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Economic Shocks and Clinging¹

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Abstract

During his first campaign for president, Barack Obama was criticized when he argued that residents of towns with poor local labor markets “cling to guns or religion or antipathy to people who aren't like them or anti-immigrant sentiment or anti-trade sentiment as a way to explain their frustration.” We test empirically whether this is the case by examining the effect on social attitudes, as measured in the General Social Survey, of a local labor market’s exposure to import competition brought about by “the China shock,” from 1990 to 2007. We find that the economic effects of globalization do indeed change the attitudes of whites towards immigrants, minorities, religion and guns. More specifically, we find evidence of significant hardening of existing attitudes — that is, the impact of these import shocks appears concentrated in the tails of the distribution over attitudes.

1. Introduction

During his first campaign for president, Barack Obama created controversy with remarks he made about the American working class. “You go into these small towns in Pennsylvania and, like a lot of small towns in the Midwest, the jobs have been gone now for 25 years and nothing's replaced them. And it's not surprising, then, they get bitter,” said Mr. Obama, “they cling to guns

¹ We thank Duncan Hobbs for excellent research assistance. We are also grateful to Jeffrey Clemens, Brandon de la Cuesta, and seminar attendees at the 2018 Annual Meeting of the American Political Science Association for helpful comments.

or religion or antipathy to people who aren't like them or anti-immigrant sentiment or anti-trade sentiment as a way to explain their frustration” (*The Guardian*, 2008). Mr. Obama in effect argued that the social attitudes he described were caused by rapid economic change. This paper seeks to implement a test of this hypothesis. Specifically, we ask the following question: Does a local labor market’s exposure to import competition brought about by international trade affect social attitudes?

Manufacturing employment, and the socioeconomic state of many former manufacturing towns, have in many localities declined relative to four decades ago. Despite this, many common metrics used to measure the aforementioned social attitudes have in recent years trended away from the direction suggested by Mr. Obama. Despite increasing gun sales, gun ownership rates have steadily declined over the last forty years — down about 17 percentage points from peak gun ownership in the late 1970s (Smith and Son, 2015). Between 2007 and 2014, (self-identified) Christians declined as a share of the population from 78.4% to 70.6%, and the share unaffiliated with any religion increased from 16.1% to 22.8% (Smith, 2015). The 2013 Gallup Minority Rights and Relations Poll showed that the rate of approval of interracial marriage reached 87% by summer 2013 (Newport, 2013). Similarly, the belief that schools should remain segregated between African Americans and whites had already dropped to the low single digits by the late 1990s (Schuman *et al.*, 1997). Trends related to views on immigrants have been mixed recently, but Hainmueller and Hopkins (2015) argue that anti-immigrant sentiment is more likely rooted in “sociotropic” concerns about national culture rather than personal economic circumstance.

In spite of the evidence from these broad trends, many observers find something intuitive about Mr. Obama’s hypothesis. For instance, many commentators (e.g., Alden, 2016; Short,

2016; Williams-Grut, 2016) have conjectured that the 2016 election of Donald Trump as the president of the United States was driven in part by a backlash against globalization and the frustration felt by people negatively impacted by economic competition from abroad. Scholars have also tried to explain whether changing social attitudes resulting from pressures brought by economic globalization can bring about populist governments.² Funke, Schularick, and Trebesch (2016), for example, find that voters are attracted to political rhetoric that places blame for bad economic circumstances on minorities and foreigners following financial crises, and that far-right political parties increase their parliamentary vote share by 30 percent (on average) following a crisis. Furthermore, many recent studies have found strong correlations between social attitudes and both economic growth and political stability.³⁴

In this paper, we seek to further our understanding of the relationship between economic shocks and social attitudes by examining the effect on social attitudes of a local labor market's exposure to import competition brought about by the rapid changes in the Chinese economy from 1990 to 2007. We find that the sudden surge of import competition during this period did affect social attitudes in important and nuanced ways. For example, while we find that "the China shock" had relatively small effects among white Americans on attitudes towards African Americans more broadly, we also find that the effect is stronger in areas with a history of racial tension.

² Acemoglu, Egorov, and Sonin (2013) develop a formal model of populist politics as a desire for politicians to signal to skeptical voters that they are not influenced by interest groups. Rodrik (2017) argues that the recent wave of populism is a response to the redistributive effects of liberalization dwarfing its net gains. Inglehart and Norris (2016) conclude that populism is a response to cultural rather than economic displacement.

³ Algan and Cahuc, (2010; 2013) and Tabellini (2010) find that higher levels of trust and social capital promote economic growth. Higher levels of trust increase the efficiency of economic exchanges and reduce the need for costly government oversight (Durlauf and Fafchamps, 2005; Guiso, Sapienza, and Zingales, 2011).

⁴ Guiso, Herrera, and Morelli (2016) also argue that economic integration without common political institutions can lead to large welfare losses in economic downturns, particularly when countries are culturally dissimilar.

During this period, China moved away from a centrally planned economy and towards an economy in which market forces played a larger role, which increased China's productive capacity, and acceded to the World Trade Organization. These developments in China exposed other countries, including the United States, to intense and relatively sudden competition from Chinese manufacturing.

We rely heavily on Autor *et al.* (2013), which pioneered an instrumental variables approach to study the effect of import competition on local labor markets. Following Autor *et al.* (2013), we define a local labor market as a commuting zone (CZ), of which there are 741 in the United States during the period we study. Commuting zones naturally vary in their exposure to import competition from China during our sample period — the within-CZ distribution of employment over industries varies widely across CZs and, specifically, so does the importance of different manufacturing industries.

We then use Chinese exports to eight other European countries as an instrument for Chinese exports to the United States, in order to isolate the change in local import competition from China driven by changes in China's competitiveness in globalized product markets. (Again, following Autor *et al.* (2013).) This strategy allows us to focus on the change in the supply side of a product market brought about by increasing import competition from China, and filter out changes resulting from shifts in import demand. We study how changes in this “supply shock” to a local labor market affect social attitudes in that local labor market.

Our results are therefore driven by the partial equilibrium impact of relatively sudden increases in import competition in local labor markets. Globalization as a whole has, of course, increases both import and export demand, and affected economic objects other than employment — for example, the prices and variety of consumer goods. Given this, this paper does not offer

evidence on the overall effects of globalization on social attitudes, but on the more specific question: Has the economic dislocation caused by the surge in import competition from “the China shock” affected attitudes?

Our answer to this question is nuanced. On balance, we interpret our findings as lending only very limited support to the hypothesis that the economic effects of globalization affect the social attitudes of whites towards immigrants, minorities, guns and religion in the aggregate. At the same time, the increase in trade with China seems to materially harden preexisting attitudes. Specifically, the stronger a sudden surge in import competition, the more likely whites are to embrace religious fundamentalism. It is in areas that have a history of racial antipathy that “the China shock” led whites to develop more strongly negative views towards African Americans. Commuting zones with low initial levels of immigration witness a rise in anti-immigrant sentiments following sudden and intense import competition. And gun ownership becomes both even less common and even less popular in areas where gun ownership was low to begin with.

2. Economic circumstances and “clinging”

There is a rich literature on the relationship between economic circumstances and social and political attitudes. We do not attempt a comprehensive summary here, but instead highlight several papers directly relevant to our study.

Our paper focuses on the impact of international trade on social attitudes. International migration, another significant component of globalization, has also influenced these attitudes and, indeed, political outcomes, as the inflow of immigrants is generally associated with increasing support for conservative politicians and anti-immigration policies in the United States (Mayda *et al.*, 2016; Tabellini, 2017), UK (Becker and Fetzer, 2016), Italy (Barone *et al.*, 2016),

and Europe in general (Hatton, 2016). The inflow of refugees into some of the Aegean islands in Greece seems to drive similar change as well (Hangartner *et al.*, 2017).

Research using American National Election Studies (ANES) survey data generally finds pessimism about the economy (e.g., Citrin *et al.*, 1997; Burns and Gimpel, 2000) and limited job prospects (e.g., Scheve and Slaughter, 2001) are associated with anti-immigration sentiment. Studies using data from other sources paint a similar picture.⁵ Malhotra *et al.* (2013) find that the high-skilled workers whose jobs are threatened by workers with H-1B visas are more likely to oppose issuing more H-1B visas. However, they find that feelings of “culture threat” among respondents explain attitudes toward high-skilled immigrants better than concerns over job security.

More historically focused work suggests this relationship between economic circumstance and social attitudes towards immigration is not a new phenomenon. Goldin (1994) examines Congress’s historical voting record on major attempts to restrict immigration (e.g., the Literacy Test for immigrants in 1898, 1913, 1915, and 1917) and corresponding data on wages and immigration and concludes that increases in the immigrant population were correlated with greater anti-immigrant sentiment in almost all counties, with the exception of some large cities. Larger urban areas tended to become more pro-immigration as immigrants living in those cities garnered political influence over their legislators.

There is a substantial literature examining how economic conditions influence religious attitudes, often based on the idea that higher incomes increase the opportunity cost of church

⁵ McVeigh (2004), for example, finds that racial and ethnic heterogeneity, industrial heterogeneity, income inequality, and changes in economic structure are associated with increases in the popularity of hate groups or racist organizations at the county level. On the other hand, heterogeneity in educational attainment reduces the popularity of hate groups or racist organizations. Haimueller and Hiscox (2010) and Haimueller *et al.* (2015) conduct a survey focused on how U.S. employees view high-skilled and low-skilled immigrants, and find that high-skilled natives support immigration more than low-skilled natives, while both low-skilled and high-skilled natives strongly prefer high-skilled immigrants over low-skilled immigrants.

attendance and other forms of religiosity. Beckworth (2009) uses the 2001 Pew Survey and finds in the US, being unemployed boosts weekly attendance of church activities for Evangelical Protestants and that Evangelical Protestant membership growth seems to be countercyclical to the unemployment rate and other macroeconomic factors. Chen (2010) finds a similar phenomenon in Indonesia - that households in Indonesia suffering deeper economic distress from its financial crisis in the mid-1990s devoted more time to religion (e.g., communal Koran study and Islamic school attendance). In addition, Smith (1993) finds that as real wages rise, church membership in Scotland falls.

McCleary *et al.* (2006), looking at the macro level, find that *per capita* GDP has a significantly negative effect on participation in religious activities, while Iannaccone (1998) shows that family income has little effect on rates of church attendance but a strong positive effect on total giving.

How economic conditions influence views on gun ownership has not been studied extensively. Glaser and Spencer (1998) find a positive correlation between income and gun ownership, while Kleck *et al.* (2009) find no strong correlation between household income and attitudes towards gun control, suggesting direct income effects may explain the positive correlation between income and ownership (as opposed to attitudes).

As tides of populism have recently risen in various parts of the world, discussions of how globalization, both in terms of trade and immigration, might have led to such changes in political and social trends have become more prevalent.⁶

⁶ For examples see Michael Collins. "[The Pros and Cons of Globalization](#)" *Forbes*, May 6th 2015; Peter S. Goodman. "[More Wealth, More Jobs, but Not for Everyone: What fuels the Backlash on Trade](#)" *New York Times*, September 28th 2016; Gregory Mankiw. "[Why Voters Don't Buy It When Economists Say Global Trade is Good](#)", *The New York Times*, July 29th 2016; Noah Smith. "[The Dark Side of Globalization: Why Seattle's 1999 Protesters Were Right](#)" *The Atlantic*, January 6th 2014.

Studies show that the sudden increase in Chinese imports have increased the popularity of the more extreme and nationalistic political parties, policies, and candidates in the US and Western Europe,⁷ possibly due to the fact that — as Becker *et al.* (2017) and Mayda and Rodrik (2005) demonstrate — individuals working in import-competing industries are more likely to oppose trade liberalization.

An expanding body of research examines the economic and political effects of the rapid increase in Chinese imports over the last three decades. Autor, Dorn, and Hanson (2013) find increased imports from China between 1990 and 2007 explains one quarter of the decline in manufacturing employment in the United States over the same period. Acemoglu *et al.* (2016) suggest that growing import competition also contributed to weak job growth after 2000 in the US. Autor *et al.* (2014) examine the effects of import competition on individual labor market outcomes using longitudinal data on earnings from the Social Security Administration. They find individuals working in industries which experienced high growth in Chinese imports have lower cumulative earnings, are less likely to work for their original employers or in their original industries, and are more likely to obtain public disability benefits. In addition to the economic effects, several recent papers examine the effects of the “China shock” on electoral outcomes. Using congressional election data from 2002 to 2010 as well as data from the 2000, 2008, and 2016 presidential elections, Autor *et al.* (2017) find citizens in congressional districts exposed to more imports from China were more likely to vote for extreme candidates. In presidential elections, counties facing greater trade exposure shifted more toward Republican candidates. Examining parliamentary election results in 15 European countries from 1988 to 2007, Colantone and Stanig (2018b) find that people in districts exposed to greater import competition

⁷ This trend has been shown in the US (Autor *et al.*, 2016), UK (Colantone and Stanig, 2018a), Germany (Dippel *et al.*, 2016), and, more generally, Western Europe (Colantone and Stanig, 2018b).

voted more often for nationalist, isolationist, and far right parties. Colantone and Stanig (2018a) also find that support for the Leave option in the Brexit referendum was higher in areas more exposed to imports from abroad.

While an increasing number of papers examine the effects of increased imports from China on economic and electoral outcomes in the US and Europe, researchers have paid comparatively less attention to the effect of import competition on individual social attitudes. In the most closely related work to our paper, Cerrato, Ferrara, and Ruggieri (2018) use data from the American National Election Studies to establish that individuals in commuting zones exposed to greater economic shocks from Chinese imports have more negative attitudes towards immigrants and minorities, lean toward more conservative values, and are more likely to vote for Republican candidates.

We contribute to this broader literature on the relationship between economic circumstance and social attitudes, as well as to the more recent literature and public discussion on the impacts of the sudden increase in import competition from China, by studying how the “China shock” affected a range of social attitudes wider than studied in previous work. Relying on data from the General Social Survey also allows us to contrast our results with those based on other, similar surveys of social attitudes and opinions.

3. Data and methods

Our data and methods rely heavily on Autor, Dorn, and Hanson (2013) — hereafter, ADH. The data we use on import competition come from ADH, while data on social attitudes come from the General Social Survey. This section discusses the data, as well as the key variable we use to capture supply-side import competition, and our identification strategy.

3.1. Data sources

Our data on social attitudes come primarily from the General Social Survey (GSS). The GSS is a nationally representative survey conducted by the National Opinion Research Center at the University of Chicago every year from 1972-1991, in 1993, and then biannually from 1994 to 2016. Due to its long history and representative coverage of the United States, researchers have frequently used the GSS to analyze changes in individual attitudes and public opinion over time.⁸ The GSS is composed of a module of demographic questions asked every year and rotating modules on specific subjects such as immigration, race relations, and gun control. We use data starting in 1993 — the first year that geocoded variables linking respondents to counties are available — and ending in 2007. To measure exogenous shocks to local labor markets we use data on import competition from ADH, who generously provide the data used in their paper on their website.⁹

Each variable in the ADH data set is defined at the commuting-zone (CZ) level. The import competition exposure variable consists of two (approximately) ten-year changes between 1990 and 2000 and between 2000 and 2007. We match the GSS years 1993, 1994, 1996, 1998 and 2000, to the import shock from 1990-2000 and the GSS years 2002, 2004 and 2006 to the import shock from 2000-2007. We restrict our sample to non-Hispanic white respondents.

We make use of a variety of GSS questions on religion, firearms, race, and immigration. Specifically, we explore a total of 14 social attitudes variables: 6 related to race, 4 related to immigration, 2 related to firearms, and 2 related to religion. The GSS data include county-level identifiers starting in 1993, which we convert to the commuting zone level using a crosswalk

⁸ See, Schmidt (1999), Ashok, Kuziemko, and Washington (2015), and Desmet and Wacziarg (2018) for examples of papers using General Social Survey data.

⁹ We retrieved the data from David Dorn's website on June 16, 2015. <http://www.ddorn.net/data.htm>.

provided by ADH.

The six survey questions related to race are: to what degree the respondents agreed that “the government has a special obligation to help improve the living standards [of Blacks]”, “in general, how close do you feel to Blacks?”, do “people in the group [i.e., Blacks] tend to be hard-working?”, “Do people in these groups [i.e., Blacks] tend to be unintelligent or tend to be intelligent?”, whether they thought differences in racial outcomes were due to lesser “in-born ability to learn”, and whether differences in racial outcomes were because of a lack of, “the chance for education that it takes to rise out of poverty.”

The four survey questions related to immigration are: “Do you think the number of immigrants...should be increased a lot, increased a little, left the same as it is now, decreased a little, or decreased a lot?”, whether they agreed that “America should take stronger measures to exclude illegal immigrants”, whether they agreed that “immigrants take jobs away from people who were born in America”, and whether they agreed that “immigrants are generally good for America’s economy.” We use two questions about firearms: “Would you favor or oppose a law which would require a person to obtain a police permit before he or she could buy a gun?” and “Do you have in your home any guns or revolvers?” Our final questions from the GSS ask: “How fundamentalist is the respondent currently?” and “What is your religious affiliation?”

To dichotomize variables, we code the two most ‘extreme’ responses (e.g., 6 and 7 on a 7-point scale) as meaning that the respondent holds a certain view, and the remaining responses as meaning that the respondent does not hold that view.¹⁰ In effect, we count those who are

¹⁰ When the dichotomized shares are calculated, the denominator is the number of respondents in a commuting zone that answered the particular question rather than the total number of survey respondents in that year. Responses listed as “no answer” or “not applicable” were not used in the calculation.

“unsure” and those who “strongly disagree” with a view as not holding that view.¹¹ Furthermore, those who were recorded as “no answer” or “don’t know” were not counted when dichotomizing the attitudes variables. Table A1 displays means and standard deviations of the dichotomized attitudes variables across our two sample periods 1993-2000 and 2002-2007, as well as the entire period from 1993-2007. From this table we observe that average racial attitudes have not appeared to change much over time, but that average views regarding immigration, religion, gun ownership, and gun regulation have shifted over time. Table A2 displays means and standard deviations for individual characteristics that may be correlated with these attitudes across our two sample periods 1993-2000 and 2002-2007, as well as the entire period from 1993-2007. A respondent interviewed between 2002 and 2007 is less likely to be employed, less likely to be married and more likely to have a college degree, and is slightly older than a respondent interviewed between 1993 and 2000.

3.2. Methodology

Following ADH (2013), we calculate the ten-year change in local industry exposure per worker to import competition from China:

$$\Delta IPW_{ukt} = \sum_j \frac{L_{kjt}}{L_{ujt}} \frac{\Delta M_{ucjt}}{L_{kt}} \quad (1)$$

Here, L_{kt} is local employment in commuting zone k at the start of the period, t , $\frac{L_{kjt}}{L_{ujt}}$ is the share of total employment in industry j in commuting zone k at the start of period t , and ΔM_{ucjt} is the change over a ten-year period in US (u) imports from China (c) in industry j .

¹¹ Where responses to questions are assigned lower values the more a respondent agreed with a view of interest, we reverse the order of the responses. For example, if a response of 1 out of 7 corresponds to the most anti-immigrant view in the original GSS data, we reverse the order of these responses to ensure that an increase in a commuting zone’s average response to this question can be interpreted as an increase in anti-immigrant sentiment.

Part of the exposure measured using (1) could be driven by an increase in US demand for Chinese imports. Since we are interested specifically in the effect of the exposure of local labor markets to the supply shock caused by China's surging exports to the US on social attitudes, we disentangle supply shocks from demand shocks by identifying variation in import exposure driven by supply-side factors. We follow ADH (2013) by instrumenting for ΔIPW_{ukt} using the contemporaneous ten-year change in imports from China to eight other developed countries (ΔM_{ocjt}),¹² assigned to commuting zones using 10-year-lagged employment variables.¹³

$$\Delta IPW_{okt} = \sum_j \frac{L_{kjt-1}}{L_{ujt-1}} \frac{\Delta M_{ocjt}}{L_{kt-1}} \quad (2)$$

The identifying assumptions here are that the common component of the change in imports from China across these countries is driven by changes in China's competitiveness, and not by any commonality in domestic demand across these countries for imports from China. In addition, the exclusion restriction requires that imports to other countries do not differentially affect local social attitudes in the US except for through this supply-side commonality. ADH (2013) demonstrate, through a series of tests for potential other channels such as export competition, that this restriction is largely satisfied as far as local manufacturing employment is concerned. Given that the years in the GSS do not match with the import shock periods constructed by ADH, we interpolate as follows:

$$\Delta IPW_{ukt}^{new} = \Delta IPW_{ukt}^{ADH} * \frac{t_{GSS} - t_{ADH}^{start}}{t_{ADH}^{end} - t_{ADH}^{start}} \quad (3)$$

Where ΔIPW_{ukt}^{new} is our adjusted measure of import competition, ΔIPW_{ukt}^{ADH} is the import competition measure from ADH, t_{GSS} is the year the respondent was sampled in the GSS survey,

¹² The eight countries are Australia, Denmark, Finland, Germany, Japan, New Zealand, Spain, and Switzerland.

¹³ We use lagged employment data to mitigate simultaneity and omitted variable bias.

t_{ADH}^{start} is the first year of the closest shock period measured by ADH (1990 or 2000) and t_{ADH}^{end} is the last year of the matched shock period measured by ADH (2000 or 2007). We perform this adjustment to account for the fact that the import shock likely builds over time. The import shock measure from ADH for 1990-2000, for example, measures the cumulative change over the entire 10-year period from 1990 to 2000. A survey respondent from 1994 likely has not experienced the full effect of the shock represented by the 10-year change from ADH.

Having isolated the China shock, we can now study whether changes in a local labor market's globalization-driven exposure to import competition affects broader social attitudes. Specifically, we regress all of variables measuring social attitudes on our local labor market import exposure variable using the following equation:

$$y_{ikt} = \beta_0 + \beta_1 \Delta IPW_{ukt}^{new} + X_{it} \beta_2 + \gamma_d + \tau_t + \varepsilon_{ikt} \quad (4)$$

where y_{ikt} is a dichotomous measure of attitudes coded as 1 if a respondent i living in commuting zone k within census division d in GSS survey year t holds a particular view and 0 otherwise, and the vector X_{it} is a set of individual-level control variables for each respondent i in GSS survey year t including the age, sex, and employment status of the respondent, as well as whether or not the respondent has a college degree, is married, or has children. γ_d and τ_t are census division fixed effects and GSS survey year fixed effects. The errors ε_{ikt} , are clustered at the commuting zone level.

It could, of course, be possible that parts of the country hit by different import exposure shocks experienced different trends in social attitudes before getting hit by these shocks. Figure 1 displays the share of respondents holding a particular view at the state level in the states most and least exposed to import competition over the period 1990-2010. We aggregate commuting zone level import shocks to the state level here, using a population-weighted average, because

county identifiers are not available for the GSS data prior to 1993. Reassuringly, we observe little evidence of trends in attitudes prior to the arrival of the import shocks.

4. Results

We study the effect of import competition in a local labor market on a variety of social attitudes: religious fundamentalism, religious adherence, views towards African Americans, views towards immigrants, and views on guns.

4.1. Exposure to import competition and religion

Tables 1 and 2 explore whether exposure to import competition affects religious attitudes among whites. Table 1 looks at the effect of import exposure on religious fundamentalism. Table 2 examines the effect of import competition on religious adherence.

From table 1, we see that increases in exposure to Chinese imports increase the likelihood that a person identifies as fundamentalist. This result is statistically significant at the 5 percent significance level and is robust across three of four specifications. In column 1, we estimate a simple OLS model without instruments, fixed effects, or controls and find that a \$1,000 per worker increase in import exposure increases the likelihood a person identifies as fundamentalist by 2.6 percentage points. Such an increase in import exposure roughly translates to moving from the 25th percentile to the 75th percentile of exposure. Our IV estimate from column 2 of 2.3 percentage points is slightly smaller than our OLS estimate. The effect of import exposure appears to increase, when we add GSS survey year and census division fixed effects (column 3) and does not change greatly when we add individual level controls (column 4). In our most restrictive specification in column 4, which includes survey year fixed effects, census division fixed effects and the individual-level controls outlined in equation 4, we estimate that a \$1,000

per worker increase in import exposure is associated with a 4.0 percent increase in the likelihood a person will identify as fundamentalist. In contrast, table 2 suggests that increases in exposure to Chinese imports have no significant impact on whether or not a person identifies as religious. In three of four specifications, the coefficient on the China import shock variable is economically small and statistically indistinguishable from zero. Overall, heightened import exposure appears to strengthen existing religious convictions, but does not appear to push people toward identifying as religious.

4.2. Exposure to import competition and race

Table 3 explores the effect of import exposure on the views of whites towards African Americans. Each column reports results using a different question about African Americans as the dependent variable. All regressions are estimated using the lagged changes in import exposure to other high income countries as an instrument, and include survey year and census division fixed effects, as well as individual-level controls described in equation 4. From Table 3, we observe that increases in exposure to imports from China have no significant effect on how white respondents view African Americans.

Table 4 repeats the regressions from Table 3 restricting the sample to commuting zones containing at least one county mentioned in the 1965 Voting Rights Act. A \$1,000 per worker increase in import exposure increases the probability that a white respondent feels, African Americans are not hardworking by 3.7 percentage points, African Americans are less intelligent than whites by 2.2 percentage points, and African Americans lack education by 5.6 percentage points. In contrast to the more modest results from Table 4, the results from Table 5 suggest that increases in import exposure from China significantly harden racial attitudes among whites in areas with a history of racial tension and oppression.

4.3. Exposure to import competition and immigrants

Table 5 and appendix table A3 report results from estimating equation 4 where the dependent variable is the probability that a person in a commuting zone holds a certain belief about immigrants or immigration, defined as having reported one of the two most extreme scores. Each column reports results estimating equation 4 using a different question about immigrants as the dependent variable. All specifications include survey year fixed effects, census division fixed effects and individual-level controls.

Appendix table A3, shows that a \$1,000 increase in per worker import exposure is associated with a 4.1 percentage point increase in the probability a white respondent feels the United States should let in fewer immigrants, and a 6.3 percentage point increase in the probability a white respondent believes the United States should do more to exclude illegal immigrants. We find no significant effect on the probability a person believes that immigrants are not good for America, immigrants take jobs from native-born workers, or that the United States should let in fewer total immigrants.

In addition to examining the average effect of import completion on attitudes towards immigration, we also explore whether this effect differs depending on the initial share of the population who are immigrants. Panels A and B of table 5 explore the relationship between import competition and views on immigrants and immigration among whites living in areas with a relatively low share of immigrants at the start of the shock period (1990 or 2000). Panel A shows that in commuting zones in the bottom quartile of immigrants as a share of total population in 1990, a \$1,000 increase in per worker import exposure is associated with an 8.3 percent increase in the probability a white respondent believes that immigrants are not good for the United States, a 10.2 percent increase in the probability a respondent believes immigrants

take jobs from native-born workers, an 8.2 percent increase in the likelihood a respondent feels the United States should let in fewer immigrants, and a 8.6 percent increase in the likelihood a respondent believes that the United States should do more to exclude undocumented immigrants. Similarly, from panel B we see that in commuting zones in the bottom decile of immigrants as a share of total population in 1990, a \$1,000 increase in per worker import exposure is associated with a 8.1 percent increase in the probability a white respondent believes that immigrants are not good for the United States, a 6.3 percent increase in the probability a respondent believes immigrants take jobs from native-born workers, a 4.8 percent increase in the likelihood a respondent feels the United States should let in fewer immigrants, and a 6.9 percent increase in the likelihood a respondent believes that the United States should do more to exclude undocumented immigrants. Overall increases in import exposure appear to harden attitudes towards immigrants among white Americans, particularly in areas where the preexisting share of immigrants is low.

4.4 Exposure to import competition and firearms

Finally, tables 6 and 7 and appendix tables A4 and A5 explore the relationship between import competition and attitudes of whites towards gun ownership and gun regulation. From appendix table A4, we observe increases in import exposure are associated with a 3.9 percent increase in the probability a white resident owns a firearm on average, after including individual-level controls. In panels A and B of table 6, we examine whether this effect differs depending on the stringency of background checks in a given state. We use the same specifications mentioned in tables 1 and 2. We use data on background checks from the FBI National Instant Criminal Background Check System.¹⁴ We observe increases in import competition are associated with

¹⁴ https://www.fbi.gov/file-repository/nics_firearm_checks_-_year_by_state_type.pdf

higher rates of gun ownership on average, but lower rates of gun ownership among states in the bottom quartile or bottom decile of total background checks.

Table 7 and appendix table A5 report results from the same specifications on whether an individual disapproves requiring a police permit to purchase a firearm. From appendix table A5, we observe that, all four specifications, increases in import exposure from China appear to have no effect on the views of white residents regarding gun licensing laws on average. From panel A of table 7, we observe increases in import competition appear to significantly increase approval for tighter restrictions in states in the bottom quartile of total background checks. From panel B of table 7, we see similar results looking at states in the bottom decile of total background checks. Overall, increases in import exposure are associated with increases in the likelihood a respondent owns a gun, and appear to harden attitudes against gun ownership in areas where few people own guns.

5. Concluding discussion

These results suggest a nuanced relationship between the economic disruption caused by globalization — specifically, a local labor market’s exposure to import penetration from the “China shock” — and social attitudes among whites. Increases in import exposure are associated with an increased probability that white Americans identify as fundamentalist, but appear to have no effect on whether a person views himself as religious or not. Exposure to imports from China has no discernable effect on gun ownership or disapproval of gun regulation overall, but it makes people in areas where guns are not popular to begin with even more skeptical of gun ownership. Among the general white population, an increase in import competition only marginally increases support for restrictions on immigration. However, in areas with small immigrant

populations, it both increases support for more restrictive immigration policies and triggers more negative views of immigrants.

A similar picture arises when we examine the relationship between a sudden surge in import competition and the racial attitudes of white Americans. While racial attitudes grow slightly more negative in general, in labor markets containing at least one country mentioned in the 1965 Voting Rights Act a sudden increase in the effects of globalization materially increases the probability white respondents report feeling African Americans are lazy, believing African Americans are generally unintelligent, and who believe that African Americans lack education. These results suggest economic disruption from increased competition from abroad may lead to a hardening of racial views in areas with a history of racial tension.

Taken as a whole, the economic effects of globalization materially affect the social attitudes of whites towards immigrants, minorities, guns and religion. They do so by hardening existing views, as opposed to altering attitudes across the board. These results are, of course, ultimately derived from variation in import competition. The availability of cheaper goods and services facilitated by increases in foreign output and productivity raises the purchasing power of American consumers, and globalization increases demand for exports, along with labor demand in export-intensive firms and industries. This may well, through these channels, have the opposite effect on the social views we study here, which leaves the aggregate impact of increased globalization on said views in both specific areas and the country as a whole to be determined.

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Table 1: Import Competition and Religious Fundamentalism among White Americans, 1993-2007

Dependent variable: Probability of identifying as fundamentalist among white Americans				
	(1)	(2)	(3)	(4)
Estimator	OLS	IV	IV	IV
		Panel 1: 2SLS second-stage estimates		
Change in imports from China to US per worker	0.026** (0.010)	0.023 (0.016)	0.044*** (0.017)	0.040*** (0.015)
GSS survey year fixed effects	No	No	Yes	Yes
Census division fixed effects	No	No	Yes	Yes
Individual-level controls	No	No	No	Yes
Dependent variable mean	0.274	0.274	0.274	0.274
Observations	16811	16811	16811	16741
		Panel 2: 2SLS first-stage estimates		
Change in imports from China to other countries per worker		0.468*** (0.072)	0.432*** (0.090)	0.432*** (0.090)
First-stage F-statistic		42.347	22.986	22.957

Notes: Standard errors clustered by commuting zone in parentheses. Regressions weighted by GSS population weights. The survey question used is: "How fundamentalist is the respondent currently?" GSS data from 1993-2000 are matched to the 1990-2000 import shock in the Autor *et al.* (2013) data, and data from 2002-2007 are matched to the 2000-2007 import shock. Regressions with individual level controls include indicator variables for sex, age, employment status, marital status, education, and whether a respondent has children. *** p<0.01, ** p<0.05, * p<0.1

Table 2: Import Competition and Religious Adherence among White Americans, 1993-2007

Dependent variable: Probability of identifying as religious among white Americans				
	(1)	(2)	(3)	(4)
Estimator	OLS	IV	IV	IV
		Panel 2. 2SLS second-stage estimates		
Change in imports from China to US per worker	-0.004 (0.004)	0.015* (0.008)	0.010 (0.006)	0.006 (0.006)
GSS survey year fixed effects	No	No	Yes	Yes
Census division fixed effects	No	No	Yes	Yes
Individual-level controls	No	No	No	Yes
Dependent variable mean	0.858	0.858	0.858	0.859
Observations	17574	17574	17574	17486
		Panel 2: 2SLS first-stage estimates		
Change in imports from China to other countries per worker		0.433*** (0.091)	0.426*** (0.091)	0.426*** (0.091)
First-stage F-statistic		22.449	21.996	21.927

Notes: Standard errors clustered by commuting zone in parentheses. Regressions weighted by GSS population weights. The survey question is: "What is your religious preference? Is it Protestant, Catholic, Jewish, some other religion, or no religion?". We define a dependent variable equal to 1 if a person lists a religious preference and 0 if they respond "no religion". GSS data from 1993-2000 are matched to the 1990-2000 import shock in the *Autor et al.* (2013) data, and data from 2002-2007 are matched to the 2000-2007 import shock. Regressions with individual level controls include indicator variables for sex, age, employment status, marital status, education, and whether a respondent has children. *** p<0.01, ** p<0.05, * p<0.1.

Table 3: Import Competition and Views Towards African Americans among White Americans, 1993-2007

Dependent variable: Probability of whites holding view about African Americans						
	(1)	(2)	(3)	(4)	(5)	(6)
	Feel no/little closeness	Not hardworking	Less intelligent	Lack of education	Less ability to learn	No government help
Panel 1: 2SLS second stage estimates						
Change in imports from China to US per worker	0.003 (0.007)	0.003 (0.006)	0.008 (0.005)	0.017 (0.012)	-0.003 (0.007)	0.009 (0.009)
Dependent variable mean	0.090	0.135	0.045	0.559	0.100	0.581
Observations	6515	7762	6577	9045	9070	9198
Panel 2: 2SLS first stage estimates						
Change in imports from China to other countries per worker	0.473*** (0.103)	0.502*** (0.087)	0.502*** (0.087)	0.494*** (0.085)	0.496*** (0.086)	0.511*** (0.092)
First-stage F-statistic	21.320	33.641	32.943	33.606	33.480	30.874

Notes: Observation counts vary by variable depending on the number of respondents in a commuting zone who answered the question each survey year. Each column uses answers to a question or statement about African Americans as the dependent variable: (1) "How close do you feel to blacks?" (2) "Do blacks tend to be hardworking or lazy?" (3) "Do blacks tend to be intelligent or unintelligent?" (4) "Are blacks worse off because they don't have the chance for education it takes to rise out of poverty?" (5) "Are blacks worse off because they have less ability to learn?" (6) "Does the government have a special obligation to help improve living standards of blacks?" All regressions include individual-level controls for sex, age, employment status, marital status, education, and whether a respondent has children, as well as dummies for census division and survey year. GSS data from 1993-2000 are matched to the 1990-2000 import shock in the Autor *et al.* (2013) data, and data from 2002-2007 are matched to the 2000-2007 import shock. Standard errors clustered by commuting zone in parentheses. Regressions weighted by GSS population weights. *** p<0.01, ** p<0.05, * p<0.1.

Table 4: Import Competition and Views Towards African Americans among White Americans in Voting Rights Commuting Zones, 1993-2007

Dependent variable: Probability of holding view about African Americans among white Americans						
	(1)	(2)	(3)	(4)	(5)	(6)
	Feel no/little closeness	Not hardworking	Less intelligent	Lack of education	Less ability to learn	No government help
Panel 1: 2SLS second stage estimates						
Change in imports from China to US per worker	0.013 (0.009)	0.037* (0.020)	0.022* (0.012)	0.056** (0.025)	0.019 (0.022)	0.013 (0.024)
Dependent variable mean	0.066	0.164	0.051	0.648	0.097	0.640
Observations	1138	1392	1152	1645	1650	1647
Panel 2: 2SLS first stage estimates						
Change in imports from China to other countries per worker	0.782*** (0.159)	0.735*** (0.144)	0.794*** (0.161)	0.675*** (0.121)	0.669*** (0.121)	0.698*** (0.122)
First-stage F-statistic	29.919	38.995	35.958	30.548	31.218	29.170

Notes: Observation counts vary by variable depending on the number of respondents in a commuting zone who answered the question each survey year. Each column uses answers to a question or statement about African Americans as the dependent variable: (1) "How close do you feel to blacks?" (2) "Do blacks tend to be hardworking or lazy?" (3) "Do blacks tend to be intelligent or unintelligent?" (4) "Are blacks worse off because they don't have the chance for education it takes to rise out of poverty?" (5) "Are blacks worse off because they have less ability to learn?" (6) "Does the government have a special obligation to help improve living standards of blacks?" All regressions include individual-level controls for sex, age, employment status, marital status, education, and whether a respondent has children, as well as dummies for census division and survey year. GSS data from 1993-2000 are matched to the 1990-2000 import shock in the Autor *et al.* (2013) data, and data from 2002-2007 are matched to the 2000-2007 import shock. Standard errors clustered by commuting zone in parentheses. Regressions weighted by GSS population weights. The sample is restricted to commuting zones with at least one county mentioned in the 1965 Voting Rights Act. *** p<0.01, ** p<0.05, * p<0.1.

Table 5 Panel A: Import Competition and Views Towards Immigrants among White Americans in Low Immigration Commuting Zones, 1993-2007

Dependent variable: Probability of holding view about immigrants among white Americans				
	(1)	(2)	(3)	(4)
	Immigrants not good	Immigrants take jobs	Let in fewer immigrants	Do more to exclude illegals
Panel 1: 2SLS second-stage estimates				
Change in imports from China to US per worker	0.008 (0.030)	0.022 (0.023)	0.034 (0.022)	0.058* (0.031)
Bottom quartile share of foreign born population start of period	0.075*** (0.024)	0.080*** (0.030)	0.048** (0.019)	0.028 (0.020)
Change in imports from China to US per worker * bottom quartile share of foreign born population start of period	0.083*** (0.031)	0.102*** (0.039)	0.082*** (0.025)	0.086*** (0.028)
Dependent variable mean	0.295	0.460	0.612	0.768
Observations	1961	1990	2536	1983
Panel 2: 2SLS first-stage estimates				
Change in imports from China to other countries per worker	0.294*** (0.087)	0.309*** (0.092)	0.329*** (0.095)	0.308*** (0.089)
Change in imports from China to US per worker * bottom quartile share of foreign born population start of period	0.524*** (0.055)	0.524*** (0.055)	0.481*** (0.059)	0.528*** (0.057)
First-stage F-statistic	33.426	34.272	27.198	34.101
Notes: Observation counts vary by variable depending on the number of respondents in a commuting zone who answered the question each survey year. Each column uses answers to a question or statement about immigrants as the dependent variable: (1) "Immigrants are generally good for America's economy." (2) "Immigrants take jobs away from people who were born in America." (3) "Do you think the number of immigrants from foreign countries who are permitted to come to the United States to live should be increased a lot, increased a little, left the same as it is now, decreased a little, or decreased a lot?" (4) "America should take stronger measures to exclude illegal immigrants." Data on the share of foreign born population in 1990 and 2000 come from Autor <i>et al.</i> (2013). All regressions include individual-level controls for sex, age, employment status, marital status, education, and whether a respondent has children, as well as dummies for census division and survey year. GSS data from 1993-2000 are matched to the 1990-2000 import shock in the Autor <i>et al.</i> (2013) data, and data from 2002-2007 are matched to the 2000-2007 import shock. Standard errors clustered by commuting zone in parentheses. Regressions weighted by GSS population weights. *** p<0.01, ** p<0.05, * p<0.1.				

Table 5 Panel B: Import Competition and Views Towards Immigrants among White Americans in Low Immigration Commuting Zones, 1993-2007

Dependent variable: Probability of holding view about immigrants among white Americans

	(1)	(2)	(3)	(4)
	Immigrants not good	Immigrants take jobs	Let in fewer immigrants	Do more to exclude illegals
Panel 1: 2SLS second-stage estimates				
Change in imports from China to US per worker	-0.001 (0.033)	0.026 (0.027)	0.039* (0.022)	0.061* (0.032)
Bottom decile share of foreign born population start of period	0.081*** (0.029)	0.037 (0.028)	0.009 (0.017)	0.008 (0.024)
Change in imports from China to US per worker * bottom decile share of foreign born population start of period	0.081** (0.035)	0.063** (0.030)	0.048** (0.022)	0.069** (0.028)
Dependent variable mean	0.294	0.458	0.612	0.768
Observations	1961	1990	2536	1983
Panel 2: 2SLS first-stage estimates				
Change in imports from China to other countries per worker	0.291*** (0.088)	0.306*** (0.093)	0.323*** (0.093)	0.305*** (0.090)
Change in imports from China to US per worker * bottom decile share of foreign born population start of period	0.522*** (0.059)	0.522*** (0.060)	0.490*** (0.048)	0.531*** (0.064)
First-stage F-statistic	5.572	5.496	6.072	5.926

Notes: Observation counts vary by variable depending on the number of respondents in a commuting zone who answered the question each survey year. Each column uses answers to a question or statement about immigrants as the dependent variable: (1) "Immigrants are generally good for America's economy." (2) "Immigrants take jobs away from people who were born in America." (3) "Do you think the number of immigrants from foreign countries who are permitted to come to the United States to live should be increased a lot, increased a little, left the same as it is now, decreased a little, or decreased a lot?" (4) "America should take stronger measures to exclude illegal immigrants." Data on the share of foreign born population in 1990 and 2000 come from Autor *et al.* (2013). All regressions include individual-level controls for sex, age, employment status, marital status, education, and whether a respondent has children, as well as dummies for census division and survey year. GSS data from 1993-2000 are matched to the 1990-2000 import shock in the Autor *et al.* (2013) data, and data from 2002-2007 are matched to the 2000-2007 import shock. Standard errors clustered by commuting zone in parentheses. Regressions weighted by GSS population weights. *** p<0.01, ** p<0.05, * p<0.1.

Table 6 Panel A: Import Competition and Gun Ownership among White Americans in Low Background-Check States, 1993-2007

Dependent variable: Probability of living in a household with a gun among white Americans				
	(1)	(2)	(3)	(4)
Estimator	OLS	IV	IV	IV
		Panel 1: 2SLS second-stage estimates		
Change in imports from China to US per worker	0.018 (0.011)	0.028* (0.015)	0.045*** (0.018)	0.039** (0.016)
Change in imports from China to US per worker * Bottom quartile background checks in 2000	-0.088*** (0.028)	-0.093** (0.038)	0.029 (0.041)	0.038 (0.039)
Total effect of change in imports in low background check commuting zones	-0.071*** (0.026)	-0.065 (0.040)	0.074 (0.051)	0.077 (0.049)
GSS survey year fixed effects	No	No	Yes	Yes
Census division fixed effects	No	No	Yes	Yes
Individual-level controls	No	No	No	Yes
Dependent variable mean	0.202	0.202	0.202	0.202
Observations	9123	9123	9123	9082
		Panel 2: 2SLS first-stage estimates		
Change in imports from China to other countries per worker		0.578*** (0.064)	0.561*** (0.076)	0.561*** (0.076)
Change in imports from China to other countries per worker * Bottom quartile background checks in 2000		0.456*** (0.084)	0.402*** (0.090)	0.402*** (0.090)
First-stage F-statistic		23.799	8.753	8.856

Notes: Standard errors clustered by commuting zone in parentheses. Regressions weighted by GSS population weights. The survey question used is "Would you favor or oppose a law which would require a person to obtain a police permit before he or she could buy a gun?" GSS data from 1993-2000 are matched to the 1990-2000 import shock in the Autor *et al.* (2013) data, and data from 2002-2007 are matched to the 2000-2007 import shock. Data on background checks come from the FBI National Instant Criminal Background Check System. Regressions with individual level controls include indicator variables for sex, age, employment status, marital status, education, and whether a respondent has children. *** p<0.01, ** p<0.05, * p<0.1.

Table 6 Panel B: Import Competition and Gun Ownership among White Americans in Low Background-Check States, 1993-2007

Dependent variable: Probability of living in a household with a gun among white Americans				
	(1)	(2)	(3)	(4)
Estimator	OLS	IV	IV	IV
		Panel 1: 2SLS second-stage estimates		
Change in imports from China to US per worker	0.011 (0.011)	0.016 (0.014)	0.047** (0.020)	0.041** (0.020)
Change in imports from China to US per worker * Bottom decile background checks in 2000	-0.173*** (0.025)	-0.188*** (0.033)	-0.093*** (0.029)	-0.102*** (0.028)
Total effect of change in imports in low background check commuting zones	-0.162*** (0.028)	-0.172*** (0.038)	-0.046 (0.042)	-0.060 (0.040)
GSS survey year fixed effects	No	No	Yes	Yes
Census division fixed effects	No	No	Yes	Yes
Individual-level controls	No	No	No	Yes
Dependent variable mean	0.438	0.438	0.438	0.439
Observations	9123	9123	9123	9082
		Panel 2: 2SLS first-stage estimates		
Change in imports from China to other countries per worker		0.810*** (0.097)	0.853*** (0.092)	0.853*** (0.091)
Change in imports from China to other countries per worker * Bottom decile background checks in 2000		0.578*** (0.079)	0.503*** (0.085)	0.502*** (0.085)
First-stage F-statistic		21.425	11.485	11.522

Notes: Standard errors clustered by commuting zone in parentheses. Regressions weighted by GSS population weights. The survey question used is "Would you favor or oppose a law which would require a person to obtain a police permit before he or she could buy a gun?" GSS data from 1993-2000 are matched to the 1990-2000 import shock in the Autor *et al.* (2013) data, and data from 2002-2007 are matched to the 2000-2007 import shock. Data on background checks come from the FBI National Instant Criminal Background Check System. Regressions with individual level controls include indicator variables for sex, age, employment status, marital status, education, and whether a respondent has children. *** p<0.01, ** p<0.05, * p<0.1.

Table 7 Panel A: Import Competition and Attitudes Toward Gun Licensing Laws among White Americans in Low Background-Check States, 1993-2007

Dependent variable: Probability of opposing requirement for police permit to own gun among white Americans				
	(1)	(2)	(3)	(4)
Estimator	OLS	IV	IV	IV
		Panel 1: 2SLS second-stage estimates		
Change in imports from China to US per worker	0.004 (0.006)	0.010 (0.010)	0.018 (0.012)	0.016 (0.012)
Change in imports from China to US per worker * Bottom quartile background checks in 2000	-0.024 (0.017)	-0.036* (0.019)	0.013 (0.016)	0.018 (0.016)
Total effect of change in imports in low background check commuting zones	-0.021 (0.016)	-0.026 (0.019)	0.031 (0.019)	0.034* (0.019)
GSS survey year fixed effects	No	No	Yes	Yes
Census division fixed effects	No	No	Yes	Yes
Individual-level controls	No	No	No	Yes
Dependent variable mean	0.202	0.202	0.202	0.202
Observations	9062	9062	9062	9020
		Panel 2: 2SLS first-stage estimates		
Change in imports from China to other countries per worker		0.581*** (0.064)	0.562*** (0.076)	0.562*** (0.076)
Change in imports from China to other countries per worker * Bottom quartile background checks in 2000		0.454*** (0.084)	0.402*** (0.091)	0.403*** (0.090)
First-stage F-statistic		23.465	8.836	8.955

Notes: Standard errors clustered by commuting zone in parentheses. Regressions weighted by GSS population weights. The survey question used is "Would you favor or oppose a law which would require a person to obtain a police permit before he or she could buy a gun?" GSS data from 1993-2000 are matched to the 1990-2000 import shock in the Autor *et al.* (2013) data, and data from 2002-2007 are matched to the 2000-2007 import shock. Data on background checks come from the FBI National Instant Criminal Background Check System. Regressions with individual level controls include indicator variables for sex, age, employment status, marital status, education, and whether a respondent has children. *** p<0.01, ** p<0.05, * p<0.1.

Table 7 Panel B: Import Competition and Attitudes Toward Gun Licensing Laws among White Americans in Low Background-Check States, 1993-2007

Dependent variable: Probability of opposing requirement for police permit to own gun among white Americans

	(1)	(2)	(3)	(4)
Estimator	OLS	IV	IV	IV
	Panel 1: 2SLS second-stage estimates			
Change in imports from China to US per worker	0.002 (0.006)	0.006 (0.010)	0.018 (0.012)	0.017 (0.012)
Change in imports from China to US per worker * Bottom decile background checks in 2000	-0.074** (0.028)	-0.102*** (0.023)	-0.061*** (0.020)	-0.057** (0.023)
Total effect of change in imports in low background check commuting zones	-0.072** (0.047)	-0.097*** (0.049)	-0.043* (0.040)	-0.041 (0.042)
GSS survey year fixed effects	No	No	Yes	Yes
Census division fixed effects	No	No	Yes	Yes
Individual-level controls	No	No	No	Yes
Dependent variable mean	0.199	0.199	0.199	0.199
Observations	9062	9062	9062	9020
	Panel 2: 2SLS first-stage estimates			
Change in imports from China to other countries per worker		0.520*** (0.081)	0.488*** (0.104)	0.487*** (0.104)
Change in imports from China to other countries per worker * Bottom decile background checks in 2000		0.484*** (0.043)	0.423*** (0.057)	0.423*** (0.057)
First-stage F-statistic		21.414	11.527	11.575

Notes: Standard errors clustered by commuting zone in parentheses. Regressions weighted by GSS population weights. The survey question used is "Would you favor or oppose a law which would require a person to obtain a police permit before he or she could buy a gun?" GSS data from 1993-2000 are matched to the 1990-2000 import shock in the Autor *et al.* (2013) data, and data from 2002-2007 are matched to the 2000-2007 import shock. Data on background checks come from the FBI National Instant Criminal Background Check System. Regressions with individual level controls include indicator variables for sex, age, employment status, marital status, education, and whether a respondent has children. *** p<0.01, ** p<0.05, * p<0.1.

Table A1: Summary Statistics for Dichotomized Attitudes Variables from the General Social Survey

	Views towards African Americans: All available commuting zones			Views towards African Americans: Voting Rights Act commuting zones		
	1993-2000	2002-2007	1993-2007	1993-2000	2002-2007	1993-2007
Feel little/no closeness	0.112 (0.315)	0.063 (0.244)	0.090 (0.287)	0.0894 (0.286)	0.032 (0.176)	0.065 (0.247)
Not hardworking	0.149 (0.356)	0.109 (0.311)	0.135 (0.342)	0.179 (0.383)	0.130 (0.337)	0.163 (0.370)
Less intelligent	0.054 (0.226)	0.031 (0.174)	0.045 (0.207)	0.059 (0.236)	0.036 (0.187)	0.050 (0.219)
Less ability to learn	0.109 (0.311)	0.082 (0.274)	0.100 (0.301)	0.105 (0.307)	0.077 (0.267)	0.097 (0.296)
Lack of education	0.551 (0.497)	0.580 (0.494)	0.560 (0.496)	0.638 (0.481)	0.673 (0.469)	0.648 (0.478)
No government help	0.581 (0.493)	0.582 (0.493)	0.581 (0.493)	0.651 (0.477)	0.605 (0.489)	0.639 (0.480)
	Views towards immigrants: All available commuting zones			Views towards immigrants: High immigrant commuting zones		
	1993-2000	2002-2007	1993-2007	1993-2000	2002-2007	1993-2007
Not good for US	0.338 (0.473)	0.249 (0.432)	0.295 (0.456)	0.261 (0.440)	0.199 (0.400)	0.222 (0.416)
Take away jobs	0.479 (0.500)	0.439 (0.497)	0.460 (0.498)	0.380 (0.487)	0.343 (0.476)	0.357 (0.480)
Let in fewer	0.674 (0.469)	0.575 (0.494)	0.612 (0.487)	0.601 (0.491)	0.463 (0.500)	0.515 (0.500)
More to exclude illegals	0.811 (0.392)	0.722 (0.448)	0.768 (0.422)	0.851 (0.357)	0.630 (0.484)	0.714 (0.452)
	Identifies as fundamentalist			Identifies as religious		
	1993-2000	2002-2007	1993-2007	1993-2000	2002-2007	1993-2007
	0.283 (0.451)	0.263 (0.440)	0.274 (0.446)	0.850 (0.357)	0.790 (0.408)	0.831 (0.375)
	Member of household owns a gun			Disapproves of gun regulation		
	1993-2000	2002-2007	1993-2007	1993-2000	2002-2007	1993-2007
	0.449 (0.497)	0.418 (0.493)	0.439 (0.496)	0.200 (0.400)	0.209 (0.406)	0.202 (0.402)

Notes: This table presents means and standard deviations for the attitudes variables in years 1993-2000 and 2002-2007, as well as over the entire period from 1993-2007. The variables are 0-1 dichotomized responses. Results are weighted using GSS population weights.

Table A2: Summary Statistics for Individual-Level Covariates from the General Social Survey

	1993-2000	2002-2007	1993-2007
Female	0.536 (0.499)	0.536 (0.499)	0.536 (0.499)
Employed	0.666 (0.472)	0.632 (0.482)	0.651 (0.477)
Married	0.605 (0.489)	0.606 (0.489)	0.605 (0.489)
Has children	0.714 (0.452)	0.722 (0.448)	0.718 (0.450)
Has college degree	0.249 (0.433)	0.281 (0.450)	0.263 (0.440)
Age	45.11 (16.88)	46.76 (17.15)	45.83 (17.02)

Notes: This table presents means and standard deviations for the individual-level control variables in years 1993-2000 and 2002-2007, as well as over the entire period from 1993-2007. The variables are 0-1 dichotomized responses with the exception of the age of the respondent. Results are weighted using GSS population weights.

Table A3: Import Competition and Views Towards Immigrants among White Americans, 1993-2007

Dependent variable: Probability of holding view about immigrants among white Americans				
	(1)	(2)	(3)	(4)
	Immigrants not good	Immigrants take jobs	Let in fewer immigrants	Do more to exclude illegals
Panel 1: 2SLS second-stage estimates				
Change in imports from China to US per worker	0.021 (0.030)	0.036 (0.024)	0.041* (0.021)	0.063** (0.029)
Dependent variable mean	0.294	0.458	0.612	0.768
Observations	1961	1990	2536	1983
Panel 2: 2SLS first-stage estimates				
Change in imports from China to other countries per worker	0.299*** (0.085)	0.312*** (0.089)	0.324*** (0.088)	0.313*** (0.086)
First-stage F-statistic	12.441	12.248	13.504	13.218

Notes: Observation counts vary by variable depending on the number of respondents in a commuting zone who answered the question each survey year. Each column uses answers to a question or statement about immigrants as the dependent variable: (1) "Immigrants are generally good for America's economy." (2) "Immigrants take jobs away from people who were born in America." (3) "Do you think the number of immigrants from foreign countries who are permitted to come to the United States to live should be increased a lot, increased a little, left the same as it is now, decreased a little, or decreased a lot?" (4) "America should take stronger measures to exclude illegal immigrants." All regressions include individual-level controls for sex, age, employment status, marital status, education, and whether a respondent has children, as well as dummies for census division and survey year. GSS data from 1993-2000 are matched to the 1990-2000 import shock in the Autor *et al.* (2013) data, and data from 2002-2007 are matched to the 2000-2007 import shock. Standard errors clustered by commuting zone in parentheses. Regressions weighted by GSS population weights. *** p<0.01, ** p<0.05, * p<0.1.

Table A4: Import Competition and Gun Ownership among White Americans, 1993-2007

Dependent variable: Probability of living in a household with a gun among white Americans				
	(1)	(2)	(3)	(4)
Estimator	OLS	IV	IV	IV
		Panel 1: 2SLS second-stage estimates		
Change in imports from China to US per worker	0.011 (0.011)	0.016 (0.015)	0.052** (0.020)	0.047** (0.020)
GSS survey year fixed effects	No	No	Yes	Yes
Census division fixed effects	No	No	Yes	Yes
Individual-level controls	No	No	No	Yes
Dependent variable mean	0.439	0.439	0.439	0.440
Observations	9361	9361	9361	9320
		Panel 2: 2SLS first-stage estimates		
Change in imports from China to other countries per worker		0.505*** (0.076)	0.474*** (0.098)	0.473*** (0.097)
First-stage F-statistic		44.552	23.606	23.684

Notes: Standard errors clustered by commuting zone in parentheses. Regressions weighted by GSS population weights. The survey question used is "Would you favor or oppose a law which would require a person to obtain a police permit before he or she could buy a gun?" GSS data from 1993-2000 are matched to the 1990-2000 import shock in the Autor *et al.* (2013) data, and data from 2002-2007 are matched to the 2000-2007 import shock. Data on background checks come from the FBI National Instant Criminal Background Check System. Regressions with individual level controls include indicator variables for sex, age, employment status, marital status, education, and whether a respondent has children. *** p<0.01, ** p<0.05, * p<0.1.

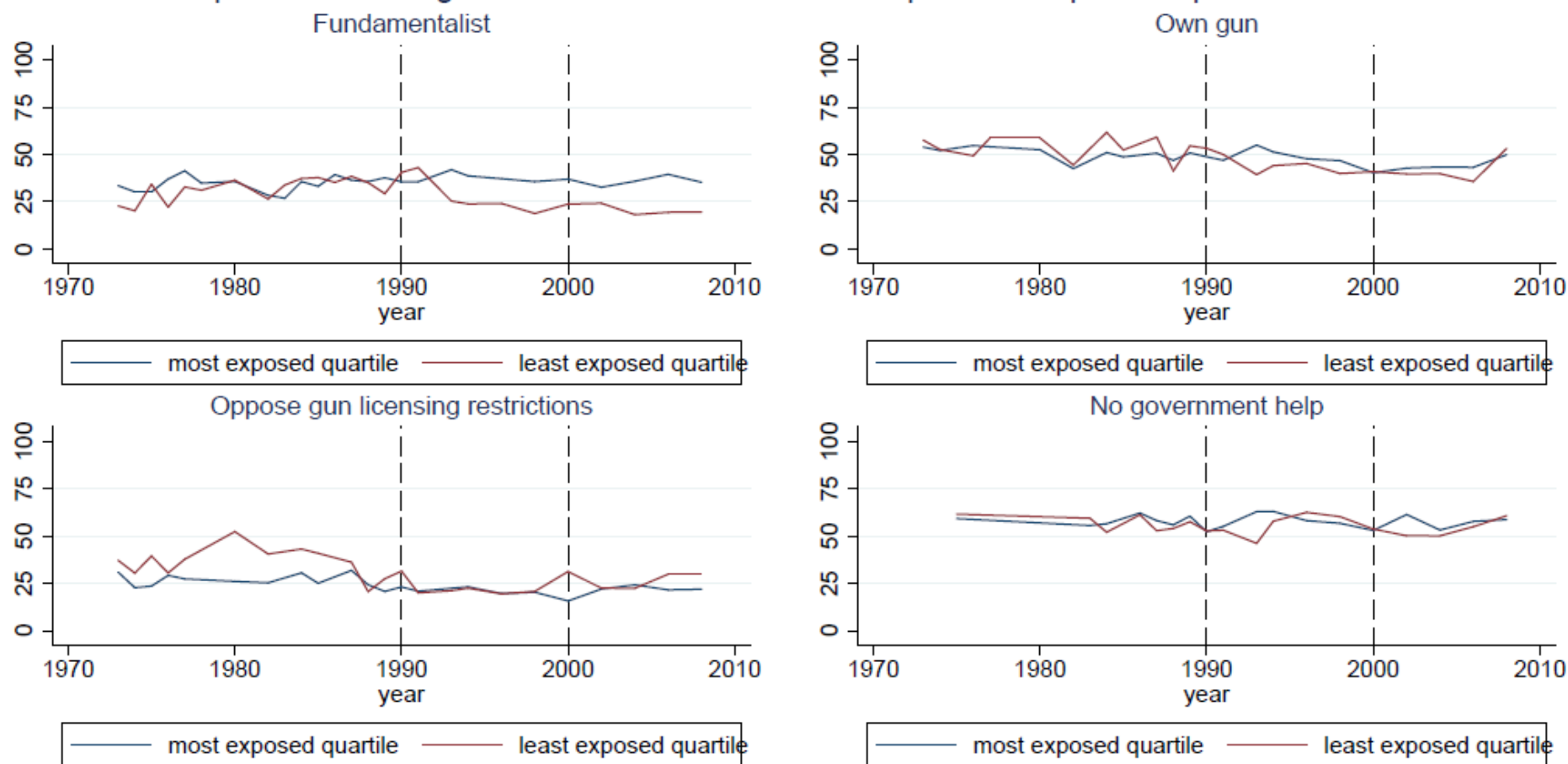
Table A5: Import Competition and Attitudes Toward Gun Licensing Laws among White Americans, 1993-2007

Dependent variable: Probability of disapproving of gun licensing laws among white Americans

	(1)	(2)	(3)	(4)
Estimator	OLS	IV	IV	IV
		Panel 1: 2SLS second-stage estimates		
Change in imports from China to US per worker	0.004 (0.006)	0.007 (0.010)	0.016 (0.012)	0.015 (0.012)
GSS survey year fixed effects	No	No	Yes	Yes
Census division fixed effects	No	No	Yes	Yes
Individual-level controls	No	No	No	Yes
Dependent variable mean	0.202	0.202	0.202	0.202
Observations	9301	9301	9301	9259
		Panel 2: 2SLS first-stage estimates		
Change in imports from China to other countries per worker		0.804*** (0.095)	0.857*** (0.092)	0.857*** (0.092)
First-stage F-statistic		44.366	23.685	23.779

Notes: Standard errors clustered by commuting zone in parentheses. Regressions weighted by GSS population weights. The survey question used is "Would you favor or oppose a law which would require a person to obtain a police permit before he or she could buy a gun?" GSS data from 1993-2000 are matched to the 1990-2000 import shock in the Autor *et al.* (2013) data, and data from 2002-2007 are matched to the 2000-2007 import shock. Regressions with individual level controls include indicator variables for sex, age, employment status, marital status, education, and whether a respondent has children. *** p<0.01, ** p<0.05, * p<0.1.

Share of respondents holding view in states most and least exposed to import competition from 1990-2010



State import competition based on a population weighted average of import competition at the commuting zone level from ADH 2013. Dashed lines at 1990 and 2000 signify start of import shock.

Figure 1 – Analysis of Pretrends: This graph displays the share of respondents holding a particular view at the state level in states most and least exposed to import competition over the period 1990-2010. The commuting zone import level shocks are aggregated to the state level using a population-weighted average because county identifiers are not available for the GSS data prior to 1993. We observe little evidence of trends in attitudes prior to the start of the import shocks.