Retail Trade	13.6	15.6	11.5	15.2
H. Finance, Insurance, Real Estate	5.6	5.6	5.6	5.7
I. Services	37.2	35.0	36.8	36.0
J. Public Administration	7.2	5.4	8.8	6.0
Voting				
Vote for Republican Candidate	39.7	40.9	41.3	36.9
Vote for Democratic Candidate	48.6	54.3	49.5	44.2
Attitudes towards Immigrants				
Immigration levels should decrease	44.4	45.3	44.5	43.8
Immigrants take away jobs	41.2	45.0	39.7	-

NOTES: This table reports summary statistics on discrete variables from the 2008-2016 American National Election Studies (ANES). Figures to be intended as observation shares. Self-reported industries are matched to SIC codes. All observations are weighted by ANES sampling weights.

Table A3: Summary Statistics - Continuous Variables

Variables	Pooled		2008		2012		2016	
	Mean	StdDev	Mean	StdDev	Mean	StdDev	Mean	StdDev
ΔIP_d	2.1	1.2	1.7	1.0	2.0	1.2	2.3	1.3
Feeling Thermometer								
Republican candidate	44.3	32.0	51.8	25.5	46.9	30.8	36.6	35.0
Democratic candidate	50.9	33.7	57.9	28.4	54.5	34.1	42.2	34.0
Hispanics	65.3	22.1	65.2	21.0	63.5	22.5	68.1	21.7
African Americans	66.9	21.6	68.8	20.2	64.8	22.1	69.1	21.4
Asians	66.0	20.5	65.0	19.3	64.7	20.6	68.6	20.8
Illegal Immigrants	39.5	26.7	39.3	25.8	38.1	26.4	41.9	27.6
Muslims	48.7	24.5	50.4	23.4	44.1	23.0	54.6	25.9
Christian Fundamentalists	50.1	27.8	51.6	28.4	48.8	27.5	51.1	27.5

NOTES: This table reports summary statistics on both our measure of import exposure and continuous variables from the 2008-2016 American National Election Studies (ANES). All observations are weighted by ANES sampling weights.

C Import Exposure and Voting Behavior

Using county-level data, [Autor et al. \(2017\)](#) show that commuting zone import penetration is positively associated with Republican vote gains in the 2008 and 2016 Presidential elections. Using ANES data, here we replicate and expand their findings for the 2008-16 period.

Using specification 4, we assess the relative importance of these contributing factors. First, we consider a dummy that takes value 1 if a respondent chose the Republican Presidential candidate in year t . In this case, we estimate a linear probability model. Alternatively, we consider the appreciation for each Republican Presidential candidate expressed through a “feeling thermometer”. In this case, we estimate a simple linear regression model.

Panel A of Table A4 presents estimates from a linear probability model. Consistent with [Autor et al. \(2017\)](#), exposure to Chinese import competition is positively associated with the choice of a Republican candidate in the 2008, 2012, and 2016 Presidential elections. Our estimates imply that a one standard deviation increase in import penetration raises this probability by 2.8 percentage points. The magnitude of this effect is far from negligible, thus suggesting that regional shocks from global competition do affect electoral outcomes. We corroborate this evidence by reporting results from a specification in which we consider respondents’ appreciation score for Republican Presidential candidates. We choose this dependent variable because we can leverage variability in the intensity of preferences, i.e., the extent to which respondents express positive or negative feelings towards a candidate. Estimates in panel B show a similar pattern to the linear probability specification in panel A. When the full set of controls is included, a one standard deviation increase in import penetration induces a 1 point increase in the appreciation score (a 1.9 percent increase with respect to the mean outcome). We conclude that our main result is robust to using a dependent variable with non-binary outcomes.

Table A4: Import Exposure and Preference for Republican Presidential Candidates

	(1)	(2)	(3)	(4)
	OLS	TSLS	TSLS	TSLS
Panel A: Dep. Var.: Vote for Republican Candidate = 1				
ΔIP	0.016*** (0.005)	0.021*** (0.006)	0.016*** (0.006)	0.023*** (0.007)
Mean Outcome	0.40	0.40	0.40	0.40
Observations	10,297	10,297	10,031	10,031
R^2	0.003	0.003	0.138	0.157
Panel B: Dep. Var.: Feeling Thermometer - Republican Candidate				
ΔIP	0.83*** (0.31)	1.16*** (0.34)	0.77** (0.32)	0.84** (0.41)
Mean Outcome	44.3	44.3	44.3	44.3
Observations	12,212	12,212	11,853	11,853
R^2	0.034	0.034	0.121	0.137
Demo Controls			✓	✓
Geo Controls				✓

NOTES: Panel A presents the estimated effects of district-level exposure to import competition on the choice of a Republican candidate in the 2008-2016 Presidential elections. Similarly, Panel B presents the estimated effects on appreciation for Republican candidates, as measured by “feeling thermometers”. All models allow for election year fixed effects. Observations are weighted by ANES sampling weights. Column (1) reports OLS estimates. In columns (2) through (4), ΔIP_d is instrumented with ΔIP_d^{IV} , a similar measure that replaces U.S. imports from China with Chinese manufacturing exports to 8 high-income countries. The model in column (3) controls for gender, age, education, race, and ethnicity. The model in column (4) controls for the 1990 district share of white and foreign born population, as well as the two-party Republican vote share in the 1992 Presidential election. Robust standard errors are in parentheses, and *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.