Unemployment, Immigration, and Populism: Evidence from Two Quasi-Natural Experiments in the United States *

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Abstract

This paper examines how economic insecurity and cultural anxiety have triggered the current populism in the United States. Specifically, I exploit two quasi-natural experiments, the Great Recession and the 2014 immigration crisis, to investigate the effects of unemployment and unauthorized immigration on attitudes related to populism and populist voting in the 2016 U.S. Presidential Election. I discover that recent unemployment during the Great Recession, rather than existing unemployment from before the recession, increased the probability of attitudes forming against wealthy elites by more than 14 percentage points. Such attitudes are connected with left-wing populism. I identify perceived economic unfairness as a mechanism through which recent unemployment drove left-wing populism. However, cultural anxiety rather than economic insecurity escalated by more than 12 percentage points the probability of anti-immigration attitudes developing. These attitudes are related to right-wing populism. Furthermore, I obtain evidence that cohorts economically suffering the aftermath of the Great Recession were 42 percentage points more inclined to support left-wing populist Bernie Sanders, while cohorts residing in regions most intensely impacted by the immigration crisis were 10 percentage points more likely to vote for right-wing populist Donald Trump. My study disentangles economic insecurity from cultural anxiety and links each of them to a different type of populism.

Keywords: Populism, Unemployment, Immigration, Great Recession, Voting
JEL-codes: A13, D31, J01, J64, P16

1 Introduction

For a decade or more, during the Great Recession and alongside the recent immigrant influx, populism has been on the rise in many Western democracies including the U.S. (Dorn et al., 2016) and part of Europe (Colantone and Stanig, 2018b; Dustmann et al., 2017). The current populism has caused the collapse of the established party system and seen the rise of prominence of radical and populist politicians, e.g. Donald Trump and Bernie Sanders in the U.S., the Sweden Democrats in Sweden, Syriza and Golden Dawn in Greece, the National Rally (formerly known as the National Front) in France, and the Five Star Movement in Italy. What has driven the recent populist tide – economic insecurity or cultural anxiety? Is there a difference between the populism triggered by economic factors and that triggered by cultural factors? This study aims to answer these two questions by investigating how unemployment and unauthorized immigration caused the surge in populism and by examining the different dimensions of populism.

Populism is defined as an "ideology" that divides society into two antagonistic camps: virtuous people versus corrupt elites and the establishment, or virtuous people versus threatening outsiders (Canovan, 1999; Kriesi and Pappas, 2015; Laclau, 1977; Mudde, 2004; Mudde and Kaltwasser, 2017; Wiles, 1969). Populism usually appears with two compatible forms – left-wing populism and right-wing populism (Aytaç and Öniş, 2014; Kaltwasser, 2018; Mudde and Kaltwasser, 2013; Rodrik, 2018a,b). In the former, "the people" refers to the "common men" with lower income or the "poor" who cannot access power. They are perceived to be exploited by, and thus opposed to, the wealthy and powerful "elites" who control the economy and define its rules. In the latter, "the people" denotes the "nation" against outsiders, i.e. foreigners or immigrants, who are regarded as threats to the popular will (Kriesi and Pappas, 2015; Kaltwasser, 2018; Mudde and Kaltwasser, 2013; Rodrik, 2018a).

Understanding what triggers populism is important if economists and policy makers want to manage its impact. Populism may harm the established and predictable order of politics and the economy that has fostered economic growth and democratic norms (Rodrik, 2018b). Populism may also exert negative influences on economic performance by imprudently changing redistribution policy under political pressure (Alesina and Rodrik, 1994; Di Tella et al., 2017; Sachs, 1990), through the banking and credit system (Rousseau, 2016), and through distrust (Algan and Cahuc, 2010; Dustmann et al., 2017; Guiso et al., 2004; Knack and Keefer, 1997). There may exist situations where "economic populism" rather than "political populism" benefits the vast majority of the nation, such

as significant overhaul and perhaps even erosion of established economic practices and restraints during severe economic downturns (Rodrik, 2018a).

Initially, with the Great Recession[1] and the 2014 immigration crisis in the U.S. as quasi-natural experiments, I employ a difference-in-differences (DID) framework to identify the effects of unemployment and unauthorized immigration on populist attitudes. During the Great Recession, large numbers of individuals who had not previously been unemployed were laid off. They form the treatment group in my first design. The corresponding control group comprises people who were never unemployed during the period covered by my data. Thus, the Great Recession affected the individuals in the treatment group more substantially than those in the control group. Individuals in the treatment group and control group share the covariate balance – a reasonable overlap on a large range of pre-treatment characteristics (Atanasov and Black, 2016).[2] Moreover, to render units in the two groups more similar, I apply nearest neighbors propensity score matching based on pre-treatment characteristics. With retrospective employment information, I also discard people who were once unemployed during the ten years preceding 2008, so that the two groups become even more comparable. The 2014 immigration crisis principally affected the West South Central region of the U.S. in the sense that the great majority of unauthorized Central American immigrants entered the U.S. through this region. Hence, the treatment group in this second design consists of residents in the West South Central region while the control group reflects those in the rest of the U.S. As in the first design, I use propensity score matching to enhance the covariate balance between the two groups. In both designs, respondents in the treatment group and control group present parallel time trends, measured pre-treatment.

I provide evidence that recent unemployment during the Great Recession increased the probability of attitudes forming against wealthy elites by more than 14 percentage points. Such attitudes are related to left-wing populism. I find evidence that a mechanism fanning the left-wing populist attitudes was perceived economic unfairness. I do not detect that unemployment from before the recession exerted a significant influence on attitudes related to populism. Ruling out economic channels of actual and perceived labor market competitions and perceived social security crowding out, I argue that cultural anxiety or xenophobia in the West South Central region during the 2014 immigration crisis raised the probability of a negative attitude to immigration by more than 12 percentage

[1]The Great Recession has been used as a shock to the labor market in multiple studies (see Algan et al. (2017), Ananyev and Guriev (2016), and Dehdari (2018)).

[2]Appendix B compares covariates between the treated and the controlled, measured pre-treatment, to verify the covariate balance and common support.

points. This anti-immigration attitude is connected with right-wing populism. Effects of unauthorized immigration on left-wing populist attitudes are not found.

Furthermore, I account for the interaction effects of economic and cultural concerns by examining unemployment rate, immigrant proportion, and their interactions at the regional level in every quasi-natural experiment. I find no evidence that immigration exposure was a significant multiplier of the effects of regional unemployment on attitudes related to populism. Nor do I detect that individual or regional unemployment provoked extra significant hostility to immigrants during the immigration crisis, even in the entry region of these unauthorized immigrants. As a result, I disentangle economic insecurity from cultural anxiety.

In a second step, I establish the effect of recent unemployment during the Great Recession and the effect of the 2014 immigration crisis on populist voting in the 2016 U.S. Presidential Election. Bernie Sanders was representative of left-wing populists and Donald Trump representative of right-wing populists. With a pseudo panel, I show that cohorts that had a high average of recent unemployment post-Great Recession were 42 percentage points more inclined to support Sanders while cohorts that resided in the West South Central region during the immigration crisis were 10 percentage points more likely to vote for Trump. However, cohorts suffering unemployment before the Great Recession were only more likely to vote for left-centrist Clinton.

The current study speaks to several strands of literature. Principally, it adds to the academic debate on the drivers of populism taking place between the economic insecurity perspective and the cultural backlash thesis. Only a handful of studies investigate both economic and cultural determinants simultaneously. Even fewer of them examine their interactions. Inglehart and Norris (2016) establish the association between voting for populist parties across European countries and economic and cultural characteristics. They find evidence supporting cultural backlash rather than economic insecurity. Dustmann et al. (2017) interact macroeconomic indicators with regional cultural traits. They discover that more authoritarian and traditional cultural characteristics amplify the adverse effects of economic recessions on trust in political institutions, while trust is less sensitive to economic conditions in more liberal and modern areas.

I contribute to this literature on populism in three respects. First, with individual panel data, I provide the first quasi-natural experimental evidence at the individual level for the drivers of different types of populism. Second, with separate shocks to economic insecurity and cultural backlash respectively, I disentangle the economic driver from the cultural driver and link each of them to a different type of populism. Third, compared to

most studies in this literature that focus on politics only (Acemoglu et al., 2013; Algan et al., 2017; Becker et al., 2017; Colantone and Stanig, 2018a; Di Tella and Rotemberg, 2018; Foster and Frieden, 2017; Guiso et al., 2017; Hatton, 2016; Jensen et al., 2017), I utilize a richer set of measures to capture different dimensions of populism. A decrease in confidence in people who are running major companies and an increase in preferences for income redistribution by imposing higher taxes on the rich (rather than by economically assisting the poor) indicate attitudes that are against wealthy elites, and in the literature these attitudes are related to left-wing populism. The anti-immigration attitude is connected with right-wing populism in the literature. Additionally, I explore populist voting behavior in the 2016 U.S. Presidential Election.

Second, this paper complements a growing literature on the effects of economic hardship on social capital, especially on trust and confidence. Ananyev and Guriev (2016) exploit the 2009 economic recession in Russia to analyze the effect of income on generalized social trust and find this effect statistically and economically significant. Algan et al. (2017), Dustmann et al. (2017), and Foster and Frieden (2017) conclude that adverse economic shocks and the resulting rise in unemployment exerted negative influences on Europeans' trust in national and EU governments. However, these studies do not distinguish between unemployment that existed before the economic downturn and new unemployment caused by the adverse economic shocks. My results show that recent unemployment during the Great Recession, rather than unemployment that existed before the Great Recession, triggered the decrease in trust or confidence in the wealthy. This original finding implies that those that were not laid off until the economic recession blamed rich elites for their unemployment. Those suffering pre-existing economic hardship may merely attribute their joblessness to their own circumstances. I verify this implication when exploring the perception of economic unfairness as a mechanism.

Third, my results are closely related to studies on preferences for redistribution. Kuziemko et al. (2015) conducted randomized survey experiments, discovering that mistrust in government explains the low support for redistribution in the U.S. However, Americans strongly preferred only one redistribution policy – the estate tax targeting the top 0.1% of U.S. families. This may be interpreted as a wish to prevent the self-perpetuation of extreme wealth. Because of the prevailing attitudes against wealthy elites "respondents might still support (it) if, say, the government merely burns the money it collects (from the rich)". Alesina and La Ferrara (2005) and Benabou and Ok (2001) argue that people with higher-than-expected income growth are more inclined to oppose redistribution, even when they earn below-average income and benefit from redistribution.

Alesina et al. (2018) find strong political polarization in preferences for redistribution and detect that only left-wing respondents react to pessimistic intergenerational mobility perception by increasing their preferences for redistribution. Intuitively, the higher the perceived importance of effort rather than luck in determining one's income, the higher the belief in the fairness of the economy, and thus the lower the preferences for redistribution (Alesina and Angeletos, 2005; Piketty, 1995). I adopt this mechanism of perceived economic unfairness in my study. What is new in my contribution to this literature is that I combine two variables in the data to distinguish two forms of preferences for redistribution, i.e. the request for imposing higher taxes on the rich and the demand for economically assisting the poor.

Moreover, this study is part of the large literature on the impact of immigration. The attitude to immigration is studied in two traditions – political economy and socio-psychology (Hainmueller and Hopkins, 2014). The former focuses on competition over resources between immigrants and natives and explains immigration attitudes from the perspective of natives' individual self-interest. The latter perceives immigration attitudes as symbolic of group identity. In socio-psychology, contact theory states that exposure to and interaction with immigrants will produce a more tolerant and friendly attitude to immigration. Threat theory, however, alleges that natives see the arrival of immigrants as a threat to the national identity, economy, and culture. The greater the number of immigrants, the bigger the threat. I examine both channels of individual self-interest and collective identity concern, and only find evidence for the latter (see also Card et al. (2012), Sniderman et al. (2004), and Tabellini (2018)). The unauthorized immigrants from Central America did not significantly impact natives negatively in the labor market. Nor did natives regard these immigrants as a threat to their jobs and social security. The negative attitude to immigration arose mainly from cultural and identity concerns.

Last but not least, my paper sheds light on certain problems that have awaited analysis in the expanding literature on political polarization or extreme voting. Previous studies on radical right voting have failed to identify the specificity of their results and to exclude the possibility of voting for the radical left. They are unable to distinguish between a general pattern of extreme voting and a tendency to vote particularly for either the far right or for the far left. However, I discover that recent economic deprivation during the Great Recession was the driver only for left-wing populist voting (see also March and Mudde (2005) and Stavrakakis and Katsambekis (2014)), and that cultural anxiety induced support only for right-wing populism (see also Dinas et al. (2016), Kuziemko and Washington (2018), Mutz (2018), and Sekeris and Vasilakis (2016)) in the 2016 U.S.

Presidential Election.

2 Institutional Background

In this section I briefly discuss the evolution of the Great Recession and the 2014 immigration crisis in the U.S.

2.1 The Great Recession

The Great Recession has been regarded as the most influential economic recession worldwide since the Great Depression in the 1930s. It originated in 2007 with a crisis in the U.S. subprime mortgage market and spread to the banking system. Its impact was felt in financial systems around the world, with the bankruptcy of the investment bank Lehman Brothers on September 15th, 2008 as a remarkable initial signal.

Despite a variety of monetary and fiscal policies adopted by governments around the world to reduce the negative impact on the economy, the 2008 financial crisis nevertheless developed into a severe worldwide economic recession. In addition to the collapse of several banks and other financial institutions, the U.S. economy suffered a sharp drop in its output and took a serious hit on its labor market. For instance, compared to the respective previous years, U.S. real GDP decreased by around six percent at an annual rate in the last quarter of 2008 and the first quarter of 2009 (U.S. Bureau of Economic Analysis). Unemployment change is usually lagged, following GDP decline. Figure 1 illustrates the seasonally adjusted monthly unemployment rate in the U.S. The unemployment rate soared to over ten percent in October 2009, the highest level since 1983 and twice as high as before the Great Recession. Average working hours per week decreased to 33, the lowest since 1964 (U.S. Bureau of Labor Statistics).

2.2 The 2014 Immigration Crisis

From October 2013 to late 2016, large numbers of unauthorized immigrants from the Northern Triangle of Central America, i.e. El Salvador, Guatemala, and Honduras, traveled to the U.S. southern border with Mexico, leading to an immigration crisis that peaked in 2014.[3] It turned out to be the biggest inflow of asylum seekers to the U.S. since the 1980 Mariel boatlift out of Cuba (Greenblatt, 2014). Many of them were women, unaccompanied children and juveniles. Almost all of these immigrants entered the West

[3]Unfortunately, precise records of entries of these unauthorized immigrants are unavailable.

South Central region of the U.S., in particular from the Rio Grande Valley area located on the southern edge of Texas.[4] Figure 2 provides an overview of U.S. border arrests from 2013 to the third quarter of 2016: the blue solid line represents monthly apprehensions at the southwest central patrol sector. The inflow started to soar at the end of 2013 and reached its peak in June 2014. It then dropped dramatically at first, but started to climb again after the end of 2014. The red dashed line denotes apprehensions at other patrol sectors in the U.S. This line is relatively flat and limited. Though this figure does not directly provide information on the number of unauthorized immigrants actually entering each month, the monthly number of arrests implies a huge variation in the influx. 55% of Northern Triangle immigrants in the U.S. were unauthorized by 2015. In 2014 the estimate of new (authorized) immigrant arrivals from these three Central American countries is around 115,000 (Pew Research Center). Thus, if the immigrant influx in 2014 followed the same pattern as before – and in fact, during this crisis it is likely there were more unauthorized entries than authorized ones – the number of Central American immigrants entering the U.S. would be roughly doubled to 230,000 in 2014.

The principal reason that these people abandoned their family and country and took this risky and dangerous journey to the U.S. border was the mass violence in these Central American nations (U.S. Department of Homeland Security).[5] Other important drivers of this immigration crisis were the organized crime and drug trade as well as poverty and food shortage.[6]

Given the above causes, the 2014 immigration crisis has been regarded as both a refugee crisis and a "humanitarian crisis" (President Obama). The U.S. government took several measures in response: (1) a multimedia awareness campaign; (2) assistance to the Mexican southern border; (3) expedition of the removal process; and (4) raids in January 2016 on individuals that had exhausted their asylum claims (Hiskey et al., 2016).

[4]Table E.1 in Appendix E lists the numbers of family unit apprehensions by month in different border patrol sectors in the U.S. from October 2012 to September 2016.

[5]DHS concluded that "(These immigrants) come from extremely violent regions where they probably perceive the risk of traveling alone to the United States preferable to remaining at home". The murder rates in these countries have skyrocketed. For example, recognized as the murder capital of the world, Honduras had a homicide rate of 91.6 murders per 100,000 people in 2011; in 2014, this number declined to 66 but was still the highest among non-war zone countries. Likewise, El Salvador also had a high rate of 90 murders per 100,000 people in 2011. Moreover, this rate dramatically increased to 104 murders per 100,000 people in 2015 after the breakdown of a truce in 2013 between the country's two most influential gangs – MS-13 and Barrio 18 (United Nations Office on Drugs and Crime).

[6]Nowadays, 79% of all cocaine-smuggled flights pass through Honduras. Children and juveniles in school are forced to smuggle drugs by criminal gangs (Nazario, 2014). Meanwhile, in the Northern Triangle area – Honduras, Guatemala, and El Salvador, most of the criminals will not be reported or prosecuted due to the lack of police force. In Guatemala, half of the children are malnourished, stunted, or even dead because of food shortage (Loewenberg, 2009).

However, these strategies did not prove effective.[7] The Central American children and juveniles attempting to illegally cross the border are treated differently in the U.S from their Mexican counterparts. Mexican immigrants may be deported immediately, but the U.S. Trafficking Victims Protection Reauthorization Act requires that youth from Central America must be given a court hearing before they are either deported or allowed to stay. The extent of the crisis meant that in the overwhelming majority of cases, these children and juveniles would wait years for a hearing, either staying with their relatives or family friends who already lived in the U.S., or else placed in foster care (Migration Policy Institute). In fact, by the spring of 2016 most of them have not been deported (Hiskey et al., 2016).

U.S. residents were aware of this immigration crisis and made their concerns known. Figure 3 displays the Google Trends indicator on the frequency of the term "immigration" being searched for, relative to the total number of searches in the U.S. across time. The high leap in late 2014 is remarkable, showing that U.S. citizens suddenly paid special attention to this immigrant influx.

3 Data

The main data I utilize to analyze the economic and cultural drivers of populism are the General Social Survey (GSS) of the U.S. administered by NORC at the University of Chicago. The GSS contains a core of demographic, behavioral, and attitudinal questions. It has been conducted biennially since 1994 and has included in every wave a random sample of around 3000 (until 2004) to 4500 (since 2006) adults that is representative of the U.S. population. Hence the main body of GSS is a repeated cross-sectional dataset. However, the GSS also includes three three-wave individual panels.

To obtain the voting information on the 2016 U.S. Presidential Primary Elections, I turn to the American National Election Studies (ANES) 2016 Time Series Study. This complementary dataset contains 4,271 individuals, a representative random sample of the U.S. eligible voter population. I combine it with the GSS to study populist voting.

[7] As the U.S. District Court Judge James Boasberg noted in his February 2015 ruling, "Defendants [DHS] have presented little empirical evidence ... that their detention policy even achieves its only desired effect, i.e., that it actually deters potential immigrants from Central America."

3.1 Panel Data of Individuals

In addition to the repeated cross-sectional data, the GSS also includes three individual panels: the 2006-sample panel, the 2008-sample panel, and the 2010-sample panel. For example, the 2006-sample of 4,510 individuals was initially interviewed in 2006, 1,536 of them drawn randomly were re-interviewed in 2008, and then 1,276 of that 1,536 were interviewed again in 2010. The 2008- and 2010-sample panels were designed in a similar manner.

I exploit the 2006-sample panel to investigate the economic driver of populism and the 2010-sample panel to study the cultural driver. The former spans the pre- and post-Great Recession periods and the latter covers the pre- and post-immigration crisis phases. Even though the recent financial crisis began in the U.S. in 2008, I regard only wave 2010 as the post-Great Recession phase with respect to unemployment since unemployment rise is usually a lagged indicator of economic downturns. As shown in Figure 1, from 1995 to November 2008 the variation in unemployment rate displayed the same pattern at roughly the same level. Moreover, all the subjects in the year 2008 were interviewed before October, while the bankruptcy of Lehman Brothers, signaling the beginning of this financial crisis, happened in mid-September. Therefore, it is reasonable to see the year 2008 as pre-Great Recession with respect to unemployment. The immigration crisis erupted in 2014. Thus, in the 2010-sample panel, it is clear to classify the 2010 and 2012 waves as the pre-immigration crisis phase and the 2014 wave as post-immigration crisis. In both cases, I preserve only respondents who appeared in all three waves, resulting in two balanced panels with 1,276 individuals in the 2006-sample and 1,304 in the 2010-sample.[8]

Based on the "ideational definition" of populism (Kaltwasser, 2018) which has been widely used in the literature in political science and political economy (Aytaç and Öniş, 2014; Kriesi and Pappas, 2015; Mudde, 2004; Mudde and Kaltwasser, 2013, 2017; Rodrik, 2018a,b), left-wing or inclusionary populist attitudes refer to attitudes against wealthy elites and the socioeconomic advantaged. In the GSS data, the variables that may most accurately capture such attitudes are confidence in people who are running major companies in the U.S., demand for the government to equalize the income between rich and poor, and request for the government to financially help the poor. The last two variables are two dimensions of preferences for redistribution. An increase in attitudes against wealthy elites will translate to a decrease in confidence in people running big companies,

[8]I also analyze the original samples of unbalanced panels in Table D.7 of Appendix D and obtain virtually identical estimates.

and an increase in preferences for redistribution without necessarily benefiting the poor probably by merely imposing higher taxes on the rich. Likewise, right-wing or exclusionary populist attitudes refer to attitudes against threatening outsiders such as immigrants or foreigners. Thus I adopt the attitude to immigration to represent the right-wing populist attitudes.[9] All of them are transformed so that a larger score refers to a higher level in each of these outcomes. These outcome variables can more specifically capture left-wing and right-wing populist attitudes, respectively, than variables such as trust in government or politicians in general do. Moreover, trust in government in the U.S. is constantly low (Kuziemko et al., 2015). Its small variations across time do not help to identify the effects of economic insecurity and cultural anxiety.

The main explanatory variable of interest is couple unemployment. This is constructed by combining two variables – the respondent's working status in the past week and that of their spouse if they have one.[10] Couple unemployment is a dummy that takes 1 if either partner of the couple became unemployed and takes 0 otherwise. The set of covariates contains the quadratic of respondent's age, marital status dummies, number of siblings, number of children, academic degree dummies, categories of last year's total family income, categories of the population size of respondent's place, party self-identification, dummy of liberal ideology, and dummy of home owner.[11]

3.2 Pseudo Panel Data of Cohorts

To investigate the effects of the Great Recession and the 2014 immigration crisis on populist voting in the 2016 U.S. Presidential Election, I turn to the main body of the GSS. However, with its original repeated cross-sectional data, I am not able to link the independent variables in previous waves to voting variables in later waves or to other external voting data at the individual level. In order to address this problem, I construct a pseudo panel based on the repeated cross-sectional data (Deaton, 1985). Specifically, I aggregate the original data into nine ten-year birth cohorts by gender and by the nine U.S. regions where respondents resided. Hence in total there are 162 ($= 9 \times 2 \times 9$) cohorts in the sample of the pseudo panel. The average of individuals within cohort represents the corresponding cohort in every wave for every variable.

[9] Details of specific questions about the outcome variables are in Appendix F.

[10] Details of specific questions about couple unemployment are in Appendix F too. Alternative explanatory variables for economic insecurity, including self-unemployment of the respondent, are used for sensitivity analyses in Appendix C.

[11] The definitions and descriptives of the relevant variables in the baseline models are provided in Appendix A.

Though there are questions about individual voting turnout and which candidate to vote for in the U.S. Presidential General Election, there is no information about the Primary Elections in the GSS survey. Since left-wing populist Bernie Sanders was a candidate only in primaries, I need data on individual voting in the 2016 Primary Elections. These relevant questions exist in the ANES 2016 Time Series Study. I aggregate the 4,271 individuals in that dataset into cohorts in the same way as above and transform the data into a cross-section of 162 averaged cohorts. Merging this ANES 2016 cross-section with the GSS pseudo panel of cohorts, I am able to study the effects of the Great Recession and the 2014 immigration crisis on populist voting in the 2016 U.S. Presidential Election.

4 Empirical Strategy

In the main estimation with the two individual level panels, I employ the ordered logit fixed effects model (Baetschmann et al., 2015) to account for time-invariant unobserved confounders. I choose this model because of the nature of ordinal dependent variables.[12] The ordered logit fixed effects model in the DID setting is specified as:

$$y^*_{it} = \beta_{Treat.\times PC} Treatment_i \times Post\_crisis_t + x'_{it}\beta_x + \alpha_i + \gamma_t + \epsilon_{it} \tag{1}$$

$$y_{it} = \begin{cases} 1, & y^*_{it} \leq c_1 \\ 2, & c_1 < y^*_{it} \leq c_2 \\ \quad ... & \\ J, & y^*_{it} > c_{J-1} \end{cases} \tag{2}$$

where i ($i = 1, 2, ..., n$) refers to individuals, and t ($t = 1, 2, ..., T$) stands for survey waves.

y represents different observed outcome variables including confidence in major companies, preferences for income redistribution, attitude to immigration, and couple unemployment (in the last two cases it is a logit fixed effects model). y^* denotes the latent counterpart of y.

$Treatment$ represents the dummy for the corresponding treatment group during the Great Recession and the 2014 immigration crisis, respectively. In relation to the Great Recession, the treatment group consists of respondents who became unemployed or whose spouse became unemployed, i.e. couple unemployment has a value of 1, only in wave

[12] In a sensitivity analysis in Table D.4 of Appendix D, I estimate the linear fixed effects model and draw the same conclusions.

2010. The corresponding control group contains respondents who were not unemployed and whose spouse (if they have one) was not unemployed, that is, couple unemployment takes a value of 0, in any of the three waves. As for the immigration crisis, the precise information on these unauthorized immigrant entries in different states is unavailable since they were not tracked. To be conservative, I rely on the original (also the conventional) classification of U.S. regions in the data and apply the West South Central region including the states of Arkansas, Louisiana, Oklahoma, and Texas as the treated region. Thus the treatment group consists of respondents who lived in this region in wave 2014. The control group covers those that lived in the rest of the U.S. in the same wave.[13]

Post_crisis is either the post-Great Recession period (wave 2010) or the post-immigration crisis phase (wave 2014). Furthermore, x denotes the vector of demographic, socioeconomic, and political and ideological covariates as enumerated in the data section.[14] Coefficients of only time-varying independent variables can be estimated in the fixed effects model where all the time-invariant variables are dropped. α_i indicates individual fixed effects and γ_t represents survey wave fixed effects. Finally, ϵ_{it} is the errors following a logistic distribution.

In order to apply the DID framework, the parallel trend assumption between the treatment and control groups should hold. This assumption in the current context implies that during the period of the last two waves, the outcome variables would follow the same trajectory between the treated and the controlled in the absence of the corresponding crisis. To assess this assumption and thus evaluate the validity of the DID setting, I examine whether the pre-shock time trends in the outcome variables diverge between the treatment and control groups. I estimate a slightly modified version of Eq.(1). Specifically, *Post_crisis* is replaced by the last two waves in the panels separately (with the first wave omitted as reference for identification), namely wave 2008 and wave 2010 for the Great Recession and wave 2012 and wave 2014 for the immigration crisis.[15] If the coefficient of the interaction term of $Treatment$ and the penultimate wave is insignificantly close to zero, it is evidence for the pre-treatment parallel trends. This is indeed the case in my estimation for both the Great Recession and the immigration crisis. Figure 4 illustrates the coefficient estimates of the leads and lags model for different outcome variables. None

[13]Later I implement robustness checks in terms of the composition of the treated region (Table D.5) and conduct an IV analysis on the effect of the proportion of Central American immigrants at the state level on the attitude to immigration (Section C5) drawing the same conclusion.

[14]In another model specification shown in Table D.3 I include state-specific linear time trends to capture smooth changes in unobservables and obtain virtually identical results.

[15]It is called the "Auto" model following Autor (2003) and the leads and lags model by Atanasov and Black (2016).

of the estimates of the interactions of $Treatment$ and the second wave is significantly distinguishable from zero. Therefore, arguably, the trends measured pre-shock between the treatment and control groups are parallel.

Moreover, in order to establish a causal link between the shocks and the outcome variables, there must not have been other events responsible for the divergence between the treatment and control groups occurring at a time close to the treatment. Placebo tests by applying fake shocks at different times during the pre-treatment period will provide such evidence if estimates are similar and statistically indistinguishable from zero before and after the fake shock (Atanasov and Black, 2016). In the current context I use only pre-treatment data. I change the onset of the fake shock to the second wave in both the Great Recession and the immigration crisis and do not detect a significant treatment effect.

To render individuals in the treatment and control groups even more comparable, two additional approaches are exploited. First, in the design of the Great Recession, I discard all the individuals who had once been unemployed in the ten years prior to 2008 in both groups. It is therefore less likely that the treated individuals and the untreated ones had different employment status during the Great Recession merely because of their divergent unobservables. Second, in designs for both the Great Recession and the 2014 immigration crisis, I adopt the method of nearest neighbors propensity score matching based on pre-shock individual characteristics. This is to improve the covariate balance between the treated and the controlled. Only the matched individuals then compose the estimation sample in the DID framework. With these two methods as robustness checks, I obtain virtually identical results.

When I study the effects of the Great Recession and the 2014 immigration crisis on populist voting in the 2016 U.S. Presidential Election, I apply the multivariate OLS model:

$$y_i = \beta_{Treat.} Treatment_i + x_i' \beta_x + \epsilon_i. \tag{3}$$

where i denotes cohorts now. All the variables except $Treatment$ in Eq.(3) are means within cohort and thus cardinal.

y refers to averaged dummy of voting for different candidates within cohort, either in the 2016 U.S. Presidential Primary Elections or General Election. $Treatment$ again denotes the corresponding dummy of the treatment group during either the Great Recession or the immigration crisis. With respect to the Great Recession, the treatment group

comprises cohorts whose couple unemployment averaged within cohort is greater than or equal to 0.5 in wave 2010 or 2012, and the control group contains cohorts whose couple unemployment average is less than 0.5 in both of these two waves.[16] The reason that I do not consider later waves is that the negative economic impact of the Great Recession was already extinct by 2014 and thereafter. As for the immigration crisis, the treatment and control groups are formed similarly to the case of individual level panel. However, I exploit information about residence in both waves 2014 and 2016. x contains the set of means of covariates in Eq.(1) and averaged voting turnout in the corresponding elections within cohort.[17] As for the Great Recession, the covariates take values in wave 2010. With respect to the immigration crisis, they take values in wave 2014.

5 Economic Insecurity and Left-wing Populism

In this section I use the 2006-sample panel to study the effects of economic insecurity represented by unemployment on populist attitudes. Many people who had not had unemployment experience previously were laid off during the Great Recession. This recent unemployment may be different from unemployment persisting from before the Great Recession in shaping the unemployed's perception on the reason of their unemployment and thus their various attitudes. So, I distinguish between the two types of unemployment and estimate their effects in panel a and panel b of Table 1, respectively.[18] In panel a with the DID framework, the treatment group consists of respondents who became unemployed or whose spouse became unemployed only in wave 2010. The corresponding control group therefore reflects a situation where neither respondent nor spouse (if they have one) was laid off in any of the three waves.[19] In panel b, the sample excludes respondents who became unemployed or whose spouse became unemployed only in wave 2010. The coefficients of the interaction term *Unemployment*×*post-Great Recession* represent the additive effects of couple unemployment during the Great Recession for

[16] In Table D.6 of Appendix D, I also directly apply the average of couple unemployment within cohort, i.e. a continuous treatment, as the explanatory variable of interest. Though the estimates are not significant, the sign and magnitude are still as expected.

[17] Guiso et al. (2017) argue that turnout incentive is vital for populist voting.

[18] Table D.1 in Appendix D presents the parameter estimates of the full model.

[19] In a sensitivity analysis displayed in panel a of Table C.1, in order to make the two groups more comparable, I discard all the individuals who had lost their jobs at any time during the ten years prior to 2008. The estimates do not notably change. In another robustness check reported in Table D.3, I include state-specific linear trends in the model and obtain virtually identical results. In the even columns of the same table, I also set wave 2008 as the onset of a placebo treatment and do not acquire any significant estimates. This therefore provides evidence that there have not been other events taking place close to the Great Recession that are responsible for the treatment effect.

individuals who were already unemployed before the recession. The odd columns are estimates without covariates and the even columns are with controls. Robust standard errors clustered at the individual level are reported in parentheses.[20]

5.1 Confidence in Major Companies

Lack of confidence in people managing big companies represents distrust in elites and the wealthy. Such anti-elitist attitude is connected with left-wing populism in the literature. Columns (1) and (2) of panel a show that after the Great Recession, the ordered log-odds of having a higher level of confidence in people running big companies diminished significantly by 1.3 for the recently unemployed relative to those not laid off in the data period, holding other covariates fixed. In terms of the average marginal effect, after the Great Recession the probability of having a great deal of confidence in people running major companies, that is, *trust in companies* = 3, decreased for the newly unemployed by 19 percentage points compared to the untreated individuals.[21] Panel b does not display significant effects on confidence in major companies among people who had already become unemployed before the Great Recession, even during the post-recession period.

5.2 Preferences for Redistribution

Preferences for income redistribution, especially with the aim of increasing financial burden on the wealthy, may be an indicator of left-wing populism. If people perceive that elites set unfair rules for the economy and take advantage of these rules to gain unfair benefits, they will request a higher level of redistribution. The relevant survey question inquires about preferences for redistribution by means of "raising the taxes of wealthy families or giving income assistance to the poor".

Columns (3) and (4) of panel a show the estimates of requesting the government to reduce income differences between the rich and the poor without and with controls, respectively. Ceteris paribus, if the respondent or their spouse recently became unemployed post-Great Recession, their ordered log-odds of requesting a higher level of income redistribution increased by 0.7 significantly compared to those never laid off. In other words, the probability that the newly unemployed would show the highest level of demand for

[20] To facilitate the understanding of the effect magnitudes, I report results of the linear fixed effects model in panel a of Table D.4.

[21] The linear fixed effects estimate displayed in Table D.4 is around minus 0.3, sizable when compared to the corresponding adjusted mean in the treated, 0.98, over a range of zero to two.

redistribution, that is *government equalizes income* = 7, increased by over 14 percentage points post-Great Recession relative to the untreated.

Income equalization can be realized by raising taxes from the wealthy or by offering financial support to the poor. There is not a direct variable on taxing the rich in the survey. However, one question asks about opinions on the government's responsibility for improving the living standard of poor Americans. The results are presented in columns (5) and (6), both of which are statistically insignificant. In particular, when controlling for available covariates, the coefficient of interest becomes almost zero. In panel b, one does not observe either significant estimates for preferences for redistribution.

Such an interesting discovery is noteworthy: unemployment soon after the Great Recession significantly raised demand that the government brings about income equality between rich and poor by "raising the taxes of wealthy families or giving income assistance to the poor". However, it did not increase the specific demand for the government to offer economic assistance to the poor. These two points of view are not mutually exclusive. Their preference was for the income gap between rich and poor to be reduced maybe by imposing higher taxes on the wealthy, rather than by helping the poor financially. This finding goes along with Di Tella et al. (2017) and Kuziemko et al. (2015).

5.3 Attitude to Immigration

The last two columns in Table 1 examine the potential spillover of unemployment on attitude to immigration. In both panels a and b, unemployment post-Great Recession seems to lower the positive attitude to immigration, but the coefficients are imprecisely estimated. Therefore, the hypothesis that unemployment does not affect attitude to immigration cannot be formally rejected.[22]

5.4 Effects of Local Immigration Exposure and Labor Market Conditions

If left-wing populist attitudes prevail more intensely in areas with higher proportions of immigrants, cultural or identity concerns may also contribute to these attitudes. To investigate the possible influences of cultural anxiety and its interaction with the economic shock, I include the fraction of immigrants in the state population in every wave and its

[22]In a sensitivity analysis in Appendix C, I account for the industry heterogeneity in the share of immigrant workers and document that whether or not they became unemployed, workers in industries with a high proportion of immigrants did not have a more negative attitude to immigration after the Great Recession.

interaction term with the post-Great Recession period in the model. The information on immigrants at the state level is from the American Community Survey (ACS).[23]

In Table 2, the odd columns report relevant results. The estimates of *treatment*×*post-Great Recession* are still close to the baseline results in panel a of Table 1. Moreover, neither the immigration fraction in the state population nor its interaction with the post-Great Recession phase had significant effects on the outcome variables. Thus, residing in areas with more exposure to immigration did not seem to boost left-wing populist surge.

Economic insecurity may originate from one's own and one's family's economic distress, or from anxiety on the local adverse labor market conditions. Even if an individual or their partner is not laid off, the high unemployment rate in their area may induce a movement towards left-wing populism. Hence, in the even columns of the same panel, I add the county unemployment rate and its interaction with post-Great Recession. I acquire the annual county unemployment data from the Bureau of Labor Statistics. I then include the interactions of the immigrant proportion with the county unemployment rate and with the county unemployment rate×post-Great Recession to account for the interaction effects of the economic shock and cultural concern. The estimates in the even columns show that local labor market conditions did not exert significant influences on left-wing populist attitudes, even after the Great Recession. I also do not find that immigration exposure was an important multiplier of the effects of the Great Recession on either the anti-elite attitudes or the anti-immigrant attitude in regions suffering adverse economic conditions. The coefficients of *treatment*×*post-Great Recession* hardly change. Apparently, individual economic insecurity dominated regional economic concern in these attitudinal variations.

In this section so far I show that individual economic insecurity during the Great Recession drove the increase in left-wing but not right-wing populist attitudes. I also do not obtain evidence of the interaction influence of immigration exposure on the effects of economic insecurity. In Section 6 I will continue to explore the impacts of unauthorized immigration on both left- and right-wing populist attitudes and the interaction effect of economic insecurity on these impacts.

5.5 Mechanism

Earlier, I showed that recent unemployment during the Great Recession increased preferences for income redistribution. How is this manifest? In the literature on preferences

[23]The immigrant data at the county level are only available for part of the counties on the annual basis and hence too limited for analysis.

for redistribution, Alesina and Angeletos (2005) and Piketty (1995) allege that perceived economic unfairness generates stronger demand for income and wealth redistribution. Following their work, I use the perceived importance of effort in one's success to represent perceived economic fairness. The more important personal effort seems to be in achieving success, the fairer the economy is believed to be. And vice versa.

I explore whether perceived economic unfairness was a mechanism through which recent unemployment during the Great Recession increased preferences for redistribution. Specifically, I first examine whether new unemployment post-Great Recession raised the perception that the economy was unfair. Then, I explore the effect of perceived economic unfairness on preferences for redistribution. Panel a of Table 3 shows the results for the first step. Recent unemployment during the Great Recession did indeed increase the perception of economic unfairness, regardless of controls. In panel b, perceived economic unfairness had a significant positive effect on the demand for the government to equalize income between the wealthy and the disadvantaged. Nonetheless, this perception of unfairness did not have a significant effect on the option of assisting the poor financially. Panel c displays the first step results for those unemployed before the recession. This type of unemployment did not significantly increase the perception of economic unfairness.

The results fit with the conclusion in previous subsections: the recently unemployed during the Great Recession showed distrust in elites. They asked for higher redistribution without compassionate measures for the deprived. They thought the economy was unfair so that wealthy elites may be responsible for the recession and hence their economic hardship.

6 Cultural Anxiety and Right-wing Populism

In this section I analyze the effects of cultural anxiety on populist attitudes. An overwhelming unauthorized immigrant influx, or even an immigration crisis, may be perceived in the destination country as either an economic threat or a cultural and identity threat. By excluding the economic channels, I argue that cultural concerns drove the anti-immigration attitude related to right-wing populism. Tables 4 to 6 present results based on the individual panel from 2010 to 2014.[24] The treatment group is composed of respondents who resided in the West South Central region of the U.S. in wave 2014.[25] The control group covers the rest of the U.S. in the same wave. The post-immigration crisis

[24]Again, Table D.2 in Appendix D shows the parameter estimates of the full model.

[25]In Table D.5 of Appendix D, I change the compositions of the treated region as robustness checks and find similar results though the estimates are less significant.

period is wave 2014. I apply the logit fixed effects model for *attitude to immigration* and *actual couple unemployment*, and the ordered logit fixed effects model for *anticipated future unemployment*. The first column for every dependent variable does not include controls but the remaining columns do.

6.1 Attitude to Immigration

In Table 4 the second column with covariates reports a significant negative estimate of *treatment*×*post-immigration crisis*. In terms of the average marginal effect, for residents in the West South Central region the probability of their having a positive attitude to immigration decreased by over 12 percentage points compared to those in untreated regions during the immigrant influx. If cultural and identity concerns lowered positivity towards immigration, such an effect would be milder or even reversed among groups with a cultural background and identity that is closer to the immigrants. In columns (2I) and (2II), I estimate the same model separately for racial minorities including Hispanic Whites and non-Whites, and non-Hispanic Whites, respectively. Hispanic Americans are closer to these unauthorized immigrants from Central America in culture and ethnicity. Non-Whites share the identity of racial minorities with these Central American immigrants. As expected, the effect among the racial minorities (column (2I)) is nonnegative while the negative effect among non-Hispanic Whites (column (2II)) is considerably larger and significant. During the immigration crisis, for non-Hispanic Whites in the treated region the probability of a positive attitude to immigration was significantly decreased by 35 percentage points relative to those in the rest of the U.S. [26] Columns (2III) and (2IV) show the estimates for bachelor's degree holders and individuals without a bachelor's degree (measured in 2014), respectively. Apparently, the lower educated group drove the anti-immigration attitude.

Column (2V) is a placebo test using the East South Central region of the U.S. (Kentucky, Tennessee, Alabama, and Mississippi) as the false treatment group. The East South Central region is similar to the West South Central region in many aspects including political inclinations. However, the 2014 immigration crisis did not notably impact the East South Central region. Thus, the East South Central region is an appropriate counterfactual. The estimate in column (2V) excludes individuals living in the West South Central region, the real treatment group. Without the remarkable influence of the 2014 immigration crisis, people in the East South Central region did not significantly

[26] The corresponding linear fixed effects estimate shown in panel b of Table D.4 is minus 0.14, and also significant. It is substantial compared to the mean attitude to immigration in the treated, 0.52.

change their attitude to immigration relative to the corresponding untreated regions. Column (2VI) reports the estimate of the same type of placebo test among non-Hispanic Whites only, which is also statistically insignificant. Column (2VII) shows the result of another falsification test with only pre-treatment data (i.e. data of the first two waves) by using wave 2012 as a fake treatment. Column (2VIII) is the same test for the version of non-Hispanic Whites. Again, neither of them is significant. Hence these placebo tests deliver evidence that the treatment effect is not produced by other events occurring at a time close to the immigration crisis.

In column (3) I separate the pre-immigration crisis period into wave 2010 and wave 2012 and interact them with the treatment group respectively ($treatment \times wave$ 2010 is omitted for reference). In 2012, before the immigration crisis, the difference in attitude to immigration between the treated and controlled areas did not significantly change relative to that in 2010. After the unauthorized immigrant influx took place in the West South Central region, the local attitude to immigration deteriorated significantly compared to the other areas.

6.2 Left-wing Populist Attitudes

Table 5 displays estimated effects of the immigration crisis on attitudes related to left-wing populism. None of the coefficients of $treatment \times post\text{-}immigration\ crisis$ is significant for confidence in big companies, the demand for the government to equalize the income between rich and poor, or the request for the government to financially assist the poor, regardless of controls inclusion. Thus I do not obtain evidence that the immigration crisis affected these left-wing populist attitudes of anti-elites.

6.3 Labor Market Outcomes

Natives may also see immigrants as job competitors and social welfare diggers. Table 6 presents results for actual unemployment of either partner of the couple and individual anticipated unemployment in the next 12 months. With or without controls, the immigration crisis resulted in an insignificant rise in actual unemployment and insignificant decline in anticipated future unemployment for people in the West South Central region. The previous subsection concludes that lower-educated natives drove the increase in the negative attitude to immigration. The reason may be the competition between immigrants and lower-educated natives in the labor market and for social welfare. Columns (2I) and (4I) include only individuals without a bachelor's degree, corresponding to col-

umn (2IV) in Table 4. Amazingly, the coefficient estimates are even smaller and remain insignificant.[27] Therefore, I cannot reject the hypothesis that the 2014 immigration crisis did not impact the local individual labor market outcomes.[28] A similar finding has been documented by Card (2001) and Card (2005).

6.4 Effects of Individual Labor Market Outcomes and Local Labor Market Conditions

In Subsection 6.1 I do not obtain evidence that residents in the entry area of the immigrant influx became increasingly negative towards immigration because of realistic adverse labor market consequences created by the unauthorized immigration. However, it does not exclude the possibility that natives facing economic hardship or living in places with adverse economic conditions scapegoated immigrants.

In Table 7 I add to the model a dummy for couple unemployment, the unemployment rate in county of residence, and their interactions with post-immigration crisis. The first three columns show the attitude to immigration of the whole sample, and the last three that of non-Hispanic Whites only. The estimates for $treatment \times post\text{-}immigration\ crisis$ stay close to those in the baseline model in Table 4. Individual (couple) labor market outcomes represented by couple unemployment did not have significant effects on the attitude to immigration in any specifications, and this is in line with the conclusion in Section 5.3. While local labor market conditions captured by the county unemployment rate bore some marginally significant effects only among non-Hispanic Whites, we should be cautious with these estimates: first, they are merely marginally significant at the 10% level; second, in the alternative linear specification even this 10% level of significance disappears; finally, without an exogenous shock to the county unemployment rate, these estimates present correlation rather than causation.[29] Therefore, I do not regard either individual labor market outcomes or local labor market conditions as important drivers of the anti-immigration attitude connected with right-wing populism.[30]

[27] I also investigate the effects of the immigrant influx on family income before taxes and on preferences for redistribution, and do not obtain significant estimates either. So, worries on lower wage and social security crowding out were not the reasons for the negative attitude to immigration.

[28] In Appendix C I study the influence of the immigrant influx on regional labor market conditions and do not find significant effects either.

[29] Actually, by exploiting the Great Recession as a shock to the county unemployment, I use the same model as column (8) of Table 2 to estimate the effect on attitude to immigration among non-Hispanic Whites only and do not find significant coefficients for county unemployment related variables.

[30] Based on columns (1) and (4) of Table 7, I further interact the treated region with couple unemployment and with couple unemployment×post-immigration crisis simultaneously. Neither of them has significant negative effects on attitude to immigration.

Overall, I do not find evidence that economic insecurity in terms of labor market or social security contributed to the anti-immigration attitude. However, such negative attitudes prevailed much more substantially among non-Hispanic Whites, an ethnic group with cultural background and identity remote from the Central American immigrants. Thus, cultural or identity concerns are more likely to have driven the negative attitude to immigration. This result is consistent with the conclusions drawn by Card et al. (2012), Sekeris and Vasilakis (2016), and Tabellini (2018). Moreover, I do not find that the immigration crisis exerted significant influences on left-wing populist attitudes. Thus, combined with the conclusions from Section 5 economic insecurity drove left-wing populism while cultural anxiety triggered right-wing populism.

7 The 2016 U.S. Presidential Election

Populism expresses negative attitudes to wealthy elites as well as anti-immigrant sentiment. Both types of attitude may be transferred to voting behavior in elections. In this section I focus on the 2016 U.S. Presidential Election, including primaries as well as the General Election. More specifically, I examine whether the treated group relating to the Great Recession was more inclined to vote for left-wing populist Bernie Sanders, and whether the treated group relating to the immigration crisis was more likely to support right-wing populist Donald Trump. It is well known and documented that Bernie Sanders' rhetoric focused on the division between common people and corrupt wealthy elites and that he fostered a negative attitude towards those wealthy elites. At the same time, Donald Trump appealed to xenophobia by using the rhetoric of anti-(unauthorized) immigration to create a split between nationals and the immigrants who threatened them (Kazin, 2016; Rodrik, 2018b).

7.1 Great Recession and Left-wing Populist Voting

There are no questions in the GSS survey asking about voting behavior in the U.S. Presidential Primary Elections, so I utilize the information from the ANES 2016 Time Series Study and combine it with the GSS data. Since it is impossible to link the two data at the individual level, I aggregate the ANES data in the same way as I do to generate the GSS pseudo panel, and then merge it with the GSS pseudo panel at the cohort level (please refer to Section 3.2). The treatment group is composed of cohorts whose couple unemployment averaged within cohort in wave 2010 or 2012 is greater than or equal to

0.5.[31] The controls take their values in 2010.

The first six columns in panel a of Table 8 display outcomes for the 2016 U.S. Presidential Primary Elections. Regardless of controls, the treated cohorts were significantly more prone to support left-wing populist Sanders and significantly less inclined to vote for Trump, echoing the findings of Di Tella and MacCulloch (2009). These results are more likely due to the popularity of Sanders among the cohorts that were unemployed during the Great Recession, rather than merely difference in party preferences between the treated and the controlled. Columns (7) to (10) as the first placebo test show the estimates for the General Election in the same year. After including covariates, the coefficients are insignificant and almost zero for both Clinton and Trump votes. In panel a of Table 9 I present results for the 2012 U.S. Presidential General Election between Obama and Romney as another placebo test. With controls, the estimates are still insignificant. Hence the support for Sanders from the treated cohorts during the Great Recession is not very likely to be explained by difference in party preferences.

Panel c displays the estimates for the counterpart whose couple unemployment averaged within cohort in wave 2006 or 2008 is greater than or equal to 0.5. The controls take their values in 2008. Including covariates, these treated cohorts were not significantly more likely to support either left-wing populist Bernie Sanders or right-wing populist Donald Trump. They were significantly more prone to vote for Hillary Clinton who is usually regarded as a left centrist. This result is consistent with the story in Section 5: only recent unemployment during the Great Recession produced left-wing populism while existing unemployment from before the Great Recession did not.

7.2 Immigration Crisis and Right-wing Populist Voting

Likewise, the data used in this subsection also consist of the GSS pseudo panel and the ANES 2016 Time Series Study. Now the treatment group is formed by the cohorts that were in the West South Central region in wave 2014 or 2016 during the immigration crisis. Covariates take their values in wave 2014 for estimation.

Panel b of Table 8 reports the relevant results. During the Presidential Primary Elections, the cohorts in the West South Central region were significantly more likely to vote for right-wing populist Trump and significantly less prone to support the two Democratic candidates Sanders and Clinton. A similar situation appeared during the

[31] In Table D.6 of Appendix D, I also directly apply the average of couple unemployment within cohort, i.e. a continuous treatment, as the explanatory variable of interest. Though the estimate of voting for Sanders is not significant, the sign and magnitude are still as expected.

Presidential General Election. These results are closely related to the conclusions of Dinas et al. (2016) and Tabellini (2018). One may suspect that they are merely a divergence between party preferences of the treatment and control groups. However, I conduct a placebo test again in panel b of Table 9 for the 2012 U.S. Presidential General Election, and no longer find such a divergence between the votes for Democratic candidate Obama and the votes for Republican candidate Romney. Hence support for Trump among people in the West South Central region cannot be explained, in the main, by difference in party preferences.

7.3 Potential Mechanism

I try to distinguish two potential mechanisms through which new economic insecurity and cultural backlash led to populist voting – accountability theory (Ferejohn, 1986) and issue ownership (Petrocik, 1996). In the current context, the former mechanism states that voters who are dissatisfied with the way the incumbent government is dealing with the Great Recession and the immigration crisis will punish it by turning to an opposition. The latter mechanism claims that dissatisfied voters will support the party or politician they deem competent on the specific issues (Dinas et al., 2016).

As shown in panel a of Table 8, people losing their job after the Great Recession did not decrease their support for the incumbent – the Democratic Party – or turn to the opposition – the Republican Party – in either primaries or the General Election. Instead, these people were significantly more prone to vote for Bernie Sanders who used anti-elitist rhetoric during his campaign. Thus, accountability theory is not valid in this case, while issue ownership seems to be what appropriately explains the electoral reaction against elites and establishment after the Great Recession.

The results are mixed in panel b. The Democrats, Bernie Sanders and Hillary Clinton, both lost votes from people who were most impacted by the immigration crisis. This is predicted by accountability theory. However, Donald Trump, who used considerable anti-(unauthorized) immigration rhetoric and promised harsh reform of the U.S. immigration policy during his campaign, obtained increasing support from residents of the West South Central region. This is also predicted by issue ownership. In order to disentangle this puzzle, in Table 10 I estimate the same model for another two Republican candidates, Ted Cruz and John Kasich, during the 2016 Primary Elections. Ted Cruz held a similar anti-immigration position to that of Donald Trump. He was opposed to providing DREAMers (unauthorized immigrants brought to the U.S. as children) with a path to

citizenship (Kapur, 2018). Moreover, he also called for the repeal of that clause of the 14th amendment granting citizenship to those born in the U.S. (Farley, 2016). However, from 2014 John Kasich changed his previous conservative opinion on immigration and called for a path to legal status for unauthorized immigrants (Sussman, 2015). In October 2015, he actually criticized Trump's plan for "building a wall along the U.S.–Mexico border and removing immigrants who entered the U.S. illegally" as "just crazy" (Rappeport, 2015). If accountability theory were true, the residents in the West South Central region would increase (or at least not decrease) votes for any Republican candidates. If issue ownership were true, these residents would more likely support candidates with a clear anti-immigration opinion. It is clear from Table 10 that they were significantly more prone to vote for Cruz, an anti-immigration candidate, and significantly less likely to support Kasich with his softer attitude to immigration. Once more, this phenomenon fits issue ownership rather than accountability theory.

In this section, I connect new economic insecurity to left-wing populist voting and link cultural anxiety to right-wing populist voting, both delivered through the channel of issue ownership. I find consistent conclusions with the literature (Rodrik, 2018b): economic deprivation drives people to support left-wing populists, and cultural concern urges them to vote for right-wing populists (Sekeris and Vasilakis, 2016; Lucassen and Lubbers, 2012). The effect of recent unemployment during the Great Recession seemed to persist in the long-term. Even five years or so after they had been made unemployed by the Great Recession, people were still significantly more prone to vote for a left-wing populist. Such lasting negative effects on electoral support and trust are also documented by Ananyev and Guriev (2016) and Dustmann et al. (2017).

8 Conclusions

Brexit, the rise of numerous radical left and radical right parties in Europe, as well as Donald Trump's presidency and Bernie Sanders's popularity during the 2016 U.S. Presidential Election, present a surge in populism. This study has investigated whether it is economic insecurity or cultural anxiety that has been driving the growth in populism.

The most important and unique contribution of this study is to identify the trigger of this growth by using the Great Recession and the 2014 immigration crisis as two separate quasi-natural experiments for economic insecurity and cultural backlash, respectively. This paper disentangles economic forces from cultural forces and distinguishes between left-wing populism and right-wing populism empirically. Moreover, individual longitu-

dinal data are rarely available in attitudinal and political surveys, but they are helpful in identifying the driver here by removing individual specific confounders. With two individual level panels, my study is one of the first in populism and political polarization literature that accounts for time-invariant unobserved heterogeneity and time-varying observable characteristics. Compared with earlier studies, a larger set of measures is employed to capture the economic and political dimensions of populism.

I find that recent unemployment during the Great Recession, rather than existing unemployment from before the recession, is what induced attitudes against wealthy elites, such as a decrease in trust in people who manage big companies and a rise in preferences for income redistribution by imposing higher taxes on wealthy families rather than by providing financial assistance to poor people. These anti-elitist attitudes are connected with left-wing populism in the literature. This result is original in that it distinguishes between recent unemployment during the Great Recession and existing unemployment from before the recession. Individuals who became unemployed during the Great Recession perceived the economy as manipulated by elites and thus unjust to them. However, those who had lost their job before the Great Recession did not express that sentiment.

The current study also provides quasi-natural experimental evidence that unauthorized immigration generated a more negative attitude to immigration in the more intensely affected region. Such anti-immigration attitude was driven by cultural and identity concerns rather than labor market competition or social security crowding out. This phenomenon is related to right-wing populism in the literature.

Furthermore, new unemployment amid the Great Recession and the 2014 immigration crisis influenced the 2016 U.S. Presidential Election. Cohorts with a high average of unemployment post-Great Recession preferred left-wing populist Bernie Sanders, while cohorts in the most intensely impacted region during the immigration crisis supported right-wing populist Donald Trump. Placebo tests verify that these voting consequences could not be merely attributed to difference in party preferences.

In sum, this paper takes a step towards reconciling the economic insecurity perspective with the cultural backlash thesis. Economic insecurity represented by recent unemployment during the Great Recession drove left-wing populism while cultural anxiety due to unauthorized immigration triggered right-wing populism. These implications are helpful for economists and policy makers who may be interested in managing the influence of populism in economic and political institutions.

References

Acemoglu, D., G. Egorov, and K. Sonin (2013). A political theory of populism. *The Quarterly Journal of Economics 128*(2), 771–805.

Alesina, A. and G. M. Angeletos (2005). Fairness and redistribution. *American Economic Review 95*(4), 960–980.

Alesina, A. and E. La Ferrara (2005). Preferences for redistribution in the land of opportunities. *Journal of Public Economics 89*(5), 897–931.

Alesina, A. and D. Rodrik (1994). Distributive politics and economic growth. *The Quarterly Journal of Economics 109*(2), 465–490.

Alesina, A., S. Stantcheva, and E. Teso (2018). Intergenerational mobility and preferences for redistribution. *American Economic Review 108*(2), 521–554.

Algan, Y. and P. Cahuc (2010). Inherited trust and growth. *American Economic Review 100*(5), 2060–2092.

Algan, Y., S. Guriev, E. Papaioannou, and E. Passari (2017). The European trust crisis and the rise of populism. *Brookings Papers on Economic Activity 2017*(2), 309–400.

Ananyev, M. and S. M. Guriev (2016). Effect of income on trust: Evidence from the 2009 crisis in Russia. *Working Paper available at SSRN*.

Atanasov, V. and B. Black (2016). Shock-based causal inference in corporate finance and accounting research. *Critical Finance Review 5*, 207–304.

Autor, D. H. (2003). Outsourcing at will: The contribution of unjust dismissal doctrine to the growth of employment outsourcing. *Journal of Labor Economics 21*(1), 1–42.

Aytaç, S. E. and Z. Öniş (2014). Varieties of populism in a changing global context: The divergent paths of Erdoğan and Kirchnerismo. *Comparative Politics 47*(1), 41–59.

Baetschmann, G., K. E. Staub, and R. Winkelmann (2015). Consistent estimation of the fixed effects ordered logit model. *Journal of the Royal Statistical Society: Series A (Statistics in Society) 178*(3), 685–703.

Becker, S. O., T. Fetzer, and D. Novy (2017). Who voted for Brexit? A comprehensive district-level analysis. *Economic Policy 32*(92), 601–650.

Benabou, R. and E. A. Ok (2001). Social mobility and the demand for redistribution: The POUM hypothesis. *The Quarterly Journal of Economics 116*(2), 447–487.

Canovan, M. (1999). Trust the people! Populism and the two faces of democracy. *Political Studies 47*(1), 2–16.

Card, D. (2001). Immigrant inflows, native outflows, and the local labor market impacts of higher immigration. *Journal of Labor Economics 19*(1), 22–64.

Card, D. (2005). Is the new immigration really so bad? *The Economic Journal 115*(507), F300–F323.

Card, D., C. Dustmann, and I. Preston (2012). Immigration, wages, and compositional amenities. *Journal of the European Economic Association 10*(1), 78–119.

Colantone, I. and P. Stanig (2018a). Global competition and Brexit. *American Political Science Review 112*(2), 201–218.

Colantone, I. and P. Stanig (2018b). The trade origins of economic nationalism: Import competition and voting behavior in western Europe. *American Journal of Political Science 62*(4), 936–953.

Deaton, A. (1985). Panel data from time series of cross-sections. *Journal of Econometrics 30*(1-2), 109–126.

Dehdari, S. (2018). Economic distress and support for far-right parties - evidence from Sweden. *Working Paper available at SSRN*.

Di Tella, R., J. Dubra, and A. L. Lagomarsino (2017). Meet the oligarchs: Business legitimacy, state capacity and taxation. *NBER Working Paper No. 22934*.

Di Tella, R. and R. MacCulloch (2009). Why doesn't capitalism flow to poor countries? *Brookings Papers on Economic Activity*, 285–321.

Di Tella, R. and J. J. Rotemberg (2018). Populism and the return of the "paranoid style": Some evidence and a simple model of demand for incompetence as insurance against elite betrayal. *Journal of Comparative Economics 46*(4), 988–1005.

Dinas, E., K. Matakos, D. Xefteris, and D. Hangartner (2016). Waking up the Golden Dawn: Does exposure to the refugee crisis increase support for extreme-right parties. *Working Paper*.

Dorn, D., G. Hanson, K. Majlesi, et al. (2016). Importing political polarization? The electoral consequences of rising trade exposure. *Working Paper*.

Dustmann, C., B. Eichengreen, S. Otten, A. Sapir, G. Tabellini, and G. Zoega (2017). *Europe's Trust Deficit: Causes and Remedies*. CEPR Press.

Dustmann, C., U. Schönberg, and J. Stuhler (2017). Labor supply shocks, native wages, and the adjustment of local employment. *The Quarterly Journal of Economics 132*(1), 435–483.

Farley, R. (2016). Cruz on birthright citizenship. `https://www.factcheck.org/2016/01/cruz-on-birthright-citizenship/`.

Ferejohn, J. (1986). Incumbent performance and electoral control. *Public Choice 50*(1), 5–25.

Foster, C. and J. Frieden (2017). Crisis of trust: Socio-economic determinants of Europeans? Confidence in government. *European Union Politics 18*(4), 511–535.

Greenblatt, A. (2014). What's causing the latest immigration crisis? A brief explainer. `https://www.npr.org/2014/07/09/329848538/whats-causing-the-latest-immigration-crisis-a-brief-explainer`.

Guiso, L., H. Herrera, M. Morelli, and T. Sonno (2017). Demand and supply of populism. *CEPR Discussion Paper No. DP11871*.

Guiso, L., P. Sapienza, and L. Zingales (2004). The role of social capital in financial development. *American Economic Review 94*(3), 526–556.

Hainmueller, J. and D. J. Hopkins (2014). Public attitudes toward immigration. *Annual Review of Political Science 17*, 225–249.

Hatton, T. J. (2016). Immigration, public opinion and the recession in Europe. *Economic Policy 31*(86), 205–246.

Hiskey, J. T., A. Córdova, D. Orcés, and M. F. Malone (2016). Understanding the Central American refugee crisis. `https://www.americanimmigrationcouncil.org/research/understanding-central-american-refugee-crisis`.

Inglehart, R. and P. Norris (2016). Trump, Brexit, and the rise of populism: Economic have-nots and cultural backlash. *HKS Working Paper No. RWP16-026*.

Jensen, J. B., D. P. Quinn, and S. Weymouth (2017). Winners and losers in international trade: The effects on US presidential voting. *International Organization 71*(3), 423–457.

Kaltwasser, C. (2018). Studying the (economic) consequences of populism. *AEA Papers and Proceedings 108*, 204–207.

Kapur, S. (2018). Cruz blasts citizenship path for Dreamers suggested by Trump. `https://www.bloomberg.com/news/articles/2018-01-25/cruz-blasts-citizenship-path-for-dreamers-suggested-by-trump/`.

Kazin, M. (2016). How can Donald Trump and Bernie Sanders both be 'populist'? `https://www.nytimes.com/2016/03/27/magazine/how-can-donald-trump-and-bernie-sanders-both-be-populist.html`.

Knack, S. and P. Keefer (1997). Does social capital have an economic payoff? A cross-country investigation. *The Quarterly Journal of Economics 112*(4), 1251–1288.

Kriesi, H. and T. S. Pappas (2015). Populism in Europe during crisis: An introduction. In H. Kriesi and T. S. Pappas (Eds.), *European Populism in the Shadow of the Great Recession*, pp. 1–19. Colchester : ECPR Press.

Kuziemko, I., M. I. Norton, E. Saez, and S. Stantcheva (2015). How elastic are preferences for redistribution? Evidence from randomized survey experiments. *American Economic Review 105*(4), 1478–1508.

Kuziemko, I. and E. Washington (2018). Why did the democrats lose the south? Bringing new data to an old debate. *American Economic Review 108*(10), 2830–2867.

Laclau, E. (1977). *Politics and ideology in Marxist theory: Capitalism, fascism, populism.* London: New Left Books.

Loewenberg, S. (2009). Malnutrition in Guatemala: A national shame. *The Economist 8*, 27.

Lucassen, G. and M. Lubbers (2012). Who fears what? Explaining far-right-wing preference in Europe by distinguishing perceived cultural and economic ethnic threats. *Comparative Political Studies 45*(5), 547–574.

March, L. and C. Mudde (2005). What's left of the radical left? The European radical left after 1989: Decline and mutation. *Comparative European Politics 3*(1), 23–49.

Mudde, C. (2004). The populist zeitgeist. *Government and Opposition 39*(4), 541–563.

Mudde, C. and C. R. Kaltwasser (2013). Exclusionary vs. inclusionary populism: Comparing contemporary Europe and Latin America. *Government and Opposition 48*(2), 147–174.

Mudde, C. and C. R. Kaltwasser (2017). *Populism: A very short introduction*. New York: Oxford University Press.

Mutz, D. C. (2018). Status threat, not economic hardship, explains the 2016 presidential vote. *Proceedings of the National Academy of Sciences 115*(19), E4330–E4339.

Nazario, S. (2014). The children of the drug wars. `https://www.nytimes.com/2014/07/13/opinion/sunday/a-refugee-crisis-not-an-immigration-crisis.html`.

Petrocik, J. R. (1996). Issue ownership in presidential elections, with a 1980 case study. *American Journal of Political Science 40*(3), 825–850.

Piketty, T. (1995). Social mobility and redistributive politics. *The Quarterly Journal of Economics 110*(3), 551–584.

Rappeport, A. (2015). John Kasich says he's 'had it' with rivals peddling 'crazy' ideas. `https://www.nytimes.com/politics/first-draft/2015/10/27/john-kasich-says-hes-had-it-with-rivals-peddling-crazy-ideas/`.

Rodrik, D. (2018a). Is populism necessarily bad economics? *AEA Papers and Proceedings 108*, 196–199.

Rodrik, D. (2018b). Populism and the economics of globalization. *Journal of International Business Policy 1*, 12–33.

Rousseau, P. L. (2016). The politics of financial development: A review of Calomiris and Haber's Fragile by Design. *Journal of Economic Literature 54*(1), 208–223.

Sachs, J. (1990). Social conflict and populist policies in Latin America. In R. Brunetta and C. Dell'Aringa (Eds.), *Labour Relations and Economic Performance*, pp. 137–169. London: Palgrave Macmillan.

Sekeris, P. and C. Vasilakis (2016). The mediterranean refugees crisis and extreme right parties: Evidence from Greece. *MPRA Paper No. 72222*.

Sniderman, P. M., L. Hagendoorn, and M. Prior (2004). Predisposing factors and situational triggers: Exclusionary reactions to immigrant minorities. *American Political Science Review 98*(1), 35–49.

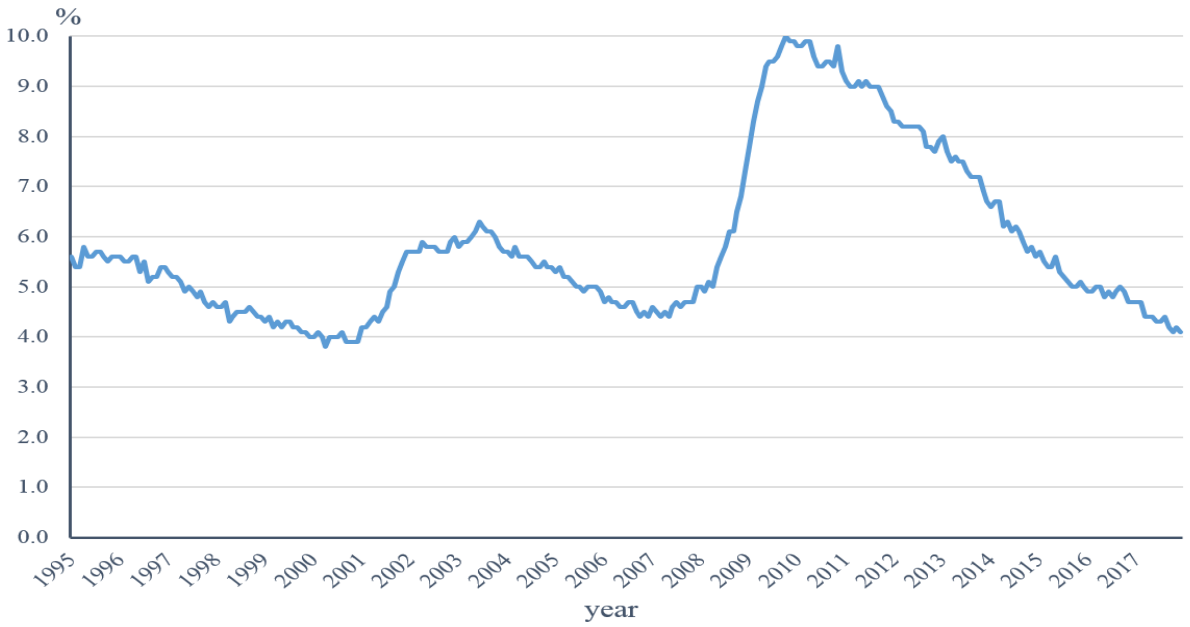
Stavrakakis, Y. and G. Katsambekis (2014). Left-wing populism in the European periphery: The case of SYRIZA. *Journal of Political Ideologies 19*(2), 119–142.

Sussman, A. L. (2015). Kasich backs path to legal status for undocumented immigrants. `https://www.wsj.com/articles/kasich-backs-path-to-legal-status-for-undocumented-immigrants-1439164176`.

Tabellini, M. (2018). Gifts of the immigrants, woes of the natives: Lessons from the age of mass migration. *Working Paper*.

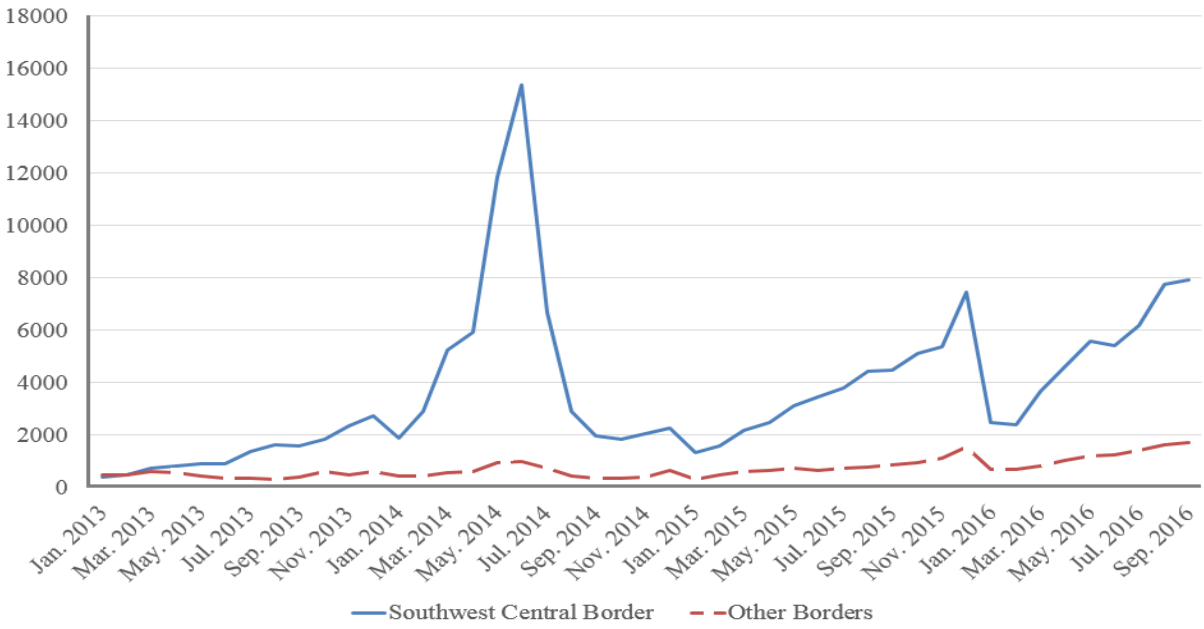
Wiles, P. (1969). A syndrome, not a doctrine: Some elementary theses on populism. In G. Ionescu and E. Gellner (Eds.), *Populism: Its Meaning and National Characteristics*, pp. 166–179. London: Weidenfeld and Nicolson.

Figure 1: Unemployment Rate in the U.S. (Seasonally Adjusted); 1995-2017



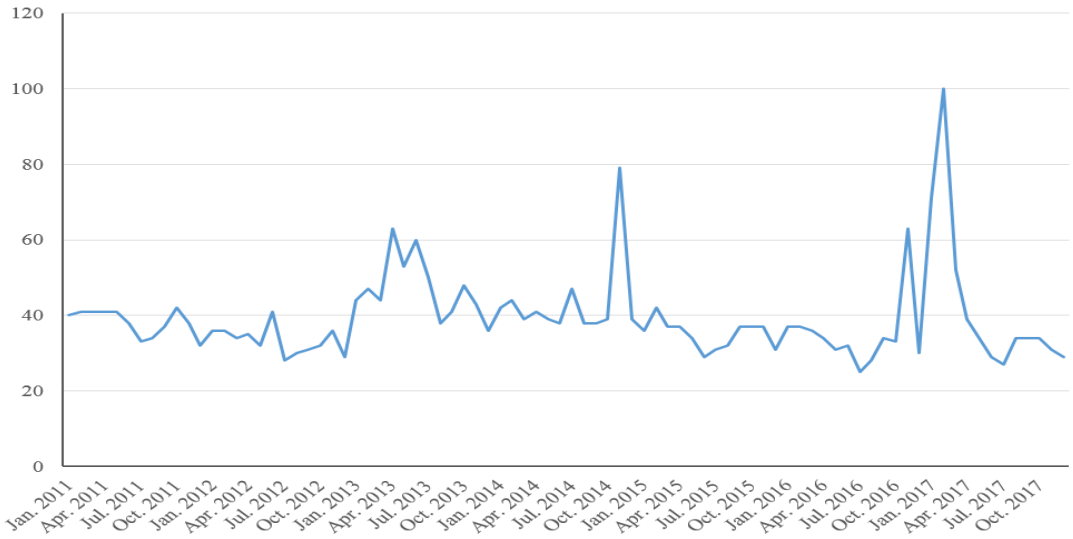
Source: U.S. Bureau of Labor Statistics

Figure 2: Family Unit Apprehensions by Month; 2013-Sep.2016



Source: United States Border Patrol

Figure 3: U.S. Google Trends on Immigration



Source: Google Trends

Figure 4: Pre-Treatment Trends: Estimates of Treatment×Every Wave

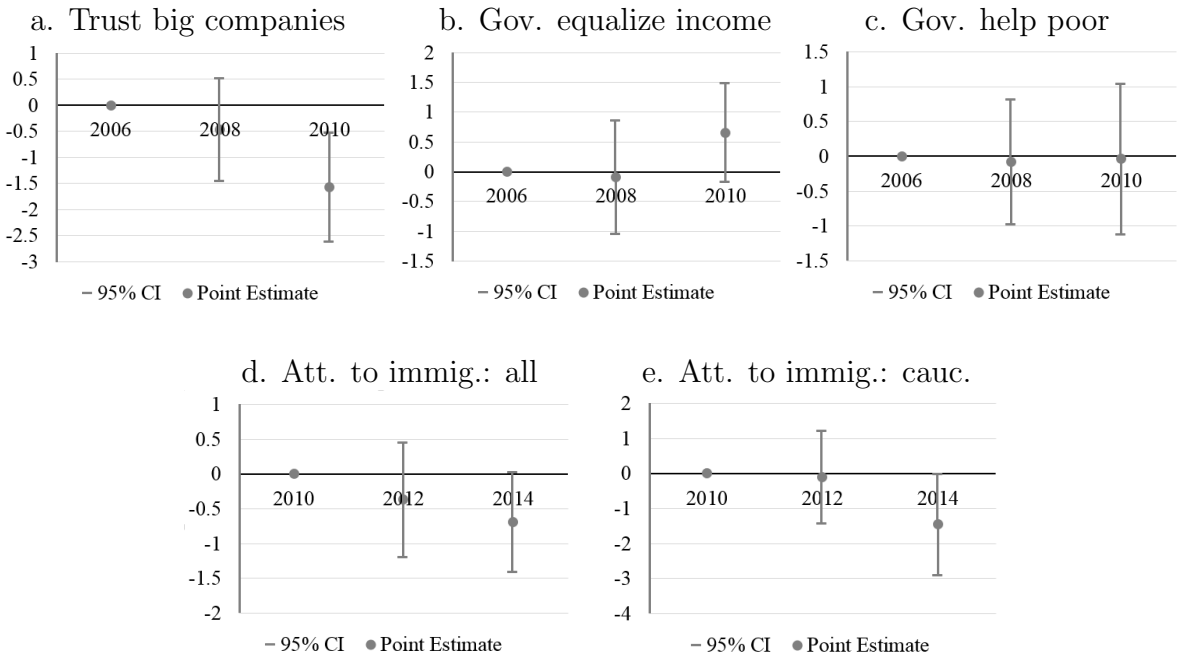


Table 1: Effects of Unemployment on Attitudes Related to Populism

Panel a.	Trust Companies		Gov. Equ. Inc.		Gov. Help Poor		Atti. Immig.	
Recent Unemp. Post-Rec.	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Treat.×Post-Great Rec.	-1.23***	-1.32***	0.67**	0.70**	0.28	-0.00	-0.37	-0.28
	(0.47)	(0.50)	(0.34)	(0.34)	(0.41)	(0.43)	(0.45)	(0.48)
Controls	No	Yes	No	Yes	No	Yes	No	Yes
No. of Obs.	1,569	1,569	5,049	5,049	3,057	3,057	878	878
Panel b.	Trust Companies		Gov. Equ. Inc.		Gov. Help Poor		Atti. Immig.	
Existing Unemp. Pre-Rec.	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Couple Unemployment	-0.61	-0.69	0.26	0.16	0.63	0.40	0.35	0.56
	(0.44)	(0.43)	(0.39)	(0.41)	(0.44)	(0.45)	(0.44)	(0.49)
Unemp.×Post-Rec.	1.96	2.02	0.35	0.48	-0.15	0.04	-1.37*	-1.33
	(1.38)	(1.53)	(0.67)	(0.73)	(0.76)	(0.77)	(0.80)	(0.90)
Controls	No	Yes	No	Yes	No	Yes	No	Yes
No. of Obs.	1,537	1,537	5,018	5,018	3,025	3,025	912	912

Note: In panel a, the sample excludes individuals who were unemployed or whose spouse was unemployed in either wave 2006 or wave 2008. The treatment group consists of respondents who did not become unemployed or whose spouse did not become unemployed until wave 2010 and the control group contains respondents who were not laid off, and whose spouse was not laid off, in any of the three waves. Wave 2010 is the only post-Great Recession period with respect to unemployment. In panel b, the sample excludes individuals who were unemployed or whose spouse was unemployed only in wave 2010. Individual fixed effects and survey wave fixed effects are included in every column. Controls contain extensive demographic and socio-economic variables such as the quadratic of respondent's age, marital status dummies, number of siblings, number of children, academic degree dummies, categories of last year's total family income, categories of the population size of respondent's place, party self-identification, dummy of liberal ideology, and dummy of home owner. Robust standard errors clustered at the individual level are reported in parentheses; * $p < 0.1$; ** $p < 0.05$; *** $p < 0.01$.

Table 2: Effects of Recent Unemployment on Attitudes Related to Populism: Interaction with Immigration Exposure

	Trust Companies		Gov. Equ. Inc.		Gov. Help Poor		Atti. Immig.	
Recent Unemp. Post-Rec.	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Treat.×Post-Great Rec.	-1.26**	-1.22**	0.65*	0.65*	-0.02	0.02	-0.29	-0.40
	(0.51)	(0.51)	(0.34)	(0.34)	(0.44)	(0.43)	(0.48)	(0.48)
Immigrants Proportion	-0.01	-0.01	-0.07	-0.09	-0.03	-0.10*	-0.00	0.04
	(0.04)	(0.06)	(0.05)	(0.07)	(0.04)	(0.06)	(0.06)	(0.07)
Immig. Prop.×Post-Rec.	0.00	0.01	0.01	-0.01	0.01	-0.06	-0.01	-0.06
	(0.02)	(0.09)	(0.01)	(0.06)	(0.01)	(0.07)	(0.02)	(0.08)
County Unemployment		-0.03		0.05		-0.19		0.10
		(0.15)		(0.14)		(0.13)		(0.18)
County Unemp.×Post-Rec.		-0.04		-0.08		-0.03		-0.02
		(0.14)		(0.11)		(0.12)		(0.16)
Immig. Prop.×County Unemp.		-0.00		0.01		0.02**		-0.01
		(0.01)		(0.01)		(0.01)		(0.01)
Immig. Prop.×County Unemp.×Post-Rec.		-0.00		-0.00		-0.00		0.01
		(0.01)		(0.01)		(0.01)		(0.01)
Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
No. of Obs.	1,538	1,534	4,955	4,949	3,000	2,995	864	858

Note: The treatment group consists of respondents who did not become unemployed or whose spouse did not become unemployed until wave 2010 and the control group contains respondents who were not laid off, and whose spouse was not laid off, in any of the three waves. Wave 2010 is the only post-Great Recession period with respect to unemployment. Individual fixed effects and survey wave fixed effects are included in every column. Controls contain extensive demographic and socio-economic variables such as the quadratic of respondent's age, marital status dummies, number of siblings, number of children, academic degree dummies, categories of last year's total family income, categories of the population size of respondent's place, party self-identification, dummy of liberal ideology, and dummy of home owner. Robust standard errors clustered at the individual level are reported in parentheses; * $p < 0.1$; ** $p < 0.05$; *** $p < 0.01$.

Table 3: Perceived Economic Unfairness: A Mechanism through which Recent Unemployment Affected Preferences for Redistribution

Panel a.	Perceived Economic Unfairness			
Recent Unemp. Post-Great Recession	(1)		(2)	
Treatment×Post-Great Recession	0.74**	(0.36)	0.77**	(0.36)
Controls	No		Yes	
No. of Obs.	1,798		1,798	
Panel b.	Gov. Equalize Income			
Recent Unemp. Post-Great Recession	(1)		(2)	
Perceived Economic Unfairness	0.22*	(0.13)	0.22*	(0.13)
Controls	No		Yes	
No. of Obs.	2,743		2,743	
Panel b.	Gov. Help Poor			
Recent Unemp. Post-Great Recession	(3)		(4)	
Perceived Economic Unfairness	0.06	(0.12)	0.10	(0.12)
Controls	No		Yes	
No. of Obs.	1,671		1,671	
Panel c.	Perceived Economic Unfairness			
Existing Unemp. Pre-Great Recession	(1)		(2)	
Couple Unemployment	0.07	(0.44)	0.07	(0.49)
Unemployment×Post-Great Recession	-0.25	(0.90)	-0.31	(0.82)
Controls	No		Yes	
No. of Obs.	1,743		1,743	

Note: The samples in panels a and b exclude individuals who were unemployed or whose spouse was unemployed in either wave 2006 or wave 2008. The treatment group consists of respondents who did not become unemployed or whose spouse did not become unemployed until wave 2010 and the control group contains respondents who were not laid off, and whose spouse was not laid off, in any of the three waves. Wave 2010 is the only post-Great Recession period with respect to unemployment. In panel c, the sample excludes individuals who were unemployed or whose spouse was unemployed in wave 2010 only. Individual fixed effects and survey wave fixed effects are included in every column. Controls contain extensive demographic and socio-economic variables such as the quadratic of respondent's age, marital status dummies, number of siblings, number of children, academic degree dummies, categories of last year's total family income, categories of the population size of respondent's place, party self-identification, dummy of liberal ideology, and dummy of home owner. Robust standard errors clustered at the individual level are reported in parentheses;
* $p < 0.1$; ** $p < 0.05$; *** $p < 0.01$.

Table 4: Effect of the Immigration Crisis on Attitude to Immigration

Attitude to Immigration							Placebo Test 1		Placebo Test 2		
	(1)	(2)	(2I)	(2II)	(2III)	(2IV)	(2V)	(2VI)	(2VII)	(2VIII)	(3)
Treat.×Post-Immig. Crisis	-0.44	-0.50*	0.15	-1.40**	-0.26	-0.62*	-0.30	-0.06	-0.31	-0.27	
	(0.28)	(0.30)	(0.50)	(0.60)	(1.09)	(0.33)	(0.47)	(0.57)	(0.40)	(0.68)	
Treat.×Wave 2012											-0.37
											(0.42)
Treat.×Wave 2014											-0.69*
											(0.37)
Controls	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Number of observations	1,070	1,070	349	690	289	781	899	635	498	318	1,070

Note: The treatment group is composed of respondents who resided in the West South Central region of the U.S. in wave 2014, i.e. the states of Arkansas, Louisiana, Oklahoma, and Texas, that the immigration crisis most intensely impacted. The control group covers the rest of the U.S. in the same wave. The post-immigration crisis period is wave 2014. Column (2I) restricts the sample to include Hispanic Whites and non-Whites and column (2II) includes non-Hispanic Whites only. Column (2III) and (2IV) show the estimates for bachelor's degree holders and individuals without a bachelor's degree (measured in 2014), respectively. Column (2V) is a placebo test by using the East South Central region of the U.S. as the treated region and estimating the model excluding the West South Central region. Column (2VI) is the same type of placebo test for non-Hispanic Whites only. Column (2VII) is another placebo test by using wave 2012 as a fake time of the shock and estimating with only pre-(real)treatment data. Column (2VIII) is the same test among non-Hispanic Whites only. Individual fixed effects and survey wave fixed effects are included in every column. Controls contain extensive demographic and socio-economic variables such as the quadratic of respondent's age, marital status dummies, number of siblings, number of children, academic degree dummies, categories of last year's total family income, categories of the population size of respondent's place, party self-identification, dummy of liberal ideology, and dummy of home owner. Robust standard errors clustered at the individual level are reported in parentheses; * $p < 0.1$; ** $p < 0.05$; *** $p < 0.01$.

Table 5: Effects of Immigration Crisis on Left-wing Populist Attitudes

	Trust Companies		Gov. Equ. Inc.		Gov. Help Poor	
	(1)	(2)	(3)	(4)	(5)	(6)
Treat.×Post-Immigration Crisis	0.13	0.18	-0.12	-0.11	0.09	0.01
	(0.30)	(0.32)	(0.26)	(0.28)	(0.32)	(0.34)
Controls	No	Yes	No	Yes	No	Yes
No. of Obs.	1,547	1,547	8,345	8,345	3,251	3,251

Note: The treatment group is composed of respondents who resided in the West South Central region of the U.S. in wave 2014, i.e. the states of Arkansas, Louisiana, Oklahoma, and Texas, that the immigration crisis most intensely impacted. The control group covers the rest of the U.S. in the same wave. The post-immigration crisis period is wave 2014. Individual fixed effects and survey wave fixed effects are included in every column. Controls contain extensive demographic and socio-economic variables such as the quadratic of respondent's age, marital status dummies, number of siblings, number of children, academic degree dummies, categories of last year's total family income, categories of the population size of respondent's place, party self-identification, dummy of liberal ideology, and dummy of home owner. Robust standard errors clustered at the individual level are reported in parentheses; * $p < 0.1$; ** $p < 0.05$; *** $p < 0.01$.

Table 6: Effects of the Immigration Crisis on Individual Labor Market Outcomes

	Actual Couple Unemp.			Anticipated Future Unemp.		
	(1)	(2)	(2I)	(3)	(4)	(4I)
Treatment×Post-Immigration Crisis	0.47	0.71	0.38	-0.28	-0.23	-0.17
	(0.44)	(0.45)	(0.53)	(0.33)	(0.34)	(0.37)
Controls	No	Yes	Yes	No	Yes	Yes
Number of observations	633	633	492	2,848	2,848	1,986

Note: The treatment group is composed of respondents who resided in the West South Central region of the U.S. in wave 2014, i.e. the states of Arkansas, Louisiana, Oklahoma, and Texas, that the immigration crisis most intensely impacted. The control group covers the rest of the U.S. in the same wave. The post-immigration crisis period is wave 2014. Columns (2I) and (4I) show the estimates for individuals without a bachelor's degree (measured in 2014). Individual fixed effects and survey wave fixed effects are included in every column. Controls contain extensive demographic and socio-economic variables such as the quadratic of respondent's age, marital status dummies, number of siblings, number of children, academic degree dummies, categories of last year's total family income, categories of the population size of respondent's place, party self-identification, dummy of liberal ideology, and dummy of home owner. Robust standard errors clustered at the individual level are reported in parentheses; * $p < 0.1$; ** $p < 0.05$; *** $p < 0.01$.

Table 7: Effect of the Immigration Crisis on Attitude to Immigration: Interaction with Individual Labor Market Outcomes and Local Labor Market Conditions

Attitude to Immigration	All			Non-Hispanic Whites		
	(1)	(2)	(3)	(4)	(5)	(6)
Treat.×Post-Immig. Crisis	-0.50*	-0.43	-0.43	-1.38**	-1.32**	-1.30**
	(0.30)	(0.31)	(0.31)	(0.61)	(0.59)	(0.61)
Couple Unemployment	-0.51		-0.51	-0.67		-0.68
	(0.39)		(0.40)	(0.56)		(0.57)
Couple Unemp.×Post-Immig. Crisis	0.49		0.52	0.62		0.63
	(0.57)		(0.56)	(0.88)		(0.86)
County Unemployment		-0.09	-0.09		-0.17*	-0.16
		(0.08)	(0.08)		(0.10)	(0.10)
County Unemp.×Post-Immig. Crisis		-0.04	-0.05		-0.17	-0.18*
		(0.08)	(0.08)		(0.11)	(0.11)
Controls	Yes	Yes	Yes	Yes	Yes	Yes
No. of Obs.		1,070			690	

Note: The treatment group is composed of respondents who resided in the West South Central region of the U.S. in wave 2014, i.e. the states of Arkansas, Louisiana, Oklahoma, and Texas, that the immigration crisis most intensely impacted. The control group covers the rest of the U.S. in the same wave. The post-immigration crisis period is wave 2014. Individual fixed effects and survey wave fixed effects are included in every column. Controls contain extensive demographic and socio-economic variables such as the quadratic of respondent's age, marital status dummies, number of siblings, number of children, academic degree dummies, categories of last year's total family income, categories of the population size of respondent's place, party self-identification, dummy of liberal ideology, and dummy of home owner. Robust standard errors clustered at the individual level are reported in parentheses; * $p < 0.1$; ** $p < 0.05$; *** $p < 0.01$.

Table 8: Effects of the Great Recession and Immigration Crisis on Populist Voting

	2016 U.S. Presid. Primary Elections						2016 U.S. Presid. General Election			
Panel a.	Sanders		Clinton		Trump		Clinton		Trump	
Great Recession	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Treatment	0.40**	0.42**	-0.10	-0.11	-0.16***	-0.25***	0.19*	0.03	-0.26***	0.01
	(0.17)	(0.18)	(0.11)	(0.14)	(0.04)	(0.09)	(0.10)	(0.18)	(0.04)	(0.13)
Controls	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes
No. of Obs.	135	135	135	135	135	135	136	136	136	136
Panel b.	Sanders		Clinton		Trump		Clinton		Trump	
Immigration Crisis	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Treatment	-0.15***	-0.10*	-0.08**	-0.11**	0.07**	0.09**	-0.13***	-0.12**	0.15***	0.13***
	(0.04)	(0.05)	(0.04)	(0.05)	(0.03)	(0.04)	(0.04)	(0.05)	(0.05)	(0.05)
Controls	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes
No. of Obs.	132	132	132	132	132	132	134	134	134	134
Panel c.	Sanders		Clinton		Trump		Clinton		Trump	
Unemp. Pre-Rec.	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Treatment	0.44**	0.19	-0.12	-0.03	-0.12*	-0.19	0.22**	0.23*	-0.21***	-0.18
	(0.17)	(0.15)	(0.11)	(0.09)	(0.07)	(0.12)	(0.09)	(0.13)	(0.07)	(0.12)
Controls	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes
No. of Obs.	134	134	134	134	134	134	135	135	135	135

Note: In panel a for the Great Recession, the treatment group is composed of cohorts whose couple unemployment averaged within cohort is greater than or equal to 0.5 in wave 2010 or 2012. Covariates take values in wave 2010. In panel b for the immigration crisis, the treatment group consists of cohorts that resided in the West South Central region of the U.S. in wave 2014 or 2016. Covariates take values in wave 2014. In panel c for existing unemployment pre-Great Recession, the treatment group is composed of cohorts whose couple unemployment averaged within cohort is greater than or equal to 0.5 in wave 2006 or 2008. Covariates take values in wave 2008. All the dependent variables and controls are averages within cohort. Controls contain the mean of voting turnout in the corresponding election, as well as extensive averaged demographic and socio-economic variables such as the quadratic of respondent's age, marital status dummies, number of siblings, number of children, academic degree dummies, categories of last year's total family income, categories of the population size of respondent's place, party self-identification, dummy of liberal ideology, and dummy of home owner. Robust standard errors in parentheses; * $p < 0.1$; ** $p < 0.05$; *** $p < 0.01$.

Table 9: A Placebo Test: Effects of Recent Unemployment and the Immigration Crisis on the 2012 U.S. Presidential Election

	2012 U.S. Presidential General Election			
Panel a.	Obama		Romney	
Great Recession	(1)	(2)	(3)	(4)
Treatment	0.28***	0.19	-0.31***	-0.19
	(0.07)	(0.15)	(0.07)	(0.17)
Controls	No	Yes	No	Yes
No. of Obs.	134	134	134	134
Panel b.	Obama		Romney	
Immigration Crisis	(1)	(2)	(3)	(4)
Treatment	-0.09	-0.03	0.07	-0.01
	(0.06)	(0.07)	(0.06)	(0.06)
Controls	No	Yes	No	Yes
No. of Obs.	134	134	134	134

Note: In panel a for the Great Recession, the treatment group is composed of cohorts whose couple unemployment averaged within cohort is greater than or equal to 0.5 in wave 2010 or 2012. Covariates take values in wave 2010. In panel b for the immigration crisis, the treatment group consists of cohorts that resided in the West South Central region of the U.S. in wave 2014 or 2016. Covariates take values in wave 2014. All the dependent variables and controls are averages within cohort. Controls contain the mean of voting turnout in the corresponding election, as well as extensive averaged demographic and socio-economic variables such as the quadratic of respondent's age, marital status dummies, number of siblings, number of children, academic degree dummies, categories of last year's total family income, categories of the population size of respondent's place, party self-identification, dummy of liberal ideology, and dummy of home owner. Robust standard errors in parentheses; * p < 0.1; ** p < 0.05; *** p < 0.01.

Table 10: Extra Candidates in Primaries: Effects of the Immigration Crisis on Populist Voting

	2016 U.S. Presidential Primary Elections			
	Cruz		Kasich	
Immigration Crisis	(1)	(2)	(3)	(4)
Treatment	0.11***	0.08**	-0.04***	-0.05***
	(0.03)	(0.04)	(0.01)	(0.02)
Controls	No	Yes	No	Yes
No. of Obs.	132	132	132	132

Note: The treatment group consists of cohorts that resided in the West South Central region of the U.S. in wave 2014 or 2016. Covariates take values in wave 2014. All the dependent variables and controls are averages within cohort. Controls contain the mean of voting turnout in the corresponding election, as well as extensive averaged demographic and socio-economic variables such as the quadratic of respondent's age, marital status dummies, number of siblings, number of children, academic degree dummies, categories of last year's total family income, categories of the population size of respondent's place, party self-identification, dummy of liberal ideology, and dummy of home owner. Robust standard errors in parentheses; * p < 0.1; ** p < 0.05; *** p < 0.01.

For Online Publication

Appendix A: Variables – Definitions and Descriptives

Table A.1 provides an overview of the definitions of variables used in the analysis. Table A.2 presents the descriptives of these variables in the 2006 sample panel (wave 2006 to 2010) for the Great Recession. Table A.3 shows the descriptives in the 2010 sample panel (wave 2010 to 2014) for the immigration crisis.

Table A.1: Definitions of Variables

Variable	Definition
Trust companies	Confidence in people running major companies (one to three)
Gov. equal. inc.	U.S. gov. ought to reduce income difference between rich and poor (one to seven)
Gov. help poor	U.S. gov. should improve living standard of poor (one to five)
Attitude to immig.	Dummy variable if number of immigrants to U.S. should not decrease
Unemploy. couple	Dummy variable if either partner of couple unemployed
Econ. unfairness	Luck & network more important than hard work in one's success (one to three)
Married	Dummy variable if married
Widowed	Dummy variable if widowed
Divorced	Dummy variable if divorced
Separated	Dummy variable if legally separated, i.e. legally living apart but still legally married
Never married	Dummy variable if never married
Children number	Number of children
Sibling number	Number of siblings
Age	Age of respondent
Age squared	Age squared of respondent
Lower high school	Dummy variable if highest degree is lower than high school
High school	Dummy variable if highest degree is high school
College	Dummy variable if highest degree is junior college or bachelor
Graduate	Dummy variable if highest degree is graduate degree
Family income	Categories of total family income before taxes last year
City size	Categories of population size of respondent's place
Democrat	Dummy variable if party self-identification is democrat
Republican	Dummy variable if party self-identification is republican
Liberal	Dummy variable if political view is liberal
Home owner	Dummy variable if home owner

Table A.2: Descriptives in the 2006 Sample Panel; Wave 2006 – 2010

	Treatment			Control		
Variables	Mean	Minimum	Maximum	Mean	Minimum	Maximum
Trust companies	1.98	1	3	1.94	1	3
Gov. equal. inc.	4.45	1	7	4.22	1	7
Gov. help poor	3.29	1	5	3.06	1	5
Econ. unfairness	1.51	1	3	1.47	1	3
Number of children	2.07	0	6	1.95	0	8
Number of siblings	3.96	0	25	3.51	0	32
Age	43.31	22	75	50.06	18	89
Percentages						
Attitude to immig.	0.50	0	1	0.47	0	1
Married	0.54	0	1	0.51	0	1
Widowed	0.02	0	1	0.09	0	1
Divorced	0.16	0	1	0.17	0	1
Separated	0.08	0	1	0.03	0	1
Never married	0.20	0	1	0.20	0	1
Lower high school	0.11	0	1	0.11	0	1
High school	0.57	0	1	0.49	0	1
College	0.26	0	1	0.28	0	1
Graduate	0.06	0	1	0.12	0	1
Family income 10K minus	0.16	0	1	0.17	0	1
Family income 10-20K	0.13	0	1	0.09	0	1
Family income 20-30K	0.13	0	1	0.10	0	1
Family income 30-40K	0.11	0	1	0.11	0	1
Family income 40-50K	0.09	0	1	0.08	0	1
Family income 50-60K	0.07	0	1	0.09	0	1
Family income 60-75K	0.08	0	1	0.10	0	1
Family income 75-90K	0.07	0	1	0.07	0	1
Family income 90-110K	0.05	0	1	0.06	0	1
Family income 110-150K	0.07	0	1	0.07	0	1
Family income 150K plus	0.04	0	1	0.06	0	1
City size 10K minus	0.39	0	1	0.32	0	1
City size 10-100K	0.37	0	1	0.45	0	1
City size 100-1000K	0.16	0	1	0.16	0	1
City size 1000K plus	0.08	0	1	0.07	0	1
Democrat	0.38	0	1	0.34	0	1
Republican	0.19	0	1	0.27	0	1
Liberal	0.26	0	1	0.27	0	1
Home owner	0.38	0	1	0.47	0	1

Based on 81 individuals in the treatment group and 1,109 in the control group.

Table A.3: Descriptives in the 2010 Sample Panel; Wave 2010 – 2014

	Treatment			Control		
Variable	Mean	Minimum	Maximum	Mean	Minimum	Maximum
Number of children	2.19	0	8	1.84	0	8
Number of siblings	4.42	0	20	3.36	0	30
Age	46.78	19	89	49.77	18	89
Percentages						
Attitude to immig.	0.52	0	1	0.49	0	1
Unemploy. couple	0.08	0	1	0.07	0	1
Married	0.43	0	1	0.46	0	1
Widowed	0.08	0	1	0.08	0	1
Divorced	0.16	0	1	0.19	0	1
Separated	0.05	0	1	0.03	0	1
High school	0.54	0	1	0.50	0	1
College	0.23	0	1	0.28	0	1
Graduate	0.04	0	1	0.13	0	1
Family income 10-20K	0.19	0	1	0.10	0	1
Family income 20-30K	0.18	0	1	0.10	0	1
Family income 30-40K	0.10	0	1	0.09	0	1
Family income 40-50K	0.07	0	1	0.08	0	1
Family income 50-60K	0.07	0	1	0.08	0	1
Family income 60-75K	0.08	0	1	0.09	0	1
Family income 75-90K	0.03	0	1	0.07	0	1
Family income 90-110K	0.03	0	1	0.07	0	1
Family income 110-150K	0.03	0	1	0.08	0	1
Family income 150K plus	0.06	0	1	0.08	0	1
City size 10-100K	0.24	0	1	0.46	0	1
City size 100-1000K	0.34	0	1	0.17	0	1
City size 1000K plus	0.10	0	1	0.07	0	1
Democrat	0.45	0	1	0.35	0	1
Republican	0.16	0	1	0.24	0	1
Liberal	0.25	0	1	0.29	0	1
Home owner	0.51	0	1	0.53	0	1

Based on 136 individuals in the treatment group and 1,168 in the control group.

Appendix B: Covariate Balance Pre-Shock

Table B.1 compares covariates between the treatment group and the control group, measured pre-Great Recession, in the 2006 sample panel. Table B.2 compares covariates between the treated and controlled, measured pre-immigration crisis, in the 2010 sample panel.

Table B.1: Descriptives in the 2006 Sample Panel; Pre-Great Recession Wave 2006 – 2008

	Treatment			Control			Diff. test p-value
Variables	Mean	Min.	Max.	Mean	Min.	Max.	based on matched sample
Number of children	2.00	0	6	1.92	0	8	0.30
Number of siblings	3.85	0	14	3.50	0	32	0.93
Age	42.24	22	73	49.04	18	89	0.22
Percentages							
Married	0.56	0	1	0.52	0	1	0.11
Widowed	0.01	0	1	0.08	0	1	0.71
Divorced	0.17	0	1	0.17	0	1	0.42
Separated	0.07	0	1	0.02	0	1	0.88
Never married	0.19	0	1	0.21	0	1	0.18
High school	0.57	0	1	0.49	0	1	0.89
College	0.27	0	1	0.28	0	1	0.11
Graduate	0.05	0	1	0.12	0	1	0.79
Family income 10K minus	0.18	0	1	0.16	0	1	0.49
Family income 10-20K	0.15	0	1	0.09	0	1	0.21
Family income 20-30K	0.09	0	1	0.10	0	1	0.60
Family income 30-40K	0.09	0	1	0.11	0	1	0.96
Family income 40-50K	0.10	0	1	0.08	0	1	0.93
Family income 50-60K	0.08	0	1	0.10	0	1	0.69
Family income 60-75K	0.07	0	1	0.10	0	1	0.53
Family income 75-90K	0.08	0	1	0.07	0	1	0.62
Family income 90-110K	0.06	0	1	0.06	0	1	0.31
Family income 110-150K	0.07	0	1	0.07	0	1	0.79
Family income 150K plus	0.03	0	1	0.06	0	1	0.81
City size 10K minus	0.40	0	1	0.32	0	1	0.41
City size 10-100K	0.36	0	1	0.45	0	1	0.47
City size 100-1000K	0.17	0	1	0.16	0	1	0.25
City size 1000K plus	0.07	0	1	0.07	0	1	0.12
Democrat	0.37	0	1	0.35	0	1	0.20
Republican	0.20	0	1	0.27	0	1	0.38
Liberal	0.27	0	1	0.27	0	1	0.27
Home owner	0.37	0	1	0.47	0	1	0.46

Based on 81 individuals in the treatment group and 1,109 in the control group.

Table B.2: Descriptives in the 2010 Sample Panel; Pre-Immigration Crisis Wave 2010 – 2012

	Treatment			Control			Diff. test p-value
Variables	Mean	Min.	Max.	Mean	Min.	Max.	based on matched sample
Number of children	2.17	0	8	1.81	0	8	0.99
Number of siblings	4.43	0	19	3.36	0	30	0.22
Age	45.80	19	88	48.77	18	89	0.77
Percentages							
Married	0.43	0	1	0.46	0	1	0.89
Widowed	0.07	0	1	0.08	0	1	0.88
Divorced	0.16	0	1	0.19	0	1	0.97
Separated	0.04	0	1	0.03	0	1	0.68
High school	0.56	0	1	0.50	0	1	0.59
College	0.23	0	1	0.28	0	1	0.52
Graduate	0.04	0	1	0.13	0	1	0.30
Family income 10-20K	0.21	0	1	0.11	0	1	0.05
Family income 20-30K	0.18	0	1	0.09	0	1	0.38
Family income 30-40K	0.09	0	1	0.10	0	1	0.51
Family income 40-50K	0.08	0	1	0.08	0	1	0.52
Family income 50-60K	0.06	0	1	0.08	0	1	0.60
Family income 60-75K	0.08	0	1	0.09	0	1	0.26
Family income 75-90K	0.03	0	1	0.07	0	1	0.20
Family income 90-110K	0.02	0	1	0.07	0	1	0.38
Family income 110-150K	0.04	0	1	0.07	0	1	0.52
Family income 150K plus	0.05	0	1	0.08	0	1	0.48
City size 10-100K	0.23	0	1	0.46	0	1	0.17
City size 100-1000K	0.34	0	1	0.17	0	1	0.11
City size 1000K plus	0.10	0	1	0.07	0	1	0.83
Democrat	0.44	0	1	0.35	0	1	0.03
Republican	0.17	0	1	0.24	0	1	0.05
Liberal	0.23	0	1	0.29	0	1	0.47
Home owner	0.42	0	1	0.45	0	1	0.76

Based on 136 individuals in the treatment group and 1,168 in the control group.

Appendix C: Robustness Checks

In this appendix, I apply alternative methods and combine extra data to make various sensitivity analyses. The aim is to address concerns on the selection of treatment groups, the measure of individual economic insecurity, the differential effect of immigration on the labor market outcomes at the regional level, and interaction of individuals' economic insecurity with industry heterogeneity in exposure to immigration.

C1: Propensity Score Matching

In order to improve the covariate balance between the treatment and control groups and render individuals in these two groups more comparable, I apply nearest neighbors propensity score matching.[32] More specifically, in every wave before the shock, I match the individuals in the treatment group with those in the control group based on the whole set of covariates. The propensity score is estimated with a logit model. Then I take the union of these matched individuals in different pre-shock waves to form the estimation sample for DID. Different numbers of nearest neighbors are adopted and the results are robust.

Table C.1 displays this sensitivity analysis for the design of the Great Recession. Panel b restricts the estimation sample to include only matched treated and controlled individuals with the one-nearest neighbor matching. Panel c takes the same procedure with five-nearest neighbors matching. The results for all the outcome variables are very close to their counterparts in Table 1.

Likewise, panel b of Table C.2 shows the effects of the immigration crisis on the attitude to immigration of non-Hispanic Whites with the matching method. The first two columns are for three-nearest neighbors matching and the remaining two are for five-nearest neighbors matching. The results are also similar to that in column (2II) of Table 4, even though the number of observations is now halved.[33] Several assumptions such as the conditional independence assumption (CIA), that potential outcomes are independent of treatment conditional on observables, are necessary for the matching method. Here I show that with or without matching, the results are robust and thus the above conclusions are convincing.

[32]Matching methods are more appropriate for my study than the synthetic control approach because of the short pre-shock period.

[33]The estimated effects on labor market outcomes are insignificant and in similar magnitudes like before as well.

C2: Different Measures of New Economic Insecurity

When regarding individuals rather than couples as economic units, I also show the effects of self-unemployment of the respondents during the Great Recession on populist attitudes in the odd columns in Table C.3. The conclusions based on these results are not changed.

Economic insecurity may contain both real and perceived dimensions. The previous treatment group in the case of the Great Recession is based on individual or couple actual unemployment only. To account for the perceived dimension of economic insecurity, I use another variable, individual anticipated unemployment in the next 12 months, in the GSS survey. If an individual answered "very likely" or "fairly likely" to the question "Thinking about the next 12 months, how likely do you think it is that you will lose your job or be laid off – very likely, fairly likely, not too likely, or not at all likely?" in wave 2010 only, they are now added to the treatment group with those recently unemployed during the Great Recession.

The corresponding results are reported in the even columns in Table C.3. The estimates for confidence in major companies are smaller in magnitude, indicating that individual or couple actual unemployment had a stronger influence than anticipated future unemployment. The estimates for the demand for the government to equalize income are similar to those in Table 1. The estimates for the request for the government to provide economic assistance to the poor, and for the attitude to immigration, are again insignificant and smaller. These results fit with the previous conclusions.

C3: Effects of the 2014 Immigration Crisis on Local Labor Market Conditions

In Section 6.3, I investigate the effects of the 2014 immigration crisis on individual labor market outcomes and do not find significant impact relative to the untreated areas. Nevertheless, the effects of unauthorized immigration on the labor market may be different at the individual level than at the regional level due to changes in inflows and outflows of natives (Dustmann et al., 2017). If natives in the treated area become more negative towards immigration at the same time as the local unemployment rate is increasing, the change in attitude may be (partially) due to economic reasons. If the immigration crisis were to affect neither individual labor market outcomes nor local labor market conditions, we could be more confident that the more negative attitude to immigration was mainly driven by cultural or identity concern.

Table C.4 reports relevant estimates. State or county fixed effects and their spe-

cific time trends, and state real GDP per capita as well as survey waves fixed effects are included. Columns (1) and (2) present the effects of the immigration crisis on the state unemployment rate and county unemployment rate, respectively. Both of them are statistically and economically insignificant (around 0.2 – 0.3 percentage points). When combined with the results in Section 6.3, it is clear that the immigration crisis did not impact significantly on either individual labor market outcomes or local labor market conditions in the treated region.

Columns (3) and (4) report the effects of the immigration crisis on the fraction of (authorized) Central American immigrants in the state of residence.[34] The covariates are the same as in the first two columns. The immigration crisis increased the proportion of (authorized) Central American immigrants in the state of residence by around 0.1 percentage points in the treated region compared to the rest of the U.S.[35] In 2015, most of the Central American immigrants living in the U.S. were unauthorized (Pew Research Center). Thus, if the unauthorized immigration inflow followed the same pattern, the effect would be roughly doubled to 0.2 percentage points. Compared to this proportion in the median state in the sample, 0.85%, the effect of the immigration crisis would not be seen as trivial.

C4: Industry Heterogeneity in Immigration Exposure

Even though the immigration crisis did not negatively affect local labor market outcomes in the treated region, it is still possible that workers in industries that were more intensively exposed to immigrants would feel threatened and thus hold a more negative attitude to immigration after the immigration crisis. If so, the deterioration in attitude to immigration should be attributed to economic insecurity rather than to cultural concern.

In panel a of Table C.2, the industry heterogeneity in the share of immigrant workers is taken into account. The first two columns set out the top ten industries ranked by share of immigrant workers, namely private households (45%), textile, apparel, leather manufacturing (36%), agriculture (33%), accommodation (32%), food manufacturing (29%), computer and electronic products manufacturing (27%), personal and laundry services (26%), administrative and support services (25%), construction (24%), and miscellaneous and not specified manufacturing (23%) (Pew Research Center). The remaining two columns define immigrant industry in terms of the top three industries. More specif-

[34] Again, the available immigrant data at the county level from ACS are too limited on a yearly basis.

[35] The estimates of numbers of unauthorized Central American immigrants by state are imprecise and not on an annual basis. Therefore, I can only use data about authorized immigrants.

ically, the *immigrant industry* is a time-invariant dummy of individuals who worked in one of the immigrant industries before the immigration crisis. Additional interaction terms of *immigrant industry* and *post-immigration crisis*, and of these and *treatment* region are included. Neither of the coefficients of these two interactions is significant, so working in an industry with a high share of immigrant workers did not significantly entail a more negative attitude to immigration after the immigration crisis, whether the respondent lived in the treated region or not. The estimate of *treatment*×*post-immigration crisis* remains similar to that in Table 4. In this way, I rule out economic insecurity as an explanation for the increased negative attitude to immigration in immigrant industries after the immigration crisis.

C5: A Different Design for the 2014 Immigration Crisis

Previously the treatment group with respect to the 2014 immigration crisis has been the West South Central region. The unauthorized Central American immigrants entered the U.S. through this region and hence impacted there most intensely in the short term. However, if these immigrants moved to other areas of the U.S. within a few months, their destinations might form an appropriate treatment group. According to the Migration Policy Institute, around 90% of the children and juveniles among these immigrants later stayed with relatives or family friends who were already living in the U.S. Central American immigrants are already distributed rather unevenly in the U.S., gathering in several states and metropolitan areas (Migration Policy Institute). So the states and areas with higher proportions of Central American immigrants were more likely to be destinations for the unauthorized immigrants in 2014.

Nonetheless, the proportion of Central American immigrants by state is endogenous to the attitude of natives to immigration. There may be a reverse causality in that immigrants move to and concentrate in areas where they are more welcome or tolerated by natives. A potential empirical strategy for addressing this problem is to utilize the distance from the destination to the Rio Grande Valley border patrol sector as an instrument variable (IV) for the proportion of Central American immigrants. Note that a dominant proportion of these unauthorized immigrants (over 80% in the peak of the 2014 immigration crisis) entered the U.S. via this valley. This strategy relies on the exclusion restriction that the distance to the border patrol sector affected natives' attitude to immigration only through the proportion of Central American immigrants.[36] The use

[36]I also try using the proportion of Latin American immigrants and obtain similar results.

of distance as an IV in a similar context can be seen in Dinas et al. (2016).

Table C.5 displays the 2SLS estimates. The distance is measured as the shortest driving distance from the county of residence to the Rio Grande Valley border patrol sector.[37] In the first stage, the natural logarithm of distance to the border sector is negatively associated with the proportion of (authorized) Central American immigrants in the state of residence, although this association is only statistically significant for the sample of non-Hispanic Whites. In the second stage, the proportion of Central American immigrants is positively correlated with natives' attitude to immigration. I am reluctant to interpret this effect as causal since the distance to the Rio Grande Valley sector is probably effective as an IV only for the 2014 immigration crisis. After all, Central American immigrants could previously enter the U.S. using many routes scattered along its southern border. However, with respect to the estimate of the interaction of the proportion of Central American immigrants with post-immigration crisis, I am more confident. During the 2014 immigration crisis, the increase in the proportion of Central American immigrants diminished natives' positive attitude to immigration. This is consistent with the conclusion drawn in Section 6.1: the 2014 immigration crisis provoked a more negative attitude to immigration in the impacted areas, especially among non-Hispanic White natives.

[37] Another measure – distance "as the crow flies", the most direct path – yields similar results.

Table C.1: Effects of Recent Unemployment on Attitudes Related to Populism: Comparability Improvement & Propensity Score Matching

Panel a.	Trust Companies		Gov. Equ. Inc.		Gov. Help Poor		Atti. Immig.	
Recent Unemp. Post-Rec.	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Treat.×Post-Great Rec.	-1.53**	-2.29**	1.30*	1.25*	0.78	0.40	-0.55	-0.28
	(0.77)	(1.10)	(0.67)	(0.65)	(0.70)	(0.74)	(0.52)	(0.58)
Controls	No	Yes	No	Yes	No	Yes	No	Yes
No. of Obs.	899	899	2,717	2,717	1,638	1,638	692	692
Panel b.	Trust Companies		Gov. Equ. Inc.		Gov. Help Poor		Atti. Immig.	
Recent Unemp. Post-Rec.	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Treat.×Post-Great Rec.	-1.68***	-1.94***	1.04**	1.32***	0.26	0.31	-0.20	-0.16
	(0.54)	(0.60)	(0.41)	(0.45)	(0.48)	(0.50)	(0.55)	(0.81)
Controls	No	Yes	No	Yes	No	Yes	No	Yes
No. of Obs.	303	303	1,015	1,015	613	613	171	171
Panel c.	Trust Companies		Gov. Equ. Inc.		Gov. Help Poor		Atti. Immig.	
Recent Unemp. Post-Rec.	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Treat.×Post-Great Rec.	-1.26***	-1.50***	0.90**	0.92***	0.27	0.11	-0.27	0.02
	(0.48)	(0.57)	(0.36)	(0.35)	(0.42)	(0.43)	(0.47)	(0.54)
Controls	No	Yes	No	Yes	No	Yes	No	Yes
No. of Obs.	794	794	2,378	2,378	1,493	1,493	402	402

Note: In panel a, the sample excludes the individuals who were ever unemployed in the past ten years before 2008. In panel b, the sample is restricted to contain matched treated and controlled individuals only based on the one-nearest neighbor propensity score matching. In panel c, the sample is restricted to contain matched treated and controlled individuals only based on five-nearest neighbors propensity score matching. The treatment group consists of respondents who did not become unemployed or whose spouse did not become unemployed until wave 2010 and the control group contains respondents who were not laid off, and whose spouse was not laid off, in any of the three waves. Wave 2010 is the only post-Great Recession period with respect to unemployment. Individual fixed effects and survey wave fixed effects are included in every column. Controls contain extensive demographic and socio-economic variables such as the quadratic of respondent's age, marital status dummies, number of siblings, number of children, academic degree dummies, categories of last year's total family income, categories of the population size of respondent's place, party self-identification, dummy of liberal ideology, and dummy of home owner. Robust standard errors clustered at the individual level are reported in parentheses; * $p < 0.1$; ** $p < 0.05$; *** $p < 0.01$.

Table C.2: Effect of the Immigration Crisis on Attitude to Immigration: Industry Heterogeneity in Immigration Exposure & Propensity Score Matching

Panel a.	Attitude to Immigration			
	(1)	(2)	(3)	(4)
Treatment×Post-Immigration Crisis	-0.57*	-0.65*	-0.48*	-0.55*
	(0.31)	(0.34)	(0.29)	(0.31)
Immig. Industry×Post-Immig. Crisis	0.24	0.18	-0.31	-0.15
	(0.31)	(0.34)	(0.61)	(0.64)
Treatment×Immig. Industry×Post-Immig. Crisis	0.58	0.67	1.01	0.93
	(0.67)	(0.71)	(1.15)	(1.18)
Controls	No	Yes	No	Yes
Number of observations	1,070	1,070	1,070	1,070
Panel b.	Attitude to Immig. of Non-Hispanic Whites			
	(1)	(2)	(3)	(4)
Treatment×Post-Immigration Crisis	-1.09**	-1.92**	-1.08**	-1.42**
	(0.54)	(0.84)	(0.53)	(0.67)
Controls	No	Yes	No	Yes
Number of observations	309	309	387	387

Note: The treatment group is composed of respondents who resided in the West South Central region of the U.S. in wave 2014, i.e. the states of Arkansas, Louisiana, Oklahoma, and Texas, that the immigration crisis most intensely impacted. The control group covers the rest of the U.S. in the same wave. The post-immigration crisis period is wave 2014. In panel a, immigrant industry is a dummy for individuals who worked before 2014 in one of the industries with highest proportion of immigrant workers. In the first two columns, immigrant industry refers to the top ten industries ranked by proportion of immigrant workers; in the last two columns, it means the top three industries. In panel b, the sample is restricted to contain matched treated and controlled non-Hispanic Whites only based on nearest neighbors propensity score matching. The first two columns of panel b apply three-nearest neighbors propensity score matching and the remaining two columns apply five-nearest neighbors propensity score matching. Individual fixed effects and survey wave fixed effects are included in every column. Controls contain extensive demographic and socio-economic variables such as the quadratic of respondent's age, marital status dummies, number of siblings, number of children, academic degree dummies, categories of last year's total family income, categories of the population size of respondent's place, party self-identification, dummy of liberal ideology, and dummy of home owner. Robust standard errors clustered at the individual level are reported in parentheses; * $p < 0.1$; ** $p < 0.05$; *** $p < 0.01$.

Table C.3: Effects of Recent Unemployment on Attitudes Related to Populism: Different Measures of Economic Insecurity

	Trust Companies		Gov. Equ. Inc.		Gov. Help Poor		Atti. Immig.	
Recent Unemp. Post-Rec.	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Treat.×Post-Great Rec.	-1.49**	-0.98**	1.00***	0.68**	0.07	-0.07	-0.61	0.16
	(0.65)	(0.42)	(0.38)	(0.33)	(0.49)	(0.38)	(0.58)	(0.40)
Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
No. of Obs.	1,575	1,478	5,049	4,740	3,063	2,876	878	779

Note: In the odd columns, the treatment group consists of respondents who did not become unemployed until wave 2010. The control group contains respondents who were not laid off in any waves. In the even columns, the treatment group consists of respondents who, or whose spouse, did not become unemployed, or who did not anticipate very likely or fairly likely to be laid off in the next 12 months until wave 2010. The control group contains respondents who were not laid off, and whose spouse was not laid off, and who did not think they would very likely or fairly likely lose their job in the next 12 months in any waves. Wave 2010 is the only post-Great Recession period. Individual fixed effects and survey wave fixed effects are included in every column. Controls contain extensive demographic and socio-economic variables such as the quadratic of respondent's age, marital status dummies, number of siblings, number of children, academic degree dummies, categories of last year's total family income, categories of the population size of respondent's place, party self-identification, dummy of liberal ideology, and dummy of home owner. Robust standard errors clustered at the individual level are reported in parentheses; * $p < 0.1$; ** $p < 0.05$; *** $p < 0.01$.

Table C.4: Effects of the Immigration Crisis on Local Labor Market Conditions and Immigrants Proportions

	Unemploy. Rate (%)		Central American Immig. Prop. (%)	
	(1)	(2)	(3)	(4)
	State	County	State	County
Treatment×Post-Immigration Crisis	0.27	0.17	0.08*	0.08***
	(0.43)	(0.20)	(0.05)	(0.02)
Controls	Yes	Yes	Yes	Yes
Number of observations	127	692	91	625

Note: The treatment group is composed of respondents who resided in the West South Central region of the U.S. in wave 2014, i.e. the states of Arkansas, Louisiana, Oklahoma, and Texas, that the immigration crisis most intensely impacted. The control group covers the rest of the U.S. in the same wave. The post-immigration crisis period is wave 2014. State or county fixed effects and survey wave fixed effects are included in every column. Controls contain state real GDP per capital and state- or county-specific time trends. Robust standard errors clustered at the state or county level are reported in parentheses; * $p < 0.1$; ** $p < 0.05$; *** $p < 0.01$.

Table C.5: 2SLS Estimates Effect of the Immigration Crisis on Attitude to Immigration: A Different Design of Treatment

Attitude to Immigration	All		Non-Hispanic Whites	
	(1)	(2)	(3)	(4)
	First Stage	Second Stage	First Stage	Second Stage
Ln Distance	-0.34		-0.79***	
	(0.23)		(0.17)	
Instrumented Centr. Amer. Immig. Prop.		1.02		3.06*
		(2.73)		(1.65)
Instru. Centr. Amer. Immig. Prop.×Post-Crisis		-0.56		-0.81*
		(0.45)		(0.44)
County Unemployment	0.02***	-0.12	0.02**	-0.22**
	(0.01)	(0.09)	(0.01)	(0.10)
County Unemp.×Post-Crisis	-0.00	-0.03	-0.00	-0.15
	(0.00)	(0.08)	(0.01)	(0.11)
Controls	Yes	Yes	Yes	Yes
No. of Obs.	1,070		690	

Note: The distance is measured as the shortest driving distance from the county of residence to the Rio Grande Valley border patrol sector. This distance is the instrument variable for the proportion of Central American immigrants in the state population. Wave 2014 is the only post-immigration crisis period. Individual fixed effects and survey wave fixed effects are included in every column. Controls contain extensive demographic and socio-economic variables such as the quadratic of respondent's age, marital status dummies, number of siblings, number of children, academic degree dummies, categories of last year's total family income, categories of the population size of respondent's place, party self-identification, dummy of liberal ideology, and dummy of home owner. Robust standard errors clustered at the individual level are reported in parentheses; * $p < 0.1$; ** $p < 0.05$; *** $p < 0.01$.

Appendix D: Supplementary Estimation Tables

Table D.1: Effects of Recent Unemployment during the Great Recession on Attitudes Related to Populism; Full Baseline Model

	Trust Companies		Gov. Equ. Inc.		Gov. Help Poor		Atti. Immig.	
Recent Unemp. Post-Rec.	(1)		(2)		(3)		(4)	
Treat.×Post-Great Rec.	-1.32***	(0.50)	0.70**	(0.34)	-0.00	(0.43)	-0.28	(0.48)
Married	-0.47	(0.50)	-0.03	(0.39)	-0.08	(0.35)	-0.99	(0.69)
Widowed	-1.24	(0.80)	0.64	(0.62)	-0.16	(0.56)	-0.11	(0.79)
Divorced	-0.88	(0.61)	0.11	(0.54)	-0.05	(0.51)	-0.38	(0.80)
Separated	-0.81	(0.67)	-0.58	(0.54)	0.28	(0.52)	-1.02	(0.81)
Number of Siblings	0.13**	(0.06)	-0.00	(0.06)	0.12**	(0.06)	0.08	0.08
Number of Children	-0.03	(0.14)	-0.00	(0.13)	0.09	(0.12)	-0.01	(0.18)
Age	-0.12	(0.09)	0.02	(0.09)	0.01	(0.10)	-0.48**	(0.21)
Age Squared	0.00	(0.00)	0.00	(0.00)	0.00	(0.00)	0.00*	(0.00)
High School	0.53	(0.50)	-0.12	(0.39)	0.64	(0.52)	-0.85	(0.72)
College	1.12*	(0.60)	-0.06	(0.46)	0.42	(0.59)	-0.54	(0.82)
Graduate	1.14	(0.69)	0.38	(0.63)	0.58	(0.72)	-0.74	(1.04)
Family Income 10-20K	0.29	(0.30)	0.21	(0.28)	-0.51*	(0.28)	-0.57	(0.35)
Family Income 20-30K	0.06	(0.30)	0.24	(0.25)	-0.07	(0.28)	0.48	(0.37)
Family Income 30-40K	-0.16	(0.29)	0.30	(0.24)	-0.06	(0.28)	0.37	0.37
Family Income 40-50K	0.24	(0.31)	0.27	(0.29)	-0.15	(0.29)	-0.29	(0.40)
Family Income 50-60K	0.15	(0.31)	-0.12	(0.27)	-0.46	(0.28)	0.14	(0.37)
Family Income 60-75K	0.09	(0.31)	-0.33	(0.27)	-0.36	(0.28)	0.59	(0.42)
Family Income 75-90K	-0.05	(0.35)	-0.10	(0.32)	-0.36	(0.32)	0.21	(0.45)
Family Income 90-110K	0.14	(0.34)	-0.20	(0.33)	0.07	(0.37)	-0.21	(0.53)
Family Income 110-150K	-0.34	(0.38)	-0.01	(0.32)	0.01	(0.37)	0.17	(0.54)
Family Income 150K Plus	0.35	(0.39)	-0.56	(0.37)	-0.18	(0.39)	-0.19	(0.56)
City Size 10-100K	-0.15	(0.31)	0.39	(0.28)	0.57*	(0.33)	0.22	(0.35)
City Size 100-1000K	-0.05	(0.56)	0.38	(0.55)	0.62	(0.51)	0.33	(0.59)
City Size 1000K Plus	-1.75*	(0.97)	1.57	(1.05)	2.01*	(1.07)	-0.36	(1.39)
Democrat	0.11	(0.25)	0.14	(0.22)	0.15	(0.24)	-0.37	(0.33)
Republican	0.16	(0.26)	0.16	(0.24)	0.05	(0.21)	0.15	(0.33)
Liberal	-0.16	(0.18)	0.07	(0.16)	0.05	(0.19)	0.36	(0.23)
Home Owner	-0.24	(0.40)	-0.01	(0.32)	-0.19	(0.28)	0.15	(0.31)
Wave 2	0.03	(0.15)	-0.04	(0.13)	-0.03	(0.16)	0.74**	(0.33)
Wave 3	-0.46**	(0.20)	-0.78***	(0.20)	-0.37	(0.25)	1.47***	(0.56)
No. of Obs.	1,569		5,049		3,057		878	

Note: The sample excludes individuals who were unemployed or whose spouse was unemployed in either wave 2006 or wave 2008. The treatment group consists of respondents who did not become unemployed or whose spouse did not become unemployed until wave 2010 and the control group contains respondents who were not laid off, and whose spouse was not laid off, in any of the three waves. Wave 2010 is the only post-Great Recession period with respect to unemployment. Individual fixed effects and survey wave fixed effects are included in every column. Robust standard errors clustered at the individual level are reported in parentheses; * $p < 0.1$; ** $p < 0.05$; *** $p < 0.01$.

Table D.2: Effect of the Immigration Crisis on Attitude to Immigration; Full Baseline Model

Attitude to Immigration	All		Non-Hispanic Whites	
	(1)		(2)	
Treat.×Post-Immig. Crisis	-0.50*	(0.30)	-1.40**	(0.60)
Married	-0.01	(0.42)	-0.07	(0.73)
Widowed	-0.18	(0.69)	-0.11	(1.24)
Divorced	-0.50	(0.53)	-0.82	(0.95)
Separated	-0.19	(0.56)	-0.50	(1.13)
Number of Siblings	-0.04	(0.06)	0.01	(0.11)
Number of Children	0.00	(0.15)	-0.20	(0.19)
Age	-0.01	(0.11)	0.09	(0.15)
Age Squared	-0.00	(0.00)	-0.00	(0.00)
High School	0.13	(0.39)	0.50	(0.76)
College	-0.36	(0.52)	0.03	(0.82)
Graduate	-1.01	(0.77)	-2.00	(1.26)
Family Income 10-20K	0.21	(0.29)	0.11	(0.46)
Family Income 20-30K	0.09	(0.33)	-0.31	(0.52)
Family Income 30-40K	0.11	(0.32)	0.07	(0.46)
Family Income 40-50K	-0.20	(0.35)	0.13	(0.50)
Family Income 50-60K	0.11	(0.39)	0.02	(0.53)
Family Income 60-75K	-0.01	(0.41)	-0.11	(0.53)
Family Income 75-90K	-0.16	(0.47)	-0.50	(0.59)
Family Income 90-110K	-0.11	(0.48)	-0.51	(0.60)
Family Income 110-150K	-1.15**	(0.50)	-1.38**	(0.64)
Family Income 150K Plus	-0.33	(0.47)	-0.62	(0.53)
City Size 10-100K	0.05	(0.38)	0.64	(0.52)
City Size 100-1000K	0.47	(0.75)	-0.13	(0.84)
City Size 1000K Plus	1.15	(0.93)	2.53**	(1.16)
Democrat	-0.06	(0.25)	-0.10	(0.36)
Republican	-0.26	(0.28)	-0.34	(0.37)
Liberal	0.13	(0.21)	0.16	(0.32)
Home Owner	0.16	(0.30)	0.30	(0.45)
Wave 2	0.24	(0.19)	0.35	(0.25)
Wave 3	0.76***	(0.28)	1.02***	(0.39)
No. of Obs.	1,070		690	

Note: The treatment group is composed of respondents who resided in the West South Central region of the U.S. in wave 2014, i.e. the states of Arkansas, Louisiana, Oklahoma, and Texas, that the immigration crisis most intensely impacted. The control group covers the rest of the U.S. in the same wave. The post-immigration crisis period is wave 2014. The first two columns use the whole sample and the last two restrict the sample to include non-Hispanic Whites only. Individual fixed effects and survey wave fixed effects are included in every column. Robust standard errors clustered at the individual level are reported in parentheses; * $p < 0.1$; ** $p < 0.05$; *** $p < 0.01$.

Table D.3: Effects of Recent Unemployment on Attitudes Related to Populism: Location-Specific Trends & Placebo Treatment

	Trust Companies		Gov. Equ. Inc.		Gov. Help Poor		Atti. Immig.	
Recent Unemp. Post-Rec.	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Treat.×Post-Great Rec.	-1.35**	-0.41	0.77**	-0.07	-0.08	0.00	-0.06	-0.81
	(0.56)	(0.49)	(0.33)	(0.43)	(0.44)	(0.51)	(0.56)	(0.58)
Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
No. of Obs.	1,569	682	5,049	2,148	3,057	1,298	878	398

Note: The odd columns report estimates of the specification including state-specific linear trends. The even columns show estimates with wave 2008 as a fake treatment time by using only pre-(real) treatment data, i.e. the first two waves. The treatment group consists of respondents who did not become unemployed or whose spouse did not become unemployed until wave 2010 and the control group contains respondents who were not laid off, and whose spouse was not laid off, in any of the three waves. Wave 2010 is the only post-Great Recession period with respect to unemployment. Individual fixed effects and survey wave fixed effects are included in every column. Controls contain extensive demographic and socio-economic variables such as the quadratic of respondent's age, marital status dummies, number of siblings, number of children, academic degree dummies, categories of last year's total family income, categories of the population size of respondent's place, party self-identification, dummy of liberal ideology, and dummy of home owner. Robust standard errors clustered at the individual level are reported in parentheses; * $p < 0.1$; ** $p < 0.05$; *** $p < 0.01$.

Table D.4: Linear Fixed Effects of Recent Unemployment and the Immigration Crisis on Populism

Panel a. Great Recession	Trust Companies		Gov. Equ. Inc.		Gov. Help Poor		Atti. Immig.	
Adjusted Range	(0–2)		(0–6)		(0–4)		(0–1)	
Recent Unemp. Post-Great Rec.	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Treat.×Post-Great Rec.	-0.28***	-0.27***	0.47*	0.48*	0.06	-0.05	-0.03	-0.04
	(0.08)	(0.08)	(0.25)	(0.25)	(0.15)	(0.15)	(0.06)	(0.06)
Controls	No	Yes	No	Yes	No	Yes	No	Yes
No. of Obs.	1,569	1,569	5,049	5,049	3,057	3,057	878	878
Adjusted Mean of Treat. Group	0.98		3.45		2.29		0.50	

Panel b. 2014 Immigration Crisis	All		Minorities	Caucasians	Placebo All	Placebo Cauc.	Couple Unemp.		Anticipated Unemp.	
Adjusted Range	(0–1)		(0–1)		(0–1)		(0–1)		(0–3)	
Attitude to Immigration	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Treat.×Post-Immig. Crisis.	-0.06	-0.06	0.06	-0.14**	-0.01	0.04	0.02	0.04	-0.08	-0.07
	(0.05)	(0.06)	(0.09)	(0.07)	(0.07)	(0.08)	(0.03)	(0.03)	(0.14)	(0.14)
Controls	No	Yes	Yes	Yes	Yes	Yes	No	Yes	No	Yes
No. of Obs.	1,070	1,070	349	690	899	635	633	633	2,848	2,848
Adjusted Mean of Treat. Group	0.52		0.52		0.52		0.08		0.68	

Note: In panel a, the sample excludes individuals who were unemployed or whose spouse was unemployed in either wave 2006 or wave 2008. The treatment group consists of respondents who did not become unemployed or whose spouse did not become unemployed until wave 2010 and the control group contains respondents who were not laid off, and whose spouse was not laid off, in any of the three waves. Wave 2010 is the only post-Great Recession period with respect to unemployment. In panel b, the treatment group is composed of respondents who resided in the West South Central region of the U.S. in wave 2014, i.e. the states of Arkansas, Louisiana, Oklahoma, and Texas, that the immigration crisis most intensely impacted. The control group covers the rest of the U.S. in the same wave. The post-immigration crisis period is wave 2014. Column (3) restricts the sample to include Hispanic Whites and non-Whites and column (4) includes non-Hispanic Whites only. Column (5) is a placebo test by using the East South Central region of the U.S. as the treated area and estimating the model excluding the West South Central region. Column (6) is the same type of placebo test for non-Hispanic Whites only. Individual fixed effects and survey wave fixed effects are included in every column. Controls contain extensive demographic and socio-economic variables such as the quadratic of respondent's age, marital status dummies, number of siblings, number of children, academic degree dummies, categories of last year's total family income, categories of the population size of respondent's place, party self-identification, dummy of liberal ideology, and dummy of home owner. Robust standard errors clustered at the individual level are reported in parentheses; * $p < 0.1$; ** $p < 0.05$; *** $p < 0.01$.

Table D.5: Effect of the Immigration Crisis on Attitude to Immigration: Different Coverage of Treated Region

	Extended Treated Region		Shrunk Treated Region	
	All	Non-Hisp. Whites	All	Non-Hisp. Whites
Attitude to Immigration	(1)	(2)	(3)	(4)
Treat.×Post-Immig. Crisis	-0.40	-1.11*	-0.45	-0.71
	(0.30)	(0.58)	(0.37)	(0.68)
Controls	Yes	Yes	Yes	Yes
Number of observations	1,070	690	1,070	690

Note: In the first two columns, the treatment group is extended to contain respondents who resided in wave 2014 in all states bordering with Mexico including Arizona, New Mexico, Texas and neighboring states of Texas such as Arkansas, Louisiana, and Oklahoma. In the last two columns, the treatment group is shrunk to contain respondents who resided in wave 2014 in New Mexico and Texas only. The control group covers the rest of the U.S. in the same wave. The post-immigration crisis period is wave 2014. Odd columns include the whole sample and even columns restricts the sample to include non-Hispanic Whites only. Individual fixed effects and survey wave fixed effects are included in every column. Controls contain extensive demographic and socio-economic variables such as the quadratic of respondent's age, marital status dummies, number of siblings, number of children, academic degree dummies, categories of last year's total family income, categories of the population size of respondent's place, party self-identification, dummy of liberal ideology, and dummy of home owner. Robust standard errors clustered at the individual level are reported in parentheses;
* $p < 0.1$; ** $p < 0.05$; *** $p < 0.01$.

Table D.6: Effects of the Great Recession on Populist Voting: Cohort Mean of Couple Unemployment as Explanatory Variable

	2016 U.S. Presid. Primary Elections						2016 U.S. Presid. General Election			
	Sanders		Clinton		Trump		Clinton		Trump	
Great Recession	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Cohort mean of couple unemp.	0.32**	0.25	-0.11	-0.14	-0.16**	-0.16	0.16	-0.02	-0.30***	-0.04
	(0.15)	(0.22)	(0.12)	(0.15)	(0.08)	(0.11)	(0.11)	(0.16)	(0.09)	(0.14)
Controls	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes
No. of Obs.	135	135	135	135	135	135	136	136	136	136

Note: Covariates take values in wave 2010. All the dependent and explanatory variables are averages within cohort. Controls contain the mean of voting turnout in the corresponding election, as well as extensive averaged demographic and socio-economic variables such as the quadratic of respondent's age, marital status dummies, number of siblings, number of children, academic degree dummies, categories of last year's total family income, categories of the population size of respondent's place, party self-identification, dummy of liberal ideology, and dummy of home owner. Robust standard errors in parentheses; * $p < 0.1$; ** $p < 0.05$; *** $p < 0.01$.

Table D.7: Effect of the Immigration Crisis on Attitude to Immigration: Using Original Unbalanced Panel

	All		Non-Hispanic Whites	
Attitude to Immigration	(1)	(2)	(3)	(4)
Treat.×Post-Immig. Crisis	-0.44	-0.49	-1.14**	-1.33**
	(0.28)	(0.30)	(0.51)	(0.60)
Controls	No	Yes	No	Yes
Number of observations	1,174	1,174	762	762

Note: The treatment group is composed of respondents who resided in the West South Central region of the U.S. in wave 2014, i.e. the states of Arkansas, Louisiana, Oklahoma, and Texas, that the immigration crisis most intensely impacted. The control group covers the rest of the U.S. in the same wave. The post-immigration crisis period is wave 2014. The first two columns use the whole sample and the last two restrict the sample to include non-Hispanic Whites only. Individual fixed effects and survey wave fixed effects are included in every column. Controls contain extensive demographic and socio-economic variables such as the quadratic of respondent's age, marital status dummies, number of siblings, number of children, academic degree dummies, categories of last year's total family income, categories of the population size of respondent's place, party self-identification, dummy of liberal ideology, and dummy of home owner. Robust standard errors clustered at the individual level are reported in parentheses; * $p < 0.1$; ** $p < 0.05$; *** $p < 0.01$.

Appendix E: Family Unit Apprehensions during the Immigration Crisis

Table E.1 lists the numbers of family unit apprehensions by month in different border patrol sectors in the U.S. from October 2012 to September 2016.

Table E.1: Total Family Unit Apprehensions by Month; Oct.2012-Sep.2016

a. Fiscal Year 2013

SECTOR	October	November	December	January	February	March	April	May	June	July	August	September	Yearly Total
Miami	12	1	2	6	0	1	1	5	6	5	2	2	43
New Orleans	7	2	4	0	0	0	0	0	0	0	2	3	18
Ramey	2	0	0	0	1	1	0	0	0	0	1	1	6
Blaine	0	1	3	2	3	2	3	1	1	8	4	2	30
Buffalo	1	0	0	0	4	0	0	1	0	10	2	1	19
Detroit	0	0	1	0	0	0	0	0	0	2	2	1	6
Grand Forks	0	0	2	0	0	1	1	0	0	0	0	0	4
Havre	2	0	0	0	0	0	0	0	0	0	0	0	2
Houlton	0	0	0	0	0	0	0	0	0	0	0	0	0
Spokane	9	0	0	0	0	0	0	0	0	1	0	0	10
Swanton	5	3	1	0	0	5	2	13	3	13	5	13	63
Big Bend *(formerly Marfa)*	16	10	9	11	9	3	11	8	3	10	7	5	102
Del Rio	17	26	34	16	34	37	50	55	85	98	139	120	711
El Centro	36	33	23	34	19	38	54	43	29	18	20	18	365
El Paso	29	26	30	18	24	30	26	44	17	15	31	8	298
Laredo	105	114	101	110	98	178	139	155	110	211	193	174	1,688
Rio Grande Valley *(formerly McAllen)*	266	278	231	236	310	484	606	637	698	1,016	1,240	1,263	7,265
San Diego	88	86	110	153	155	177	160	131	119	126	119	152	1,576
Tucson	211	178	183	245	265	336	310	224	178	151	155	194	2,630
Yuma	31	25	25	24	9	27	28	18	11	6	3	13	220
Coastal Border	21	3	6	6	1	2	1	5	6	5	5	6	67
Northern Border	17	4	7	2	7	8	6	15	4	34	13	17	134
Southwest Border	799	776	746	847	923	1,310	1,384	1,315	1,250	1,651	1,907	1,947	14,855
Monthly Total	837	783	759	855	931	1,320	1,391	1,335	1,260	1,690	1,925	1,970	15,056

b. Fiscal Year 2014

SECTOR	October	November	December	January	February	March	April	May	June	July	August	September	Yearly Total
Miami	4	2	4	17	16	5	1	0	12	5	8	13	87
New Orleans	0	1	0	6	4	1	9	2	9	2	1	1	36
Ramey	0	1	0	0	0	0	0	0	0	0	1	0	2
Blaine	0	0	0	3	1	0	3	6	0	2	1	0	16
Buffalo	0	0	0	1	0	2	2	0	0	2	4	1	12
Detroit	0	1	0	0	0	1	2	2	2	0	0	0	8
Grand Forks	1	3	0	1	2	1	1	0	0	0	3	2	14
Havre	0	0	0	0	0	0	0	0	0	0	0	0	0
Houlton	0	0	0	0	0	0	0	0	0	0	2	0	2
Spokane	0	0	0	0	0	0	1	2	2	0	0	0	5
Swanton	1	0	12	2	0	1	6	4	2	20	2	7	57
Big Bend *(formerly Marfa)*	4	1	8	12	11	3	7	8	28	58	25	11	176
Del Rio	150	172	185	179	311	521	467	1,080	1,134	466	173	112	4,950
El Centro	37	21	51	50	36	25	48	59	105	119	41	38	630
El Paso	23	30	29	26	49	44	45	60	113	72	39	32	562
Laredo	164	176	255	171	262	351	315	554	739	316	183	105	3,591
Rio Grande Valley *(formerly McAllen)*	1,472	1,953	2,264	1,509	2,246	4,306	5,098	10,145	13,370	5,792	2,467	1,704	52,326
San Diego	171	129	130	149	106	187	146	175	168	119	137	106	1,723
Tucson	375	294	373	166	185	235	320	576	592	376	176	144	3,812
Yuma	18	10	16	24	75	80	65	115	81	87	55	49	675
Coastal Border	4	4	4	23	20	6	10	2	21	7	10	14	125
Northern Border	2	4	12	7	3	5	15	14	6	24	12	10	114
Southwest Border	2,414	2,786	3,311	2,286	3,281	5,752	6,511	12,772	16,330	7,405	3,296	2,301	68,445
Monthly Total	2,420	2,794	3,327	2,316	3,304	5,763	6,536	12,788	16,357	7,436	3,318	2,325	68,684

c. Fiscal Year 2015

SECTOR	October	November	December	January	February	March	April	May	June	July	August	September	Yearly Total
Miami	6	4	17	1	0	1	6	4	10	5	30	14	98
New Orleans	3	3	8	1	3	0	0	1	2	1	3	0	25
Ramey	0	0	0	0	0	0	2	0	1	4	0	1	8
Blaine	4	10	1	6	2	0	0	5	6	0	3	0	37
Buffalo	0	0	0	1	0	1	0	0	1	0	0	0	3
Detroit	0	0	3	0	0	0	0	0	0	0	1	0	4
Grand Forks	1	0	0	0	2	0	2	1	2	1	0	0	9
Havre	0	0	0	0	0	0	0	0	0	0	0	0	0
Houlton	0	0	0	0	0	0	0	0	0	1	0	0	1
Spokane	0	0	0	0	0	0	0	0	0	0	0	5	5
Swanton	3	2	8	1	1	2	0	0	0	5	2	1	25
Big Bend *(formerly Marfa)*	30	15	31	14	25	21	40	60	49	103	192	227	807
Del Rio	79	83	118	95	72	182	174	269	227	233	322	287	2,141
El Centro	16	47	83	22	31	53	76	38	59	76	79	95	675
El Paso	22	27	45	22	19	67	149	118	144	213	185	209	1,220
Laredo	136	112	108	104	76	90	87	97	113	126	138	185	1,372
Rio Grande Valley *(formerly McAllen)*	1,556	1,809	1,979	1,091	1,404	1,834	2,018	2,584	2,904	3,106	3,577	3,547	27,409
San Diego	119	123	185	129	126	176	133	159	102	85	111	102	1,550
Tucson	180	164	276	95	225	256	296	333	254	258	265	328	2,930
Yuma	24	35	66	50	63	103	114	203	190	303	290	293	1,734
Coastal Border	9	7	25	2	3	1	8	5	13	10	33	15	131
Northern Border	8	12	12	8	5	3	2	6	9	7	6	6	84
Southwest Border	2,162	2,415	2,891	1,622	2,041	2,782	3,087	3,861	4,042	4,503	5,159	5,273	39,838
Monthly Total	2,179	2,434	2,928	1,632	2,049	2,786	3,097	3,872	4,064	4,520	5,198	5,294	40,053

d. Fiscal Year 2016

SECTOR	October	November	December	January	February	March	April	May	June	July	August	September	Yearly Total
Miami	8	2	12	5	3	8	14	0	3	10	3	10	78
New Orleans	6	0	0	0	6	2	1	0	2	0	3	0	20
Ramey	0	2	3	0	0	2	3	0	3	4	1	0	18
Blaine	0	0	0	0	0	3	3	2	4	8	5	4	29
Buffalo	3	0	0	0	0	0	2	0	0	0	0	0	5
Detroit	2	0	0	0	0	0	0	0	0	1	0	0	3
Grand Forks	0	0	0	0	0	3	0	0	0	0	0	0	3
Havre	0	0	0	0	0	0	0	0	0	0	0	0	0
Houlton	0	0	0	0	0	0	0	0	0	0	0	0	0
Spokane	0	0	0	0	0	0	0	2	0	0	0	0	2
Swanton	3	0	3	2	4	0	0	0	4	0	2	7	25
Big Bend *(formerly Marfa)*	240	123	166	53	41	44	29	76	43	47	97	92	1,051
Del Rio	283	314	539	174	188	193	240	397	226	353	293	349	3,549
El Centro	89	110	164	42	47	76	120	155	104	180	211	295	1,593
El Paso	266	424	751	104	152	226	349	433	473	616	866	1,004	5,664
Laredo	151	160	190	130	102	155	151	119	103	119	135	125	1,640
Rio Grande Valley *(formerly McAllen)*	4,172	4,356	5,809	2,020	1,890	3,051	3,851	4,568	4,568	5,038	6,341	6,342	52,006
San Diego	108	134	233	203	194	187	245	200	243	309	372	435	2,863
Tucson	303	376	453	166	104	216	174	257	234	280	333	243	3,139
Yuma	413	474	668	251	332	303	461	578	633	627	705	724	6,169
Coastal Border	14	4	15	5	9	12	18	0	8	14	7	10	116
Northern Border	8	0	3	2	4	6	5	4	8	9	7	11	67
Southwest Border	6,025	6,471	8,973	3,143	3,050	4,451	5,620	6,783	6,627	7,569	9,353	9,609	77,674
Monthly Total	6,047	6,475	8,991	3,150	3,063	4,469	5,643	6,787	6,643	7,592	9,367	9,630	77,857

Source: United States Border Patrol

Appendix F: Details of Survey Questions on Variables

The questions on the confidence in major companies read "I am going to name major companies in this country. As far as the people running these major companies are concerned, would you say you have a great deal of confidence, only some confidence, or hardly any confidence at all in them?" and the responses contain "1. A great deal, 2. Only some, 3. Hardly any, 8. Don't know, 9. No answer, IAP. Not applicable". Two questions concern the government's income redistribution policies. The first one asks "Some people think that the government in Washington ought to reduce the income differences between the rich and the poor, perhaps by raising the taxes of wealthy families or by giving income assistance to the poor. Others think that the government should not concern itself with reducing this income difference between the rich and the poor. Here is a card with a scale from 1 to 7. Think of a score of 1 as meaning that the government ought to reduce the income differences between rich and poor, and a score of 7 meaning that the government should not concern itself with reducing income differences. What score between 1 and 7 comes closest to the way you feel? (CIRCLE ONE):" and the answers range from 1 to 7 as well as "8. Don't know, 9. No answer, IAP. Not applicable". The second relevant question is "Some people think that the government in Washington should do everything possible to improve the standard of living of all poor Americans; they are at Point 1 on this card. Other people think it is not the government's responsibility, and that each person should take care of himself; they are at Point 5. Where would you place yourself on this scale, or haven't you made up your mind on this?" and the responses range from 1 to 5 as well as "8. Don't know, 9. No answer, IAP. Not applicable". The question regarding the perception of economic unfairness is "Some people say that people get ahead by their own hard work; others say that lucky breaks or help from other people are more important. Which do you think is most important?" and the answers are "1. Hard work most important, 2. Hard work, luck equally important, 3. Luck most important, 8. Don't know, 9. No answer, IAP. Not applicable". The question on attitude to immigration reads "Do you think the number of immigrants to America nowadays should be" and the corresponding answers provided are "1. increased a lot, 2. increased a little, 3. remain the same as it is, 4. reduced a little, 5. reduced a lot, 8. can't choose, 9. no answer, and IAP. not applicable". I see all the answers of "8. Don't know, 9. No answer, IAP. Not applicable" as missing values.

All these outcome variables are transformed so that a larger score in each outcome variable refers to a higher level of confidence in major corporations, preferences for income

redistribution, and the perception of economic unfairness, respectively. The dummy variable of the attitude to immigration is coded in the way such that it values 1 if respondent reported "1. increased a lot, 2. increased a little, 3. remain the same as it is", and values 0 otherwise.

The questions concerning the working status ask "Last week were you (your wife/husband) working full time, part time, going to school, keeping house, or what?" respectively. The answers provided are "1. Working full time, 2. Working part time, 3. With a job, but not at work because of temporary illness, vacation, strike, 4. Unemployed, laid off, looking for work, 5. Retired, 6. In school, 7. Keeping house, 8. Other, 9. No answer, IAP. Not applicable (for spousal working status only)". The couple unemployment variable is coded in the way such that it values 1 if the respondent reported "4. Unemployed, laid off, looking for work" for him/herself or for his or her spouse, and values 0 otherwise.