

Labor Market Concerns and Support for Immigration*

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Abstract

We examine whether labor market concerns causally affect people's support for immigration. Using a large, representative sample of the US population, we first elicit beliefs about the labor market impact of immigration. To generate exogenous variation in beliefs, we then provide respondents in the treatment group with research evidence showing no adverse labor market impacts of immigration. We find that treated respondents update their beliefs about the labor market impact of immigration and become more supportive of immigration, as measured by self-reported policy views and signatures on real online petitions. We also employ an obfuscated follow-up study which hides the connection between the follow-up and the main study. The treatment effects persist in this setting where experimenter demand is mitigated. Our results demonstrate that beliefs about the labor market impact of immigration are an important causal driver of people's support for immigration. (*JEL* C91, D83, F22, J15)

Keywords: Beliefs about labor markets, support for immigration, political behavior

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1 Beliefs about the labor market impact of immigration

There is currently a heated political debate about immigration in Western countries. Arguments about the adverse labor market effects of immigrants dominate this debate, and voters are deeply divided in their beliefs about the extent to which immigration is good or bad for the economy. In the US, for instance, 42 percent of voters believe that increased immigration has helped American workers, while 45 percent believe that increased immigration has hurt American workers.¹ An important question is to what extent these beliefs are causing the large polarization we observe in attitudes towards immigration.

A large literature has examined the extent to which labor market concerns affect support for immigration (Card et al., 2012; Hainmueller and Hopkins, 2014b; Hainmueller and Hiscox, 2010; Hainmueller et al., 2015; Sniderman et al., 2004), but the previous literature has not provided causal evidence on whether beliefs about the labor market impact of immigration drive support for immigration. The lack of causal evidence is problematic for several reasons. For instance, people may adjust their beliefs about the labor market impact of immigration to justify their policy views. We circumvent the potential confounds of previous evidence by experimentally shifting people's beliefs. We thereby provide the first causal evidence on the role of beliefs about the labor market impact of immigration in shaping support for immigration.

In a pre-registered experiment with a large and representative sample of Americans,² we first elicit beliefs about the labor market impact of the Mariel boatlift, which is known as the “one historical event that has most shaped how economists view immigration” (Clemens, 2017). During the Mariel boatlift, which was an unexpected mass immigration

¹<http://www.pewsocialtrends.org/2016/10/06/the-state-of-american-jobs> (accessed October 23, 2017)

²We pre-specified the sample size, the empirical specifications, and our hypotheses in a pre-analysis plan available at <https://www.socialscienceregistry.org/trials/2247>.

of Cubans to the United States, the low-skilled workforce in Miami increased by 20 percent over the course of a few months. To generate exogenous variation in beliefs, we provide a random subsample of our respondents with information about research showing no adverse labor market impacts of the Mariel boatlift on wages and unemployment in Miami (Card, 1990). We then measure our respondents' support for immigration using both self-reported attitudes on preferred immigration levels as well as revealed preference measures: two real online petitions proposing changes to the annual cap on visas for low-skilled guest workers to the US. Finally, we conduct an obfuscated follow-up study one week later in which we hide the connection between the follow-up and the main study. This allows us to mitigate concerns that treatment effects are biased because of differences in experimenter demand between the treatment and the control group.³

Our main result is that the research evidence increases people's average support for low-skilled immigration by approximately 0.15 of a standard deviation, which corresponds to one quarter of the gap in policy views between Democrats and Republicans. Using the exogenous variation in beliefs induced by the treatment, we demonstrate that economic concerns are a quantitatively important determinant of attitudes towards immigration: our instrumental variable estimates reveal that a one standard deviation change in perceptions of the economic impact of immigration changes people's willingness to admit low-skilled immigrants by between 0.61 and 0.71 of a standard deviation. Further, the changes in attitudes also lead to changes in real political behavior. Treated respondents are 2.6 percentage points more likely to sign a real online petition in favor of increasing the annual cap on non-agricultural guest workers to the US. This corresponds to a 66.9 percent increase from the control group mean of 3.9 percentage points ($p < 0.01$). We also find a 0.5 percentage point decrease in signatures for a second petition in favor of decreasing the annual cap, compared to a control group mean of 5.5 percent, but this

³Experimenter demand effects refer to changes in behavior by experimental participants resulting from cues about what constitutes appropriate behavior and about what the experimenter desires (Zizzo, 2010).

difference is not statistically significant ($p=0.27$). Finally, we show that the treatment effects persist over time and remain statistically significant: In the follow-up, treated respondents display 0.1 of a standard deviation more positive attitudes towards low-skilled immigrants than control group respondents. This corresponds to approximately 70 percent of the effect size from the main study.

We use post-treatment data on beliefs about the effects of immigration today to explore mechanisms. While the treatment affects beliefs about the labor market impact of immigration on “most Americans,” we find no average treatment differences in beliefs about how immigration affects labor market outcomes for the respondents’ own household. A reason for this could be that 75 percent of our control group respondents think that their own household will not be affected by low-skilled immigration, compared to 54 percent of control group respondents who think that most Americans will not be affected by low-skilled immigration. We thus had more scope to shift average beliefs about the impact of immigration on most Americans. Moreover, the average treatment effects mask substantial heterogeneity by pre-treatment beliefs about the Mariel boatlift: Treatment effects on beliefs about the impact of increased immigration today on most Americans and people’s own household significantly depend on our respondents’ pre-treatment beliefs about the impact of the Mariel boatlift. By contrast, the research evidence does not shift beliefs about the cultural impact of immigration, regardless of pre-treatment beliefs about the Mariel boatlift. This suggests that our effects operate through changes in beliefs about the economic impact of immigration.

We also provide correlational evidence to further shed light on mechanisms. Using data from control group respondents, we first explore the role of self-interested versus sociotropic concerns in driving support for immigration. Our data suggest that people’s beliefs about the impact of immigration on most Americans are quantitatively more important determinants of support for immigration than their beliefs about the impact of immigration on their own household. Second, we explore the extent to which cultural or

economic factors are more important in explaining attitudes towards immigration. We find that beliefs about the economic impact of immigration seem to be quantitatively more important than beliefs about the cultural impact of immigration. Further, we replicate both of these results using data from the 2014 wave of the General Social Survey.

Our work contributes to several strands of the literature. First, and most closely related, we contribute to the literature on labor market concerns and attitudes towards immigration (Card et al., 2012; Citrin et al., 1997; Dustmann and Preston, 2001, 2006; Facchini et al., 2009, 2016; Hainmueller and Hopkins, 2014a; Hainmueller and Hiscox, 2010; Hainmueller et al., 2015; Iyengar et al., 2013; Mayda, 2006; Scheve and Slaughter, 2001). The current consensus in this literature is that labor market concerns are not a quantitatively important determinant of attitudes towards immigration (Card et al., 2012; Hainmueller and Hopkins, 2014b; Hainmueller et al., 2015). However, most previous evidence on the role of economic concerns in driving support for immigration is based on observational survey data and therefore vulnerable to omitted variable bias and reverse causality (Hainmueller and Hopkins, 2014b).

To overcome the challenges with observational data, researchers have used conjoint experiments which measure support for hypothetical immigrants with randomly assigned characteristics, such as their education levels and whether they plan to find work. These experiments have documented that Americans' preferences for which immigrants to admit vary little with their own education and labor market position (Hainmueller and Hopkins, 2014a). This has been taken as evidence for a limited role of economic concerns in driving support for immigration, but a weakness of conjoint experiments is that they leave respondents' beliefs about the economic and cultural effects of immigration unrestricted. This makes it hard to shed light on the underlying mechanisms. For instance, the finding in Hainmueller and Hopkins (2014a) that Americans tend to prefer highly educated immigrants that plan to find work could be due to beliefs about their economic as well as their cultural impact. Indeed, we provide evidence that people's beliefs about the

cultural impact of immigrants depend on the immigrants' economic characteristics, such as their skill levels. We employ a different approach by experimentally manipulating our respondents' beliefs about the economic impact of immigration and subsequently measuring immigration preferences with self-reports and revealed preference measures. This allows us to cleanly identify the role of economic concerns.⁴

We also contribute to a broader literature that tries to understand the determinants of people's policy preferences by experimentally manipulating beliefs (Alesina et al., 2017; Cruces et al., 2013; Gilens, 2001; Karadja et al., 2016; Kuklinski et al., 2000; Kuziemko et al., 2015). This literature has mostly focused on correcting biases in people's beliefs about verifiable facts, e.g. related to income inequality. We differ from these studies by shifting people's beliefs about the causal relationship between two economic variables which inform the functioning of markets. Our approach of asking people to predict the outcomes of natural experiments allows us to create exogenous variation in beliefs by assigning some respondents to research evidence on those natural experiments.

In the context of immigration policy, our results differ previous experiments showing muted responses of policy preferences to information about the fraction of immigrants in the US (Hopkins et al., 2016; Sides and Citrin, 2007), or their characteristics (Grigorieff et al., 2016).⁵ An explanation for why we find stronger responses of policy preferences to new information compared to previous literature could be that research evidence is more persuasive than are summary statistics.⁶

Our findings also contribute to a long-standing debate in the social sciences which

⁴Our evidence complements a literature documenting how immigration affects electoral support for anti-immigrant parties (Becker and Fetzer, 2016; Dehdari, 2017; Dustmann et al., 2016; Halla et al., 2016). While these natural experiments provide compelling evidence on the relevance of immigration inflows in shaping voting behavior, they cannot identify the underlying motivations of the voters as they lack subjective belief data.

⁵Our results are also related to online experiments in Japan showing that positive newspaper stories about immigrants can be effective in reducing self-reported anti-immigrant views (Facchini et al., 2016).

⁶In support of this interpretation, we provide new evidence that people's trust in research evidence is higher than their trust in government statistics. Results are available upon request.

discusses the relative importance of consequential, ideological, and social motives in driving people’s political behavior (Bursztyn et al., 2016; DellaVigna et al., 2016; Downs, 1957; Gerber et al., 2017a; Wolfers, 2002). Our experimental results support a consequential view on political behavior by highlighting that changes in beliefs about the economic consequences of a policy can significantly affect political behavior.

Finally, we contribute to the literature on experimental methods to deal with experimenter demand effects (de Quidt et al., 2017; Mummolo and Peterson, 2017; Zizzo, 2010) by introducing a new approach to mitigate concerns about experimenter demand. We employ a follow-up study which hides the connection to the main experiment.⁷ The novel use of obfuscation mitigates concerns that treatment effects are confounded by differences in experimenter demand between the treatment and control group.⁸

The paper proceeds as follows. Section 2 describes the experimental design. Section 3 provides descriptives on heterogeneity in policy views and beliefs. Section 4 presents the main results and explores heterogeneity. Section 5 explores mechanisms by examining the relative importance of group-level versus self-interested concerns. Finally, Section 6 concludes.

2 Experimental design and sample

Our experiment has two parts: A main experiment and an obfuscated follow-up study performed seven days after the main experiment. In the following, we describe the structure of the main experiment and the obfuscated follow-up study.⁹

⁷We also employ a similar obfuscated follow-up in Haaland and Roth (2017).

⁸We also provide novel empirical evidence employing ‘demand treatments’ which highlights that follow-up surveys can effectively reduce responsiveness to experimenter demand.

⁹Detailed experimental instructions are available on the following link: <https://goo.gl/g1ABnt>. The Qualtrics survey for the main experiment is available on the following link: https://nhh.eu.qualtrics.com/jfe/form/SV_8Am0WWUZiq4u2ax. The Qualtrics survey for the obfuscated follow-up is available on the following link: https://cessoxford.eu.qualtrics.com/jfe/form/SV_d71YFolo6Dw9Ump.

2.1 Main experiment

In the main experiment, we first ask questions about demographics and elicit our respondents' pre-treatment beliefs about the labor market impact of immigration. Then, we expose half of our respondents to the information treatment. Subsequently, we measure our respondents' support for immigration using self-reported policy views and signatures on real online petitions. Finally, we elicit post-treatment beliefs about the labor market impact of immigration. Figure 1 summarizes the structure of the main experiment.

2.1.1 Pre-treatment beliefs about the Mariel boatlift

We first elicit our respondents' beliefs about the labor market impact of the Mariel boatlift, which has strongly shaped how economists view immigration (Clemens, 2017). To familiarize our respondents with the context, we present them with the following text:

In 1980, Cuba's then President, Fidel Castro, suddenly announced that Cubans wishing to emigrate to the United States were free to do so. This led to an unexpected mass immigration to Miami, Florida, where most of the Cuban immigrants arrived by boat.

With the arrival of the new Cuban immigrants, Miami's workforce grew by 55,000, or 8 percent, almost at once. The new immigrants were mostly low-skilled, which meant that the low-skilled workforce increased by 20 percent.

The large, unexpected addition of 55,000 new immigrants to the Miami workforce has allowed researchers to study the impact of immigration on the labor market. To do so, the researchers studied wage and unemployment changes in Miami after the mass immigration relative to other US cities that, because of geographic distance, were not affected by the mass immigration of Cubans.

Thereafter, we ask our respondents how they think "the mass immigration of Cubans"

affected wages and unemployment in Miami for both low-skilled and high-skilled workers.¹⁰

2.1.2 Research evidence on the Mariel boatlift

Following the belief elicitation, we inform respondents in the treatment group about the results from a seminal study about the labor market consequences of the Mariel boatlift (Card, 1990).¹¹ Specifically, we present the following text to respondents in the treatment group¹²:

The researchers who analyzed the short- and long-term effects of the mass immigration of Cubans to Miami concluded that, for both high-skilled and low-skilled workers, the mass immigration had **virtually no effect on wages and virtually no effect on unemployment**.

According to the researchers, the mass immigration had virtually no effect on wages and unemployment because the new Cuban immigrants increased the overall demand for goods and services, which created more jobs.

By contrast, respondents in the control group do not receive any information and go directly from the belief elicitation questions to the outcome questions.

¹⁰We ran a pilot experiment which showed that incentivising beliefs barely changed the distribution of beliefs. Results are available upon request. Since incentives increase the likelihood that respondents would try to find out information about the Mariel boatlift on the Internet, we decided to elicit unincentivized beliefs.

¹¹Card (1990) provides compelling evidence on the labor market consequences of the Mariel boatlift by conducting a difference-in-differences analysis. The findings by Card (1990) that the Mariel boatlift did not have negative labor market impacts are consistent with a large body of economic research on the labor market consequences of immigration (Card, 2005, 2012; Dustmann et al., 2005; Kugler and Yuksel, 2008; Manacorda et al., 2012; Ottaviano and Peri, 2012). There is also a strong consensus among leading economists that increased immigration of low-skilled workers would be positive for most Americans (<http://www.igmchicago.org/surveys/low-skilled-immigrants>; accessed October 29 2017). However, the ultimate effects of immigration on labor market conditions are still being debated (Borjas, 2014; Card and Peri, 2016), including the effects of the Mariel boatlift (Borjas, 2017; Clemens, 2017).

¹²We present a screenshot of the treatment as shown to respondents in Figure A.12.

2.1.3 Measuring support for immigration: self-reports

To measure how the treatment affects support for immigration, we first investigate self-reported attitudes. We follow Hainmueller et al. (2015) and ask about attitudes towards increasing or decreasing the number of low-skilled (high-skilled) immigrants that are highly familiar (not familiar) with American values and traditions that should be allowed to come and live in the US. All respondents are asked about all four types of immigrants, but we randomize the order of the questions between respondents. For example, to measure our respondents' views on low-skilled immigrants not familiar with American values, we administer the following question:

Immigrants to the US differ in terms of their professional skill levels as well as their familiarity with American values and traditions. Do you think the US should allow more or less low-skilled immigrants that are not familiar with American values and traditions to come and live here?

2.1.4 Measuring support for immigration: revealed preferences

After measuring self-reported attitudes, we give our respondents the opportunity to engage in political behavior using real online petitions (Grigorieff et al., 2016). We inform our respondents truthfully that Congress is debating whether to change the annual cap on non-agricultural guest workers to the US, the H-2B visa program. In order to make sure that the debate surrounding the H-2B visa program is meaningful to the respondents, we suggest some arguments in favor of both increasing and decreasing the annual cap. Specifically, all respondents receive the following text:

Some argue that the quota should be increased because private companies say that there are not enough low-skilled American workers for hire. Others argue that the quota should be decreased because access to more foreign workers

makes it easier for private companies to cut the wages of low-skilled American workers.

Respondents are then told that they will be given the opportunity to sign one of two petitions related to this debate. The first petition suggests to increase the annual cap from 66,000 to 99,000, whereas the second petition suggests to decrease the annual cap from 66,000 to 33,000. We chose to create petitions with concrete policy proposals to maximize external validity.

We ask our respondents whether they want to sign one of the two petitions. Respondents who say that they want to sign one of the petitions are provided with a link to a real petition that we created on the White House web page, petitions.whitehouse.gov.¹³ To identify treatment differences in actual signatures, we provide respondents in the treatment and control group with different links to the same petitions.

Petitions on the White House web page have some noteworthy features. First, petitions are not public until they receive at least 150 signatures, which did not happen for any of the four petitions we created for the purpose of the study. Second, the White House requires an email confirmation for petitions to count, making signings more costly than on petition pages that do not require any form of verification.

2.1.5 Post-treatment beliefs about the impact of immigration

To explore mechanisms and to confirm that we successfully managed to induce exogenous variation in beliefs, we examine people's perceptions of the economic impact of increased immigration on their own household as well as the impact on "most Americans." In addition to asking respondents about the "overall economic impact," we ask specific questions on wages, unemployment, and taxes. Subsequently, we measure perceptions of the overall impact of immigrants on American culture and society. For this block of

¹³See Figure A.8 for a screenshot of one of our online petitions.

questions, we randomize respondents to answer questions about either the impact of admitting more low-skilled immigrants or admitting more high-skilled immigrants to the US.

2.2 Obfuscated follow-up study to deal with demand effects

To mitigate concerns that our treatment effects are biased due to experimenter demand effects, we conduct an obfuscated follow-up survey which hides the connection between the follow-up survey and the main survey (Figure 2 summarizes the structure of the follow-up study).¹⁴ The obfuscation also reduces concerns about differential attrition between the treatment and the control group.

We take several steps to hide the connection between the main study and the follow-up study from the respondents. First, respondents regularly receive invitations to participate in surveys from the market research company we collaborated with. When sending out these invitations, the market research company uses generic invitation forms that only contain information about pay and expected completion time (See Figure A.9 for a screenshot of the invitation form). Second, we use different consent forms for the two studies: In the first study, respondents are forwarded to a survey with a consent form from the Norwegian School of Economics; in the second, with a consent form from the University of Oxford (see Figure A.10 and Figure A.11 for screenshots of the consent forms). We also use different layouts for the two the surveys. Third, to make the follow-up seem like an independent study, we first ask respondents a series of questions about their demographics. Fourth, to further obfuscate the purpose of the follow-up study, we ask several questions about government spending, taxation, and redistribution before we ask any questions about immigration.

At the end of the follow-up study, we ask three key outcome questions about immi-

¹⁴The actual number of days between the main study and the follow-up study varied between one and fourteen days for all subjects, but the average difference was seven days.

gration. Since three questions about immigration may send a signal that we are interested in immigration (and thus increase the chance that respondents realize that the two studies are connected), we ask each question on a separate page with the most important outcome question (preference for low-skilled immigration) on the first of these three pages. To further minimize the chance that respondents realize the relationship between the two studies, we use different wordings for the questions on immigration in the follow-up compared to the main study. This also circumvents the potential confound that treatment effects persist because of people’s taste for consistency in survey responses (Falk and Zimmermann, 2012).

2.3 Sample

We recruited respondents using Research Now, an online market research company in the US that is regularly used by researchers to conduct academic studies (e.g., Almås et al., 2016; de Quidt et al., 2017). We recruited 3130 respondents who are representative of the US population in terms of gender, age, income, race, and regions. All respondents who had finished the main study were invited to participate in the obfuscated follow-up study, for which we received 2075 respondents. The experiment was run in late May and early June 2017. We submitted a pre-analysis plan to the AEA RCT Registry before we collected any data for the experiment. We pre-specified the sample size, empirical specifications and our hypotheses in a pre-analysis plan available at <https://www.socialscienceregistry.org/trials/2247>.

2.4 Summary statistics and balance

In the main experiment, the median age is 45; the median income is \$62,500; 50 percent of respondents have at least a two-year college degree; 48 percent are males; and 45 percent are in full-time work (this is summarized in Table A.20). In the follow-up study,

we recruited 2075 respondents that are still broadly representative of the US population in terms of observables, such as income, region, age, and gender. Table A.17 confirms that both our main sample and the follow-up sample are representative of the US population in terms of age, region, gender, and household income. As shown in Table A.21, we also find no difference in response rates to the follow-up study between the treatment and control group. Treatment and control group are balanced in terms of observables both in the main study and the follow-up (as is shown in Table A.18 and Table A.19).

3 Policy preferences and heterogeneity in beliefs

In this section, we first document heterogeneity in our respondents' support for immigration and how support depends on the characteristics of the immigrants. We then explore to what extent differences in policy preferences can be explained by heterogeneity in beliefs about the economic impact of immigration and other individual characteristics.

3.1 Documenting disagreement in beliefs and policy views

Panel A of Figure 3 uncovers the large degree of disagreement about immigration policy in our sample. For example, 27 percent of respondents in our sample demand an increase of low-skilled immigrants not familiar with American values and traditions, while 36 percent of respondents want to reduce the number of these types of immigrants. We find similar patterns of disagreement for all different types of immigrants. Consistent with findings from previous research (Hainmueller et al., 2015), we document two stylized facts about our respondents' attitudes towards immigration. First, they are much more supportive of high-skilled immigration than low-skilled immigration. Second, they are also much more supportive of immigrants that are "highly familiar" with American values and traditions compared to immigrants that are "not familiar" with American

values and traditions.

Panel B of Figure 3 provides evidence on a large degree of disagreement in beliefs about the overall economic impacts of immigration. While 40 percent of our participants believe that low-skilled immigrants not familiar with American values will lower the wages of most Americans, 21 percent think that they will increase wages of most Americans. We also show that our respondents hold systematically more optimistic views about the economic impact of high-skilled immigrants compared to low-skilled immigrants. Moreover, respondents also hold more optimistic beliefs about the economic effects of immigrants that are familiar with American values and traditions compared to immigrants that are not familiar with American values and traditions. This in turn suggests that people's preference for immigrants familiar with American values compared to immigrants not familiar with American values may not only arise from cultural but also from economic concerns. Similarly, people hold more optimistic beliefs about the cultural impact of immigration of high-skilled immigrants compared to low-skilled immigrants. The patterns in the belief data highlight that interpreting choice data from conjoint experiments which vary immigrant characteristics is difficult.

3.2 Explaining heterogeneity in beliefs and policy views

Which variables correlate with people's policy views and their beliefs? We find that Republicans and Independents, older respondents, and low-skilled individuals have more negative views towards increasing immigration to the US and hold more pessimistic beliefs about the economic impact of immigration (see Panels A and B of Figure 4). Using census data, we find evidence that individuals who live in zip codes with a higher share of immigrants have more positive views on the labor market impact of immigrants¹⁵, but local exposure to immigrants is not correlated with people's support for increasing

¹⁵We find the same patterns if we exclude respondents not born in the US.

immigration. This suggests that local experiences with immigrants can shape people's beliefs about their labor market impact.¹⁶ Political affiliation is the single most important predictor of people's self-reported policy views and their beliefs about the impact of immigration. The Republican–Democrat gap in policy views and beliefs about the economy is about 0.7 of a standard deviation.

3.3 Can beliefs account for the heterogeneity in policy views?

Can people's beliefs about immigration account for the large degree of heterogeneity in people's policy preferences, such as the gap in policy views between Democrats and Republicans? Differences in beliefs about immigrants' economic impact can explain more than 50 percent of the Republican–Democrat gap in support for low-skilled and high-skilled immigration. Beliefs about the overall economic and cultural impact of immigration explain approximately 60 percent of the gap in policy views between Republicans and Democrats. Our evidence thus suggests that beliefs about the economy are more powerful in predicting support for immigration than beliefs about the cultural impact of immigration (these results are summarized in Table A.5). Naturally, these correlational results need to be interpreted cautiously, and cannot be given a causal interpretation. For example, it is conceivable that Republicans hold more pessimistic beliefs to justify their policy views. In the next section, we examine the causal impact of beliefs using the experimentally induced variation in beliefs.

¹⁶Figure A.3 shows that there is also large variation in beliefs about the labor impact of immigration across states.

4 The causal effect of beliefs on policy preferences

4.1 How do people’s beliefs respond to the research evidence?

In order to understand the impact of the research evidence on people’s beliefs and policy views, it is important to comprehend what pre-treatment beliefs respondents hold about the impact of the Mariel boatlift.¹⁷ 66 percent think that wages of low-skilled workers decreased in response to the Mariel boatlift. Similarly, 73 percent think that unemployment among low-skilled workers increased (as summarized in Figure A.2).¹⁸ By contrast, 58 percent (64 percent) of our respondents expect no impact of the Mariel boatlift on the wages (unemployment) of high-skilled workers.¹⁹ These pre-treatment beliefs imply that the provision of the research evidence should increase people’s optimism about the labor market impacts of immigration. In what follows, we test this prediction by estimating the following equation using OLS²⁰:

$$y_i = \alpha_0 + \alpha_1 T_i + \alpha_2 \mathbf{x}_i + \varepsilon_i$$

where y_i is the outcome of interest; T_i is an indicator for whether subject i received the research evidence; \mathbf{x}_i is a vector of pre-specified controls²¹; and ε_i is an individual-

¹⁷Our descriptive data on beliefs complements recent work on people’s ability to predict experimental results (DellaVigna and Pope, 2017a,b).

¹⁸Since most of the Cuban immigrants were low-skilled, these beliefs are broadly consistent with factor proportion models which predict that immigration of low-skilled workers will drive down wages for similarly skilled native workers. That is, our respondents seem to believe in substitutability between low-skilled native and immigrant workers.

¹⁹These beliefs are not consistent with factor proportion models predicting that immigration of low-skilled workers will improve labor market outcomes of high-skilled natives. That is, our respondents do not seem to believe in complementarities between low-skilled immigrants and high-skilled workers. Beliefs about the impact on wages and unemployment are highly correlated.

²⁰All of the results in this paper are robust to employing ordered response models.

²¹Controls include gender, age, ethnicity, region, household size, household income, education, employment status, party affiliation, whether the respondent was born in the US, whether the subject’s parents were born in the US, self-perceived skill-level, and pre-treatment beliefs about the labor market impact of low-skilled (or high-skilled) immigration and are coded as described in the pre-analysis plan.

specific error term. For all specifications, we use robust standard errors.

Figure 5 shows people's beliefs about the overall economic impact of immigrants on the US as a whole. We find evidence that treated respondents strongly update their beliefs about the economic impacts of both high-skilled and low-skilled immigrants. Respondents change their beliefs about the overall economic impact of low-skilled immigrants highly familiar (not familiar) with American values by 0.17 (0.22) of a standard deviation, while they change their beliefs by 0.13 (0.15) of a standard deviation for high-skilled immigrants (not) familiar with American values. These effect sizes are large in magnitude and correspond to approximately one quarter of the gap in beliefs between Democrats and Republicans.

[Insert Figure 5 here]

Next, we test whether people update their beliefs about different aspects of the economic impact of immigration. We examine how the research evidence affected people's beliefs about the effect of low-skilled and high-skilled immigrants on *(i)* wages, *(ii)* unemployment, and *(iii)* the tax burden of "most Americans." Table 1 shows that people in the treatment group strongly change their beliefs about the effects immigrants have on wages and unemployment of most Americans. Specifically, we find that respondents change their beliefs about how wages and unemployment of most Americans are affected by low-skilled immigrants by 0.18 and 0.15 of a standard deviation respectively. These effect sizes are large in magnitude and correspond to about 80 percent of the gap in beliefs about wage impacts of immigration between Republicans and Democrats. We find similar effect sizes for people's beliefs about the impact of high-skilled immigrants. However, treated respondents do not on average change their beliefs about how low-skilled or high-skilled immigrants affect the wages, unemployment and tax burden of their own household. This could be explained by the fact that a very large fraction of control group respondents already think that their own household is not affected by

immigration.²² Therefore, there is less scope for variation for the research evidence to change beliefs about the impact of immigration on people’s own household.

It is conceivable that people’s more optimistic perception of the labor market impact of immigration changes their perceptions of other impacts that immigration has, such as its impact on public finances. Table 1 shows that the information treatment did not affect people’s views on how low-skilled or high-skilled immigrants affect public finances, and American culture. All in all, we provide compelling evidence that the research evidence successfully changed our respondents’ beliefs about both the overall economic impact and specifically the labor market impact of immigrants. A large literature has discussed whether people’s beliefs about the economic impact of immigration inform their beliefs about the cultural impact of immigration (Hainmueller and Hopkins, 2014b). For instance, people could think that the cultural impact of immigration is more positive if they update their views about how likely immigrants are to adhere to “norms of working.” Using our exogenous variation in beliefs, we find no evidence that people use the research information to update their views about the cultural impact of immigration.

[Insert Table 1 here]

4.2 Does belief updating depend on priors?

People’s belief updating in response to the research evidence should strongly depend on their priors about how immigrants affect local labor markets. In what follows, we explore whether beliefs about the labor market impact of low-skilled immigrants on most Americans depend on our respondents’ pre-treatment beliefs about the effects of the Mariel boatlift.

²²For instance, while 48 percent of our respondents expect negative labor market impacts of low-skilled immigration on most Americans, only 22 percent expect negative negative labor market impacts on their own household. while most of our respondents do not think that increased immigration will negatively affect their own household, most respondents do think that increased immigration will negatively affect most Americans.

Figure 6 shows that individuals with pessimistic beliefs to begin with strongly update their beliefs about the labor market impact of immigrants on most Americans. On the other hand, respondents with priors that are aligned with the research evidence do not update their beliefs. As expected respondents who thought that the Mariel boatlift had positive labor market effects, develop more pessimistic views about the labor market impact of immigration. However, these patterns are noisily measured as only a small sample of people thought that the Mariel boatlift had positive labor market impacts. We find similar patterns of heterogeneity for respondents' beliefs about their own household. Once we restrict our sample to respondents with "economically reasonable pre-treatment beliefs", i.e. people who do not think that unemployment will increase (decrease), while at the same time thinking that wages will decrease (increase), these patterns of heterogeneity become even stronger (see Figure A.4 in the Appendix).

[Insert Figure 6 here]

4.3 Do policy preferences respond to the research evidence?

After establishing that the research evidence strongly shifted respondents' beliefs, we examine its effect on people's policy preferences. Table 2 and Figure 7 show average self-reported attitudes towards immigrants for respondents in the control group and treatment group separately. Treated respondents become more supportive of increasing the number of low-skilled immigrants that are "not familiar" with American values and traditions by 0.17 of a standard deviation ($p < 0.01$). For low-skilled immigrants that are "highly familiar" with American values and traditions, the average treatment effect is 0.11 of a standard deviation ($p < 0.01$). Treated respondents also increase their support for high-skilled immigrants that are "highly familiar" and "not familiar" with American values and traditions by 0.11 ($p < 0.01$) and 0.05 ($p > 0.10$) of a standard deviation, respectively.

[Insert Table 2 and Figure 7 here]

Figure 8 shows the distribution of responses for the treatment group and control group separately. For low-skilled immigrants that are “not familiar” with American values and traditions, we see that the treatment mainly shifts people away from strongly supporting a decrease in immigration. By contrast, for low-skilled immigrants that are “highly familiar” with American values, the treatment mainly shifts people from being in favor of keeping the numbers as they are to increasing the numbers.

[Insert Figure 8 here]

4.4 Do beliefs affect political behavior?

To examine whether changes in self-reported attitudes also translate into changes in actual political behavior, we analyze whether the research evidence affects people’s willingness to sign petitions regarding the cap on non-agricultural guest workers to the US, the H-2B visa program. Column (1) of Table 3 and Figure 9 show that people’s willingness to sign a petition in favor of increasing the annual cap on H-2B visas increases by 4.5 percentage points or about 15 percent. Column (2) of Table 3 highlights that people’s willingness to sign a petition suggesting to decrease the annual cap on H-2B visas falls by 5.7 percentage points, or about 18 percent.

Table 3 examines whether the observed changes in intentions to sign the petitions also are reflected in actual petition signatures. A proportion test indicates that the proportion of signatures on petitions in favor of increasing the annual cap on H-2B visas increases significantly by 2.6 percentage points (66.9 percent) compared to a control group mean of 3.9 percentage points. We find a 0.5 percentage point decrease in signatures for the second petition in favor of decreasing the annual cap, compared to a control group mean of 5.5 percent. However, this difference is not statistically significant ($p > 0.10$). This result underscores the importance of collecting data on real behavior in addition to self-reports: We find large and significant treatment effects on the intention to sign both

petitions, but comparing actual signatures we only find significant treatment effects on the petition suggesting to increase the annual cap on H-2B visas. This means that our informational intervention is more successful in motivating political behavior in favor of increasing immigration than demotivating political behavior in favor of decreasing immigration. All in all, the estimated effect sizes are large in magnitude. For self-reported attitudes and people's intention to sign the petition, the effect sizes correspond to approximately one quarter of the gap in attitudes between Republicans and Democrats. Our results contrast with previous evidence showing only muted responses of beliefs and policy views with respect to new information. An explanation for why we find stronger responses of policy preferences to new information compared to previous literature could be that research evidence is more persuasive than are summary statistics.²³

[Insert Figure 9 and Table 3 here]

4.5 Do changes in attitudes persist in the obfuscated follow-up?

There are several concerns about the evidence from the main experiment. First, treatment effects may be short-lived. Second, treatment effects may be biased due to differences in experimenter demand effects across treatment arms. Specifically, respondents in the treatment group may infer from the research evidence that the experimenter has pro-immigrant attitudes and therefore adjust their reported views on immigration. Third, one might worry that the estimated effects in the main experiment are so large as economic effects of immigration were made very salient. Our evidence from the obfuscated follow-up survey mitigates these three concerns.

First, the follow-up lets us directly examine the persistence of treatment effects over time. Second, we show that follow-up surveys are an effective way of dealing with

²³We provide some new evidence that people's trust in research evidence is higher than their trust in government statistics. Results are available upon request.

demand effects. We conducted an experiment in which we examine the responsiveness of immigration policy views in response to a ‘demand treatment’ as proposed by de Quidt et al. (2017). Specifically, we tell some respondents that “we are a group of researchers in favor of immigration,” while the remaining respondents receive no such message. While this message increases people’s support for immigration instantaneously after receiving the ‘demand treatment,’ our treated respondents’ self-reported support for immigration is unchanged in a one-week follow-up (see Table A.16 in the online Appendix). Since we consider the deliberately induced experimenter demand as an upper bound for the demand that our research evidence may induce, this suggests that follow-up surveys are an effective tool for dealing with demand effects.^{24,25} In light of this evidence, we believe that our obfuscated follow-up surveys effectively mitigate concerns about differential experimenter demand. Third, economic concerns were not made salient at all when the main outcome questions were asked in the obfuscated follow-up. Thus, a persistence of effects would indicate that the magnitude of our effects cannot be explained by the high salience of economic aspects of immigration.

Figure 7 and Table 2 provide strong evidence that the effects persist one week later: Treated respondents are still more supportive of low-skilled immigration by 0.1 of a standard deviation (which corresponds to 70 percent of the treatment effect from the main experiment), and they also have more optimistic beliefs about the economic impact of immigration in general. We find smaller and statistically not significant effects for support of increasing high-skilled immigration.²⁶ The fact that we find similar effect sizes compared to the main survey suggests that demand effects and salience are likely not the underlying drivers of our estimated treatment effects.²⁷

²⁴For details on the interpretation of demand treatments, see de Quidt et al. (2017).

²⁵This complements evidence by Cavallo et al. (2016) who show that follow-ups can mitigate concerns about numerical anchoring and spurious learning.

²⁶We did not differentiate between immigrants of different familiarity with American values and traditions in the follow-up as we wanted to use different outcome measures to mitigate concerns about consistency bias in survey responses (Falk and Zimmermann, 2012).

²⁷Future experiments could cross-randomize the salience of non-economic or economic consequences

Furthermore, one could worry that subjects from the treatment group updated their beliefs about how liberal the policy views of researchers in general are and distort their self-reports in order to please the experimenter. If this was the case, we would expect participants to report more liberal policy views in general. We show that people’s policy views on redistribution, government spending, and taxation, as measured in the follow-up, are not different across treatment groups (see Table A.15). Indeed, the estimated treatment effects are very close to zero and below .03 of a standard deviation. This suggests that respondents do not misreport their policy views as a result of changes in beliefs about experimenters’ preferences in general.

4.6 Is there a heterogeneous response to the information?

We previously uncovered a large degree of heterogeneity in pre-treatment beliefs and also a large heterogeneity in preferences between Republicans and Democrats and high-skilled vs. low-skilled respondents. We now explore to what extent this heterogeneity predicts our responses to the treatment information. To explore heterogeneous responses, we estimate the following equation:

$$y_i = \delta_0 + \delta_1 T_i + \delta_2 \text{interact}_i + \delta_3 T_i \times \text{interact}_i + \delta_4 \mathbf{x}_i + \varepsilon_i$$

where the interaction term, interact_i , is *(i)* pre-treatment standardized beliefs about the labor market impact of immigration²⁸, *(ii)* self-perceived skill level (a dummy taking value one for people who think they are high-skilled), as well as *(iii)* political affiliation (a dummy taking value one for Republicans).

Panel A of Table A.22 and Panel A of Table A.23 show heterogeneous effects of immigration. This would allow us to assess the external validity of our experimental findings to the salience of different aspects of immigration.

²⁸We construct this belief measure by creating an unweighted index of people’s standardized beliefs about the effect of immigration on *(i)* wages and *(ii)* unemployment.

depending on our respondents' pre-treatment beliefs about the labor market impacts of immigrants. As expected, we find that people with more optimistic pre-treatment beliefs about the labor market impacts of immigrants respond less strongly to the information treatment. However, this heterogeneity is not statistically significantly different from zero. This could be due to the fact that pre-treatment beliefs are correlated with other covariates (such as political affiliation, attention or education) for which we may expect patterns of heterogeneity going in the opposite direction.

This treatment heterogeneity in terms of beliefs about the labor market effects of immigrants also suggests that the elasticity of support for immigration with respect to labor market concerns may be different for people with initially more or less optimistic beliefs about the labor market impact of immigrants. That is, while those with the most pessimistic beliefs about immigration to begin with update their beliefs about the labor market impact of immigration most strongly, they may be more reluctant to also change their preferences more strongly.

Panel B of Table A.22 and Panel B of Table A.23 show that Republicans do not respond differently to the treatment compared to non-Republicans. This could reflect two opposing factors: On the one hand, Republicans are more likely to dismiss the evidence from the research study (we provide evidence for this in Table A.3); on the other hand, there is more scope for increases in support for immigration for Republicans as they have more negative views to begin with.

Finally, we examine heterogeneity by skill level through the lens of a factor proportion model. Factor proportion models predict that low-skilled workers lose (gain) from low-skilled (high-skilled) immigration. If people's self-interested labor market concerns mattered for their attitudes towards immigrants, we would expect to see larger treatment effects on attitudes towards low-skilled (high-skilled) immigrants for low-skilled (high-skilled) workers compared to high-skilled (low-skilled) workers. As can be seen in

Panel C of Table A.22 and Panel C of Table A.23, we find no significant treatment heterogeneity.

4.7 How elastic are policy views with respect to beliefs?

After establishing that our research evidence changes self-reported attitudes and political behavior, we shed further light on the quantitative importance of economic concerns. To do so, we examine how a given change in beliefs about the overall economic impact of immigration affects people's policy views by using our experimentally induced variation in beliefs. The informational treatment shifted our respondents' beliefs about the overall economic impact of all four different types of immigrants.²⁹ By contrast, the treatment did not on average shift our respondents' beliefs about the cultural impact of immigration. Taken together, this suggests that the random assignment of the research evidence is both a valid and informative instrument for people's beliefs about the overall economic impact, $\text{economic_concern}_i$, for the different types of immigrants.³⁰ We focus on the subsample of respondents who thought that the Mariel boatlift had either a negative or no effect on wages and unemployment as this ensures that those respondents' beliefs were all shifted in the same direction. In the IV regression, we instrument $\text{economic_concern}_i$ with the treatment indicator, T_i as follows:

$$y_i = \beta_0 + \beta_1 \widehat{\text{economic_concern}}_i + \beta_2 \mathbf{x}_i + \varepsilon_i$$

where

$$\text{economic_concern}_i = \gamma_0 + \gamma_1 T_i + \gamma_2 \mathbf{x}_i + \epsilon_i$$

²⁹The implied first-stage F-Stat is (20.45) 13.33 for beliefs about the impact of low-skilled immigrant (not) familiar., which suggests that our instrument is sufficiently informative.

³⁰The underlying identifying assumption is that the new information has no effect on attitudes towards immigrants except through beliefs about their impact on the labor market. This rules out that people develop more positive feelings towards immigrants as a result of the research evidence. The persistence of treatment effects, as documented in the follow-up study, indicates that the treatment operates through changes in beliefs.

The controls, x_i , are included and coded as described in the pre-analysis plan. Panel A of Table 4 reports the results from IV regressions where beliefs about the overall economic impact of low-skilled immigrants “not familiar” (“highly familiar”) with American values on “most Americans” are instrumented by the treatment indicator. We find that a one standard deviation change in beliefs about the economic impact of low-skilled immigrants that are “not familiar” (“highly familiar”) with American values and traditions translates into a 0.71 (0.61) standard deviation change in attitudes towards these immigrants ($p < 0.01$). We find very similar elasticities when we employ the whole sample (see Table A.9). These results demonstrate that economic concerns are a quantitatively important driver of attitudes towards immigration. We also present the IV results for attitudes towards high-skilled workers. A one standard deviation change in beliefs about the overall economic impact of high-skilled immigrants that are “not familiar” with American values and traditions translates into a 0.83 standard deviation change in attitudes towards these immigrants ($p < 0.01$). For high-skilled immigrants that are “highly familiar” with American values and traditions, we have a weaker first stage on beliefs and the IV estimate is not statistically significant, in line with the reduced form evidence presented.

Next, we compare our IV estimates to the corresponding OLS estimates which are shown in Panel B of Table A.9. The OLS estimates are smaller than the IV estimates (about two thirds of the effect size), which suggests that the confounding factors in the OLS regressions downward bias the estimated relationship between labor market concerns and support for immigration. One possible explanation for this downward bias could be measurement error in beliefs. Moreover, the relatively large effect size could also be explained by the fact that the IV estimates capture the local average treatment effect for the compliers, i.e. the subsample of respondents who change their beliefs about the overall economic impact of immigration. It is possible that respondents who change their beliefs in response to new information may have a weaker ideological stance on

immigration, and may also be more willing to change their policy preferences.

5 Self-interested or group-level concerns?

Section 4 established that beliefs on how immigration affects most Americans causally shape policy preferences on immigration. This section looks at underlying mechanisms by exploring whether self-interested or group-level concerns are most important in forming policy preferences on immigration. In our analysis, we follow the previous literature on immigration attitudes (Card et al., 2012; Hainmueller et al., 2015) and compare our results to previous findings.

We present a simple model to structure the discussion. Person i chooses her preferred number of low-skilled and high-skilled immigrants to be admitted into the US, m_{ls} and m_{hs} , respectively, to maximize the following expression³¹:

$$\max_{m_{ls}, m_{hs}} (1 - \kappa)y_i(m_{ls}, m_{hs}) + \kappa y_{-i}(m_{ls}, m_{hs}) + f_i(m_{ls}, m_{hs})$$

$y_i(m_{ls}, m_{hs})$ is i 's expected net income, which depends on the number of low-skilled and high-skilled immigrants; $y_{-i}(m_{ls}, m_{hs})$ is the net average expected income of other Americans, which also depends on the number of low-skilled and high-skilled immigrants; $f_i(m_{ls}, m_{hs})$ is i 's perceived net non-economic benefit of immigration³², which could be positive (negative) if i gets utility (disutility) from more cultural diversity at the current level of immigration; and $0 \leq \kappa \leq 1$ is the weight on the net average expected income of other Americans. If $\kappa = 0$, only self-interested concerns about how immigration affects own income matter for attitudes; if $\kappa = 1$, only group-level concerns about how

³¹One way to think about this utility function is through the lens of an expressive voting model in which people get utility from expressing particular political views.

³²We assume that i expects the net average non-economic benefit in society to equal her own perceived net non-economic benefit; i.e., $f_i(m_{ls}, m_{hs}) = f_{-i}(m_{ls}, m_{hs})$.

immigration affects the average income of other Americans affect attitudes.

The first-order condition for the number of immigrants of type $j \in \{ls, hs\}$ to be admitted is given by (1):³³

$$(1 - \kappa) \frac{\partial y_i}{\partial m_j} + \kappa \frac{\partial y_{-i}}{\partial m_j} = - \frac{\partial f_i(m_{ls}, m_{hs})}{\partial m_j} \quad (1)$$

That is, in optimum, person i equalizes the expected net economic benefit of admitting more immigrants of type j (the left-hand side of Equation (1)) with the expected net non-economic benefits (the right-hand side of Equation (1)).

In the following, we discuss how some previous papers have identified the role of labor market concerns in driving attitudes towards immigration. We then interpret both our descriptive and causal evidence through the lens of the above model.

5.1 Self-interested labor market concerns

To investigate whether labor market concerns drive support for immigration, a seminal paper by Hainmueller and Hiscox (2010) tests whether people's education levels predict people's support for immigrants of different skill levels. For this to be a valid test of the relevance of labor market concerns, people's beliefs have to be in line with factor proportion models which predict that people gain (lose) from immigration of workers with different (similar) skill levels from their own. In addition, labor market concerns should mainly operate through self-interested concerns. In the context of Equation (1),

³³The following assumptions guarantee a unique interior solution: (A1) $f_i(0,0) = 0$, (A2) for $j \in \{ls, hs\}$, $\frac{\partial^2 f_i(m_{ls}, m_{hs})}{\partial m_j^2} < 0$, (A3) $-\frac{\partial f_i(m_{ls}, m_{hs})}{\partial m_j} |_{m_j=0} > \frac{\partial y_i}{\partial m_j} |_{m_j=0}$, (A4) $-\frac{\partial^2 f_i(m_{ls}, m_{hs})}{\partial m_j^2} > \frac{\partial^2 y_i}{\partial m_j^2}$, (A5) $\frac{\partial y_i}{\partial m_j}$ is monotonic, and (A6) there exists an $\bar{m}_i^j > 0$ such that, for all $m_j < \bar{m}_i^j$, $\frac{\partial f_i(m_{ls}, m_{hs})}{\partial m_j} > 0$ and, for all $m_j > \bar{m}_i^j$, $\frac{\partial f_i(m_{ls}, m_{hs})}{\partial m_j} < 0$. A possible intuition behind (A6) is the following: With no immigrants, the increased cultural diversity associated with immigration is perceived as a net positive non-economic benefit to society by everyone. However, at some threshold level of immigrants, more cultural diversity is perceived as a "cultural threat," and the perceived net non-economic benefit turns negative (with heterogeneity in the perceived threshold values, \bar{m}_i^j).

the identifying assumptions in Hainmueller and Hiscox (2010) are $\frac{\partial y_i}{\partial m_{hs}} > (<) 0$ and $\frac{\partial y_i}{\partial m_{ls}} < (>) 0$ if i is low-skilled (high-skilled), and $\kappa = 0$. Similar identification assumptions have been used in other papers on immigration attitudes (Mayda, 2006; Scheve and Slaughter, 2001).

Based on their main finding that highly educated respondents are more supportive of immigration of both high-skilled and low-skilled immigrants than uneducated respondents, Hainmueller and Hiscox (2010) conclude that self-interested labor market concerns are not an important driver of people's attitudes towards immigration. Using the same education variable and outcome questions as Hainmueller and Hiscox (2010), we replicate their main results that highly educated respondents are more supportive of immigration of both high-skilled and low-skilled workers (as can be seen in Table A.10). This suggests that there is nothing peculiar about our sample in terms of attitudes towards immigration compared to respondents from previous studies. Table A.10 also shows that the result is robust to using people's self-identified skill level instead of objective skill levels, as proxied by education.

These results suggest that self-interested labor market concerns are not a good descriptive model of how people form their attitudes towards immigration, but the analysis assumes that people's beliefs are in line with the factor proportion model. Table A.11 tests this assumption by regressing people's beliefs about how their own household is affected by low-skilled and high-skilled immigration on their subjective skill level and their objective skill level (as proxied by education). Table A.11 shows that while people's beliefs are broadly consistent with the factor proportion model, the relationship is quite weak (but qualitatively consistent with recent findings by Gerber et al. (2017b)).

In Table A.12, we relax the assumption that people's beliefs about the labor market impact of immigrants on their own household are fully consistent with predictions from

factor proportion models. Using rich data on people’s beliefs about how immigration of low-skilled and high-skilled workers affects wages and job security for their own household, we show that people’s attitudes towards immigration and beliefs about the labor market impact on their own household are consistent with self-interested labor market concerns. In particular, beliefs about the impact of immigration on own employment opportunities strongly predict attitudes towards all types of immigrants.

5.2 Group-level labor market concerns

The analysis in Section 5.1 assumes that people form their attitudes towards immigration based on self-interested concerns about how immigration affects their own household (i.e., $\kappa = 0$ from Equation (1)).

Table A.13 provides evidence which is consistent with a high relevance of group-level labor market concerns. When we include beliefs about the labor market impact of immigration on both the respondent’s own household as well as on “most Americans” in the regressions, beliefs about the labor market impact of immigration on own household no longer consistently predict attitudes towards immigration. By contrast, beliefs about the impact of immigration on wages and unemployment on most Americans consistently and strongly predict attitudes for all types of immigrants. These results still hold when we control for our respondents’ beliefs about the cultural impact of immigration. We also replicate these correlational patterns using data from the 2014 wave of the General Social Survey (displayed in Figure A.5). The finding that self-interested labor market concerns do not seem to be important is consistent with the lack of heterogeneous treatment responses by skill level, which we documented in Section 4.6.

Finally, we use our rich belief data to shed light on the importance of economic versus cultural concerns. We follow the approach in Card et al. (2012) who used survey data from the European Social Survey, which elicited beliefs about the nationwide economic

and non-economic impact of immigration. Their main result is that non-economic factors are 2–5 times more important than economic factors in forming attitudes towards immigration.³⁴ Table A.14 provides suggestive evidence that economic concerns are 2–4 times more important than non-economic concerns in our dataset. Moreover, we replicate this result using nationally representative data from the 2014 of the General Social Survey (displayed in Figure A.6). Our findings stand in contrast to Card et al. (2012), who found that non-economic concerns are 2–5 times more important than economic concerns. One reason for the different findings could be that we measured beliefs about the cultural impact of immigration differently from Card et al. (2012).³⁵ One other reason for this difference could be systematic differences between the populations in the US and Europe.

6 Concluding remarks

In this paper, we present evidence that labor market concerns causally affect public support for immigration. Exploiting exogenous variation in beliefs about the overall economic impact on immigration, we find that a one standard deviation change in beliefs about the economic impact of immigration changes attitudes towards allowing more low-skilled immigration by between 0.61 to 0.71 of a standard deviation. Signatures on real online petitions demonstrate that the research evidence affects real political behavior. The effects also persist in an obfuscated follow-up study where concerns about differential demand effects across the treatment and control group are mitigated. Further, these findings challenge the current consensus that labor market concerns are not

³⁴In the context of Equation (1), the assumptions behind this result are that beliefs about the economic and non-economic benefits of immigration, $\frac{\partial y_{-i}}{\partial m_j}$ and $\frac{\partial f_i(m_{ls}, m_{hs})}{\partial m_j}$, are exogenous to each other and, since beliefs were elicited about the *nationwide* economic impact of immigration, that group-level concerns matter for immigration attitudes ($\kappa > 0$).

³⁵While we ask our respondents how they think immigration would affect American culture and society as a whole, Card et al. (2012) ask specific questions on religion, language, crime, social tension, customs and traditions. Perhaps these specific questions prompted respondents to think more holistically about other dimensions of immigration that matter to them.

a quantitatively important determinant of mass attitudes towards immigration. Overall, our results and emphasize the relevance of sociotropic labor market concerns, i.e. beliefs about how the nation as a whole is affected by immigration.

Our evidence complements a literature documenting how immigration affects electoral support for anti-immigrant parties (Becker and Fetzer, 2016; Dehdari, 2017; Dustmann et al., 2016; Halla et al., 2016). There has been a big debate about whether recent opposition to immigration in the US and Europe is due to the perceived economic or cultural threats of immigration. While natural experiments studying the impact of immigration on voting outcomes cannot identify the underlying motivations of the voters, our findings suggest that labor market concerns may be an important mechanism at play.

We believe that there are several promising pathways for future research on the role of labor market concerns in driving support for immigration. First, it would be interesting to examine whether anecdotal evidence on the effect of the Mariel boatlift would have similar effects on support for immigration. Second, it would be interesting to examine whether exogenously shifting only people's beliefs about the effect of immigrants on one's own household would confirm the correlational results which suggest that there is no relationship between self-interested labor market concerns and attitudes towards immigrants. Finally, it would be interesting to explore how people change their support for immigration in response to research findings documenting that some subgroups are negatively affected by immigration, e.g. based on Borjas (2017).

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Main figures

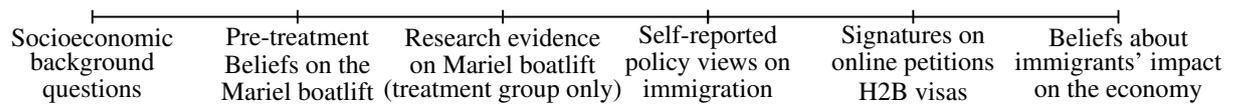


Figure 1: Structure of the main experiment

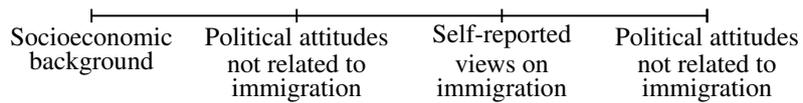
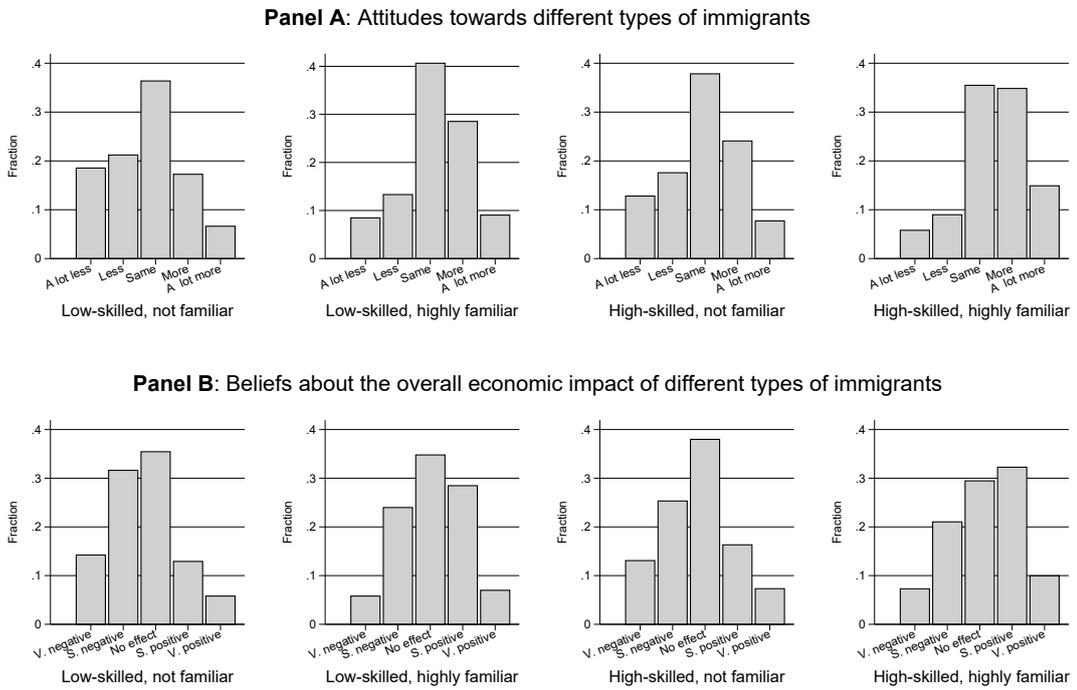


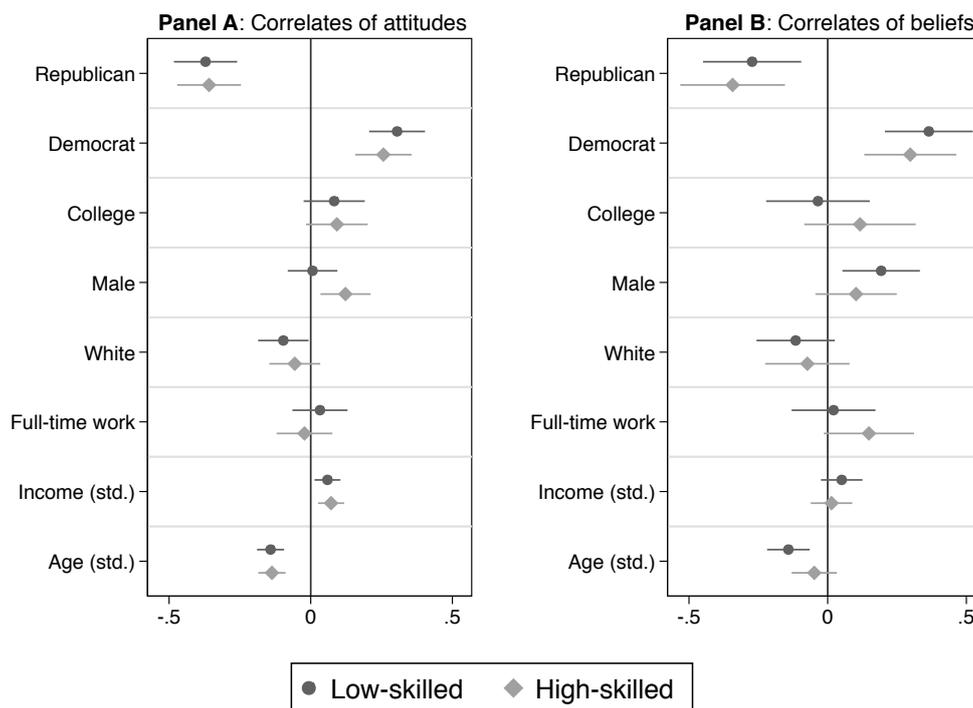
Figure 2: Structure of the follow-up survey

Figure 3: Heterogeneity in policy views and beliefs about immigration



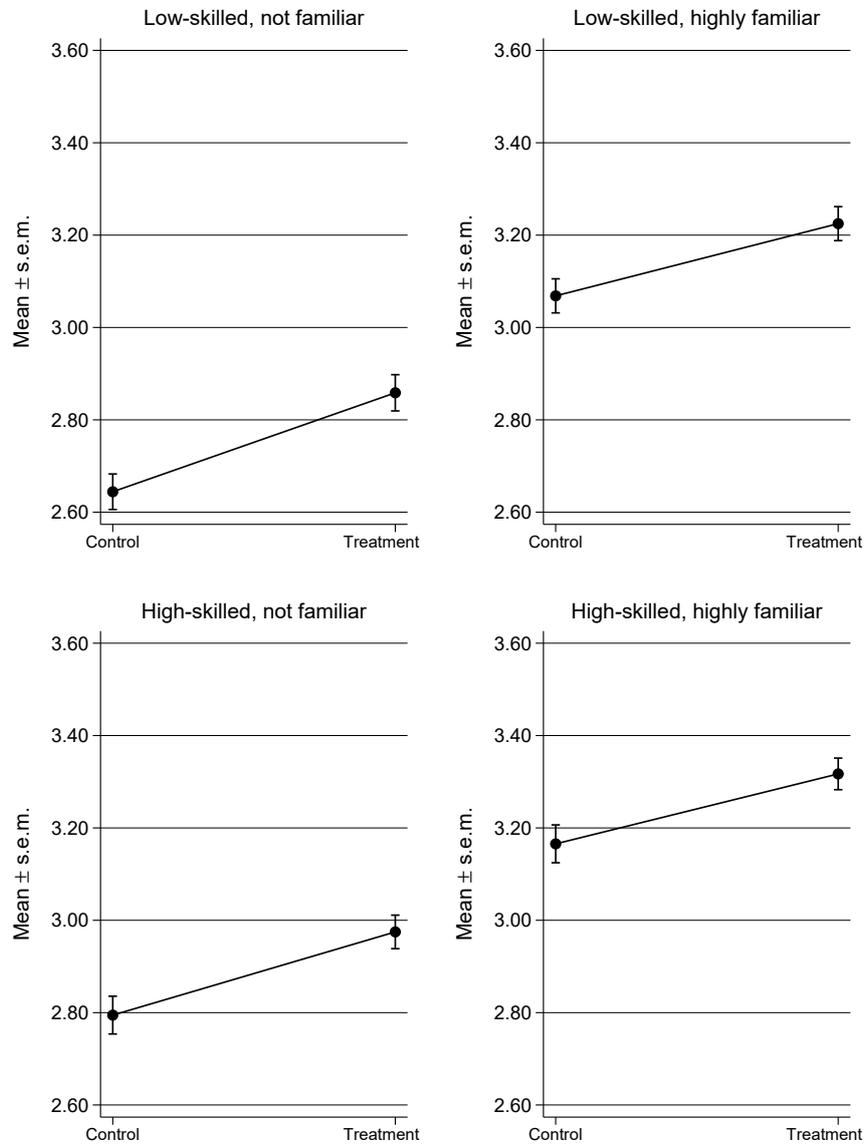
Notes: Panel A shows the distribution of policy views on whether to increase or decrease the number of immigrants for the different types of immigrants. Panel B shows the distribution of beliefs about the “overall economic impact on most Americans” for the different types of immigrants. Both panels only include responses from respondents in the control group.

Figure 4: Correlates of policy views and beliefs about immigration



Notes: The dots indicate the mean values of estimated regression coefficients. The lines indicate 95 percent confidence interval of the mean. In Panel A the outcome variables are people’s policy views on low-skilled immigration and high-skilled immigration. In Panel B the outcome variables are beliefs about the “overall economic impact on most Americans” of low-skilled and high-skilled immigrants. Both panels only include responses from respondents in the control group.

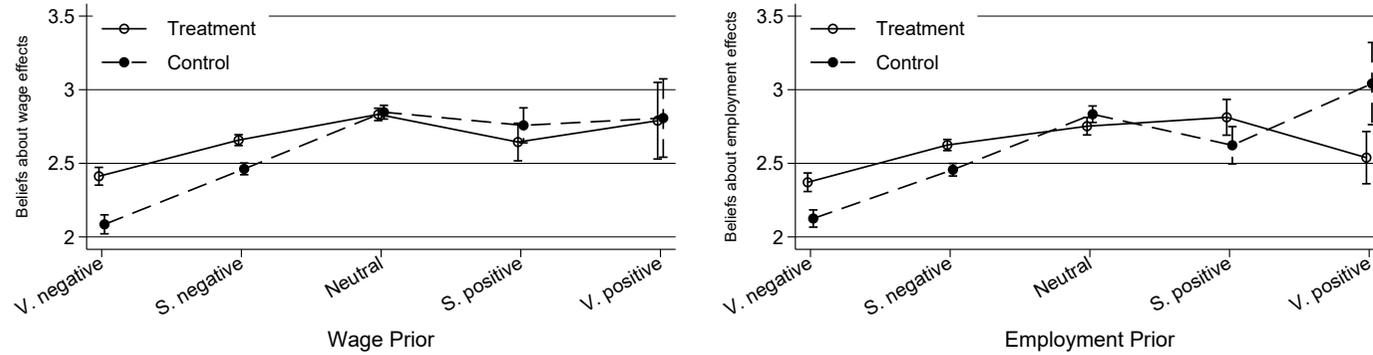
Figure 5: Post-treatment beliefs about the overall economic impact of immigrants



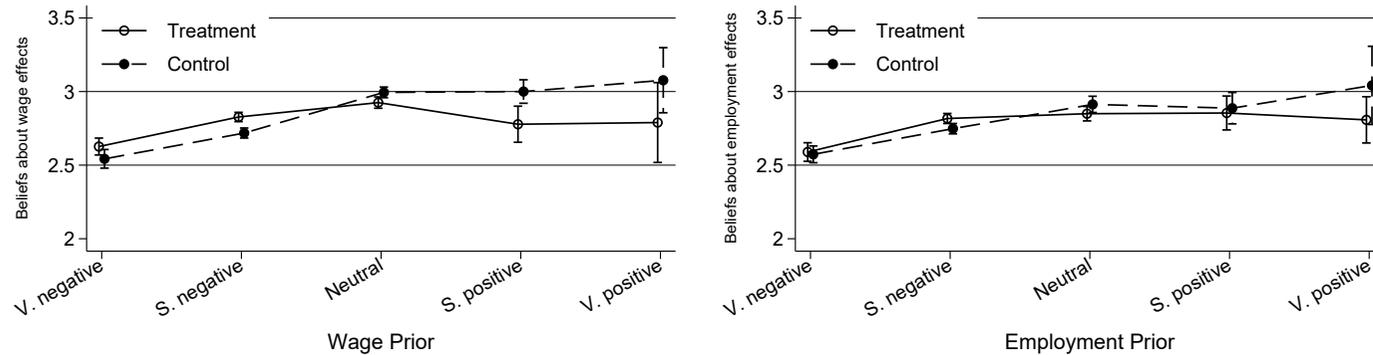
Notes: The figure shows average beliefs about the overall economic impact of low-skilled/high-skilled immigrants that are highly familiar/not familiar with American values and traditions separately for respondents from the treatment and control group. Beliefs were elicited using the following question: “When you think about all of the potential positive and negative economic effects of increasing the number of high-skilled/low-skilled immigrants that are not familiar/highly familiar with American values and traditions coming to the United States, do you think the overall effect would be positive or negative for the finances of most Americans?” The question was answered on a five point scale from 1: “The overall economic effect would be very negative for most Americans” to 5: “The overall economic effect would be very positive for most Americans.” We randomized whether respondents were asked these questions about low-skilled immigrants or high-skilled immigrants. The error bars indicate the standard error of the mean.

Figure 6: Heterogeneity in belief updating

Panel A: Heterogeneity by priors: beliefs about most Americans

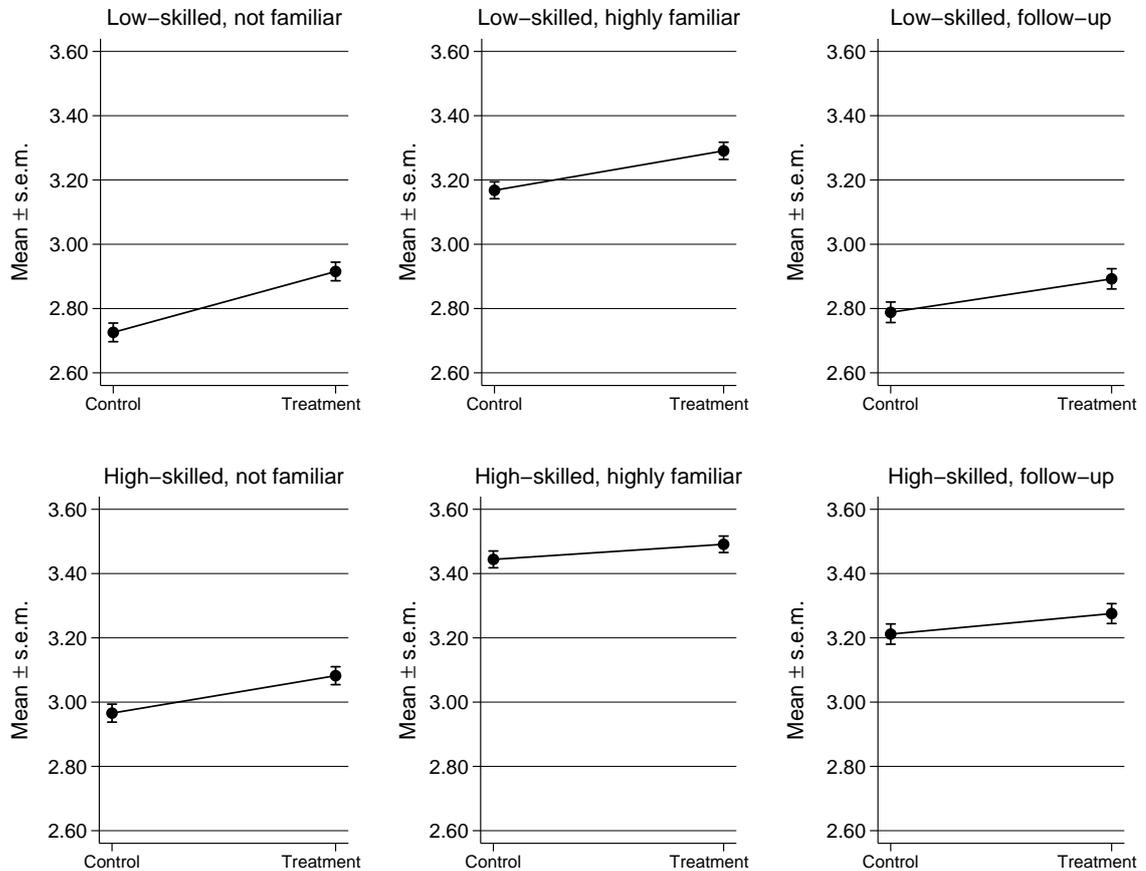


Panel B: Heterogeneity by priors: beliefs about own household



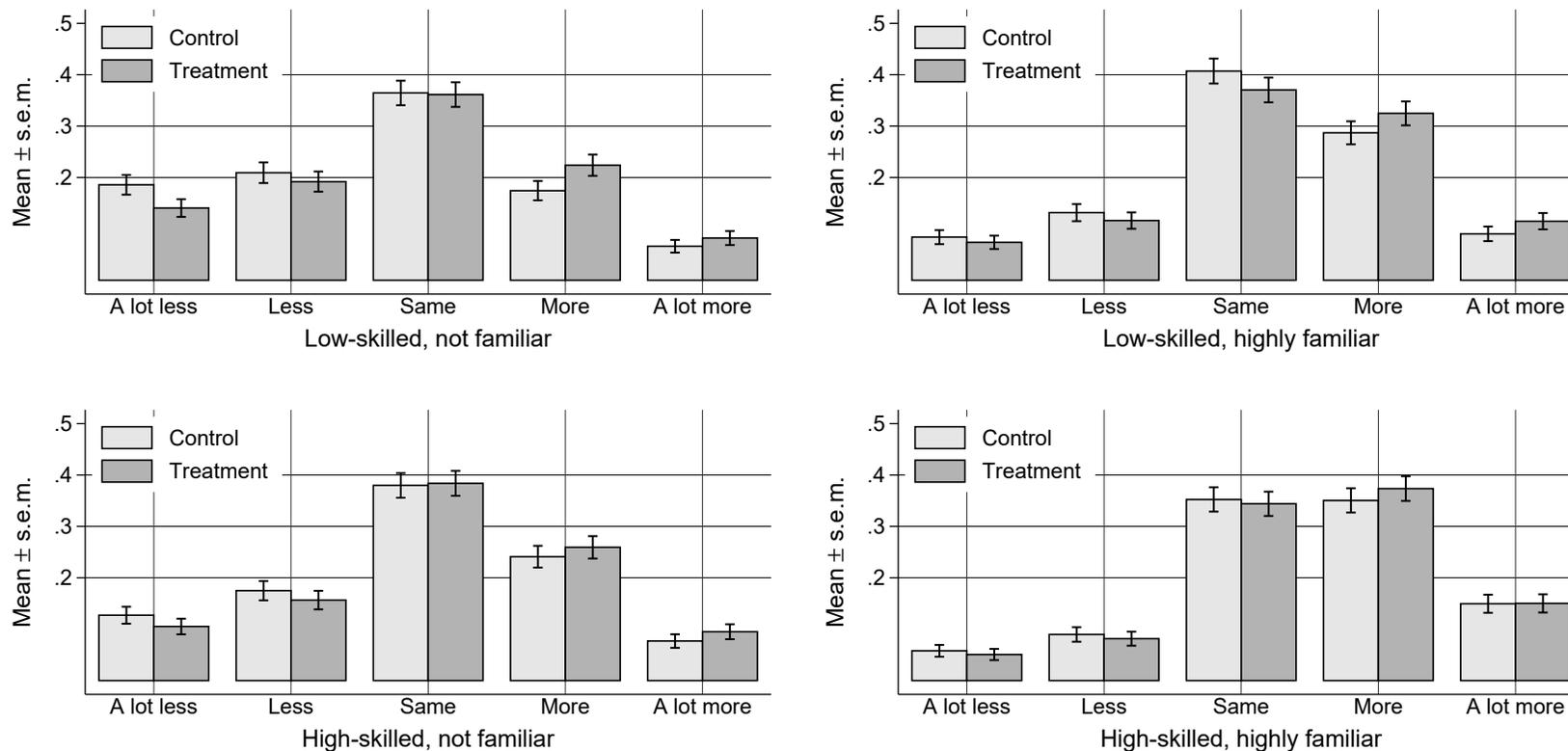
Notes: The figure shows beliefs about the wage and employment effects of low-skilled immigrants disaggregated by treatment status and pre-treatment beliefs about the Mariel boatlift. The outcomes are based on the follow questions: how do you think admitting more low-skilled immigrants would affect (i) “wages,” and (ii) “job opportunities and job security,” for their own household as well as for most Americans. The error bars indicate the standard error of the mean.

Figure 7: Post-treatment attitudes towards immigration: Treatment and control group average



Notes: The figure shows average self-reported attitudes towards low-skilled/high-skilled immigrants that are highly familiar/not familiar with American values and traditions disaggregated by the treatment and control group. The answers were given on a five point scale from 1: “allow a lot less of these immigrants” to 5: “allow a lot more of these immigrants.” The question order was randomized (statistical tests show no order effects). The error bars indicate the standard error of the mean.

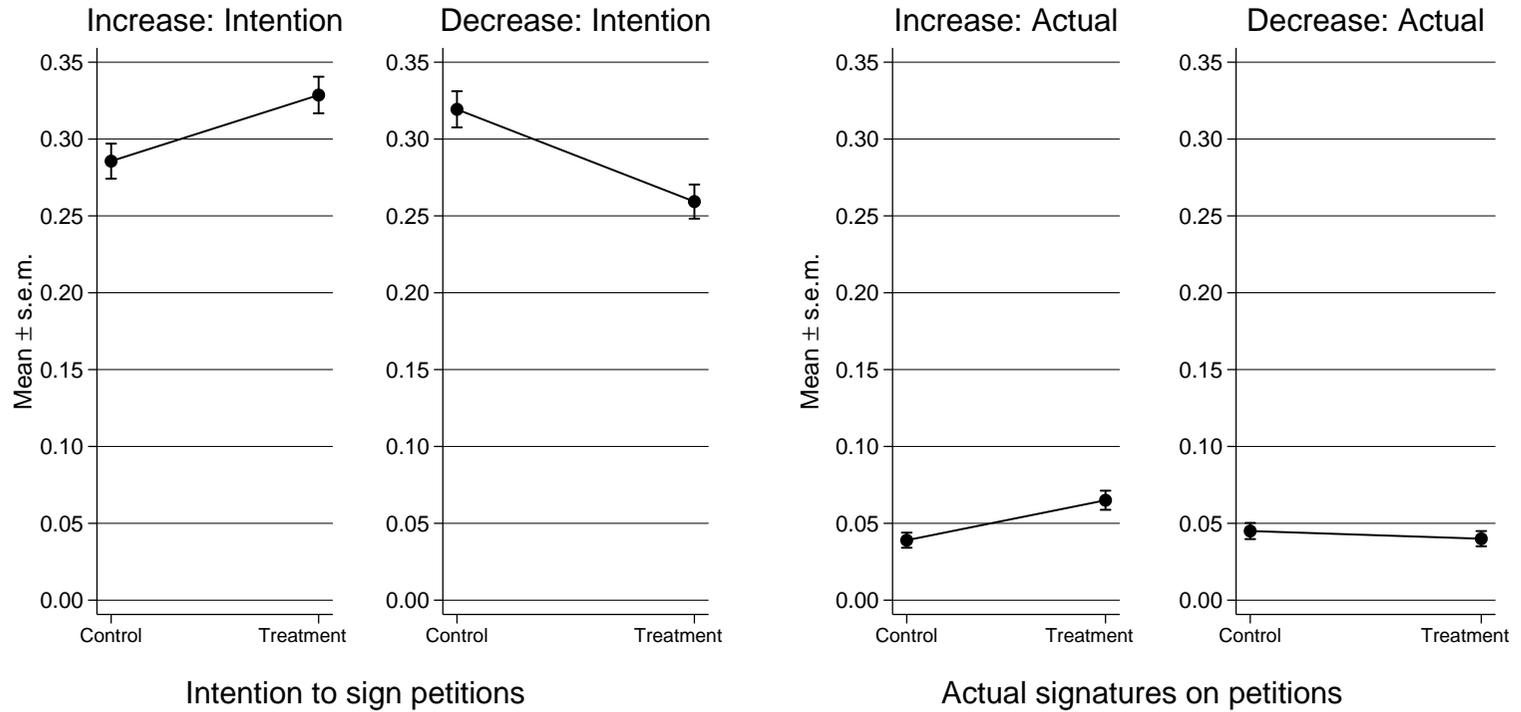
Figure 8: Post-treatment distribution of attitudes towards immigrants: Treatment vs. control



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Notes: The figure shows the distribution of attitudes towards immigrants for the treatment and control group for four types of immigrants: (i) low-skilled immigrants not familiar with American values and traditions, (ii) low-skilled immigrants highly familiar with American values and traditions, (iii) high-skilled immigrants not familiar with American values and traditions, and (iv) high-skilled immigrants highly familiar with American values and traditions. The question order was randomized (statistical tests show no order effects). The figure displays, separately for the treatment and control group, the fraction of respondents wanting “a lot less,” “less,” “the same,” “more” and “a lot more” of the four different types. The error bars indicate the standard error of the mean.

Figure 9: Signatures on the online petitions by treatment and control group



Notes: The figure shows the fraction of respondents who say that they want to sign one of the petitions suggesting to increase or decrease the annual cap on non-agricultural guest workers to the US (from 66,000 to 99,000 or 33,000, respectively) separately for the treatment and control group. The question order was randomized (statistical tests show no order effects). The error bars indicate the standard error of the mean.

Main Tables

Table 1: Beliefs about the effects of low-skilled and high-skilled (post-treatment)

	Wages		Employment		Fiscal burden		Culture
	Own household	Most Americans	Own household	Most Americans	Own household	Most Americans	
Panel A: Effect of low-skilled							
Treatment	0.039 (0.049)	0.178*** (0.046)	0.019 (0.049)	0.153*** (0.047)	0.024 (0.049)	0.032 (0.047)	0.039 (0.049)
Observations	1485	1485	1481	1481	1476	1476	1466
Panel B: Effect of high-skilled							
Treatment	0.064 (0.047)	0.187*** (0.048)	0.149*** (0.048)	0.259*** (0.048)	0.052 (0.047)	0.074 (0.047)	0.048 (0.048)
Observations	1486	1486	1480	1480	1474	1474	1459

Notes: The table shows OLS regression results where the dependent variables are beliefs about the economic and cultural impact of different types of immigrants. Respondents were asked how they thought admitting more low-skilled/high-skilled immigrants would affect (i) “wages,” (ii) “job opportunities and job security,” and (iii) “taxes” for their own household as well as for most Americans. They were also asked about how they thought admitting more low-skilled/high-skilled immigrants “would affect American culture and society as a whole.” We randomized whether respondents answered these questions for low-skilled or high-skilled immigrants. All questions were answered on 5-point Likert scales where higher values indicate more optimistic views on the effect of immigration. The outcome variables are z-scored using the mean and standard deviation in the control group. We use the same controls as described in Table 2. * p<0.1, ** p<0.05, *** p<0.01. Robust standard errors in parentheses.

Table 2: Self-reported attitudes towards immigration (post-treatment)

	Low-skilled (Main Study)			High-skilled (Main Study)			Follow-up	
	Not familiar	Familiar	Index	Not familiar	Familiar	Index	Low-skilled	High-skilled
Panel A: With controls								
Treatment	0.172*** (0.033)	0.115*** (0.034)	0.144*** (0.030)	0.106*** (0.033)	0.043 (0.034)	0.074** (0.030)	0.093** (0.040)	0.057 (0.041)
Adjusted p-value	[0.001]	[0.001]		[0.003]	[0.117]			
Observations	3130	3130	3130	3130	3130	3130	2075	2075
Panel B: Without controls								
Treatment	0.165*** (0.036)	0.118*** (0.036)	0.141*** (0.033)	0.105*** (0.036)	0.045 (0.035)	0.075** (0.032)	0.101** (0.043)	0.063 (0.043)
Adjusted p-value	[0.001]	[0.001]		[0.006]	[0.110]			
Observations	3130	3130	3130	3130	3130	3130	2075	2075

Notes: The table shows OLS regression results where the dependent variables are attitudes to the different types of immigrants. The answers were given on a five point scale from 1: “Allow a lot less of these immigrants” to 5: “Allow a lot more of these immigrants.” The question order was randomized (statistical tests show no order effects). The outcomes are z-scored using the mean and standard deviation in the control group. The indices are created by taking the mean of the responses to immigrants with different familiarity with American values and traditions for each skill level. Adjusted p-values are in brackets. “Treatment” is an indicator equal to 1 if respondents received the research evidence. Controls include gender, age, ethnicity, region, household size, household income, education, employment status, party affiliation, whether the respondent was born in the US, whether the subject’s parents were born in the US, self-perceived skill-level, and pre-treatment beliefs about the labor market impact of low-skilled (or high-skilled) immigration and are coded as described in the pre-analysis plan. * p<0.1, ** p<0.05, *** p<0.01. Robust standard errors in parentheses.

Table 3: Online petitions on H-2B visas (post-treatment)

	Intention: H2B Visas			Actual signatures H2B Visas	
	Increase	Decrease	Net support	Increase	Decrease
Panel A: With controls					
Treatment	0.045*** (0.016)	-0.057*** (0.016)	0.130*** (0.034)	– –	– –
Observations	3130	3130	3130	–	–
Panel B: Without controls					
Treatment	0.043*** (0.016)	-0.060*** (0.016)	0.134*** (0.036)	0.026*** (0.007)	-0.005 (0.007)
Control Mean	0.286	0.319	0.000	0.039	0.055
Observations	3130	3130	3130	3130	3130

Notes: The three first columns show regression results where the dependent variable is intention to sign the petitions. “Increase” (“Decrease”) is an indicator equal to 1 if a respondent wanted to sign the petition suggesting to increase (decrease) the annual cap on the H-2B visa program. “Net support” is a z-scored transformation of a variable taking value 1 (-1) if a respondent wanted to sign the petition to increase (decrease) the annual cap on the H-2B visa program and 0 otherwise. The two last columns show actual signatures. Since we only observe actual signatures on the treatment group level, we cannot include controls and run regressions for these outcomes. To do testing, we calculate standard errors using the standard formula for proportion tests. “Treatment” is an indicator equal to 1 if respondents received information about the labor market impact of the Mariel boatlift. We use the same controls as in Table 2. * p<0.1, ** p<0.05, *** p<0.01. For the questions on intention to sign the petitions, we apply robust standard errors in parentheses.

Table 4: The causal effect of labor market concerns: Subsample of respondents with pessimistic priors

	Low-skilled		High-skilled	
	Not familiar	Familiar	Not familiar	Familiar
Panel A: IV				
Economic Concerns	0.705*** (0.194)	0.629** (0.257)	1.118*** (0.365)	0.528 (0.348)
Adjusted p-value	[0.001]	[0.007]	[0.004]	[0.068]
Observations	1215	1215	1226	1228
Panel B: OLS				
Economic Concerns	0.534*** (0.024)	0.472*** (0.025)	0.546*** (0.025)	0.501*** (0.027)
Adjusted p-value	[0.001]	[0.001]	[0.001]	[0.001]
Observations	1215	1215	1226	1228

Notes: These regressions are based on the subsample of respondents who thought that the Mariel boatlift had either negative or no effects on wages and unemployment. The dependent variables are attitudes to the four different types of immigrants: (i) low-skilled immigrants not familiar with American values and traditions, (ii) low-skilled immigrants highly familiar with American values and traditions, (iii) high-skilled immigrants not familiar with American values and traditions, and (iv) high-skilled immigrants highly familiar with American values and traditions. The answers were given on a five point scale from 1: “Allow a lot less of these immigrants” to 5: “Allow a lot more of these immigrants.” “Economic Concerns” is given by the answers to the following question: “When you think about all of the potential positive and negative economic effects of increasing the number of high-skilled/low-skilled immigrants that are not familiar/highly familiar with American values and traditions coming to the United States, do you think the overall effect would be positive or negative for the finances of most Americans?” The question was answered on a five point scale from 1: “The overall economic effect would be very negative for most Americans” to 5: “The overall economic effect would be very positive for most Americans.” In Panel A, we instrument “Economic Concerns” with an indicator for whether our respondent received the research evidence. In Panel B, we run OLS regressions. We randomized whether people were asked about the impact of low-skilled or high-skilled immigrants. We use the same controls as described in Table 2. * p<0.1, ** p<0.05, *** p<0.01. Robust standard errors in parentheses.

Online Appendix: **Labor Market Concerns and Support for Immigration**

Ingar Haaland and Christopher Roth

Summary of the Online Appendix

Section A.1 provides additional descriptives on our respondents beliefs. Figure A.3 summarizes the spatial distribution of people's beliefs about the effects of the Mariel boatlift. Figure 6 shows heterogeneous updating of beliefs about the labor market effects of immigrants for the sample of people with "consistent pre-treatment beliefs". In Section A.2, Figure A.7 describe our respondents' beliefs about the survey and beliefs about the relevance, accuracy, and trustworthiness of the research evidence. Table A.2 explores how beliefs about the research study are correlated with support for immigration. Table A.3 examines how standard demographics are correlated with beliefs about the research study. Finally, Table A.1 explores the main treatment effects when controlling for people's beliefs about the political bias in the survey.

Section A.3 provides further evidence on the mechanisms, and descriptives. Table A.4 summarizes treatment effects on people's beliefs about how their own household's and most American's wages, employment, tax burden and American culture are affected by low-skilled immigration for the subsample of respondents that are currently in the labor force. Table A.6 describes correlates of people's beliefs about the labor market impact of the Mariel boatlift. Table A.7 shows correlates of people's attitudes. Table A.8 depicts the determinants of people's confidence in their beliefs about the impact of the Mariel boatlift.

Table A.10 examines how skill level correlates with attitudes towards immigrants. Table A.11 investigates whether people's beliefs are in line with the factor-proportion

model. Table A.12 examines how people's beliefs about how their own household is affected by immigration affects their support for immigration. Table A.13 examines the relative importance of self-interested vs. group-level concerns in shaping immigration preferences. Table A.14 explores the relative importance of economic vs. cultural concerns in shaping immigration preferences.

Section A.4 provides evidence on covariate balance and describes the sample. Table A.18 shows covariate balance for the main sample, while Table A.19 provides evidence on covariate balance for the sample in the follow-up study. Table A.20 provides descriptive statistics. Table A.21 examines correlates of attrition in the follow-up study.

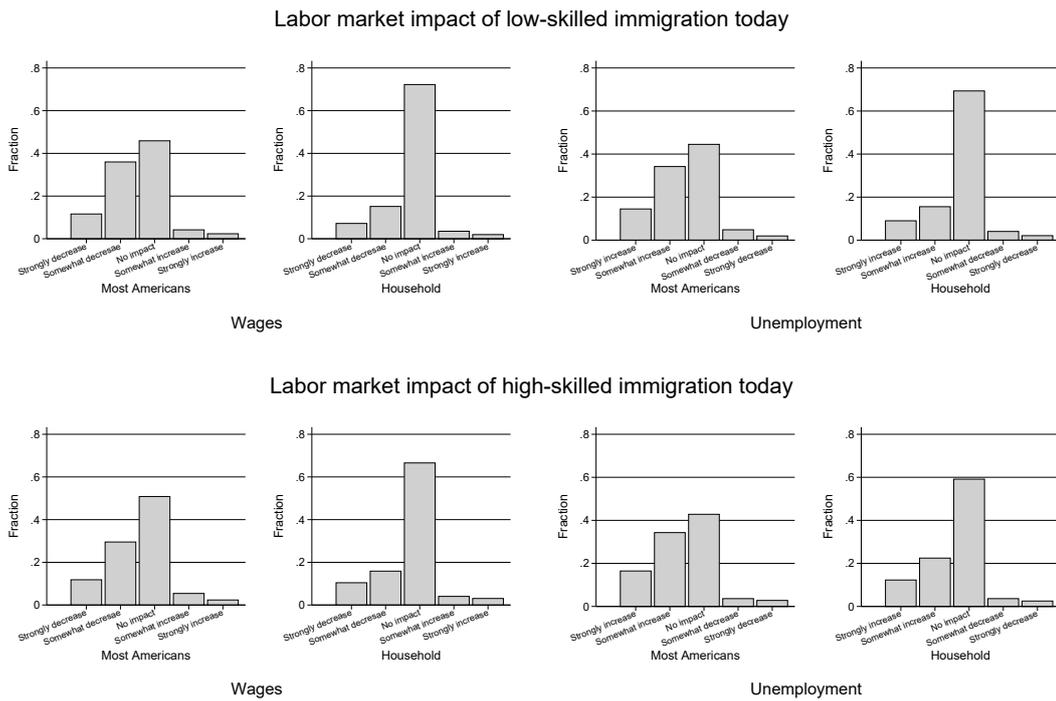
Section A.5 examines heterogeneity in treatment effects. Table A.22 explores heterogeneity for our main self-reported outcome questions by people's self-perceived skill level, their political affiliation, and their prior belief about the effect of the Mariel boatlift. Table A.23 examines heterogeneous treatment effects along these dimensions on people's intention to sign the petition, while Table A.24 examines heterogeneity using the main outcome questions in the follow-up study. Table A.26 and Table A.25 explore heterogeneous treatment effects on people's beliefs about the labor market impact of immigration.

Finally, Section B provides screenshots of the online petition, the invitation email for the follow-up study, the consent forms in the main study and the obfuscated follow-up study.

A Figures

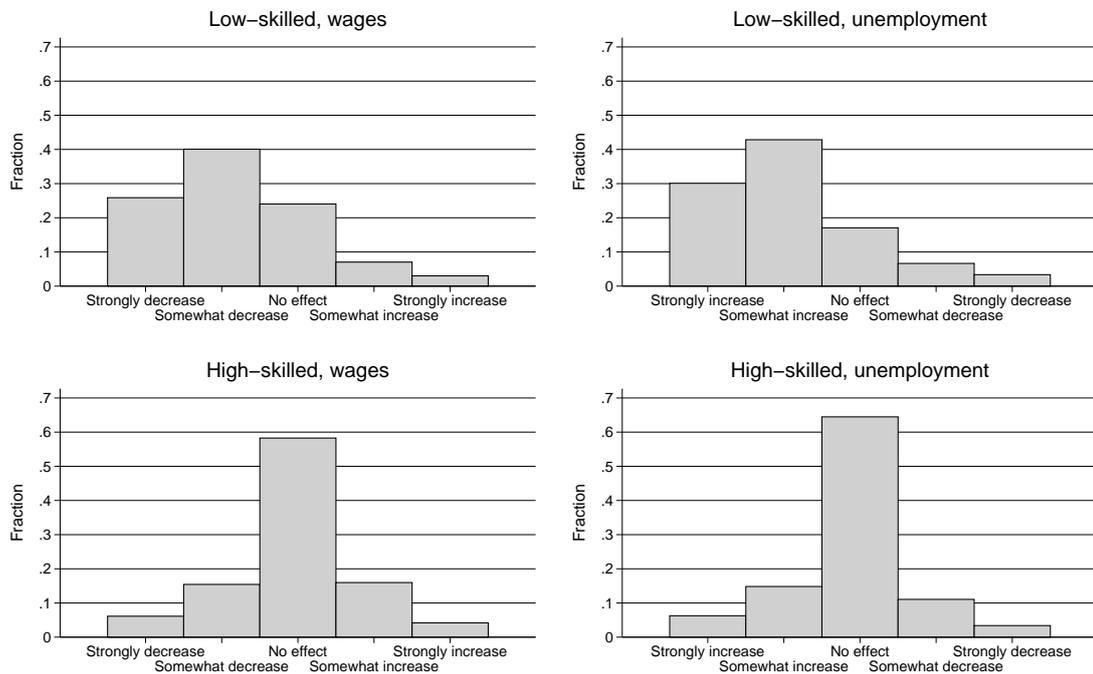
A.1 Beliefs about immigrants

Figure A.1: Control group beliefs about the labor market of impacts immigrants



Notes: The figure shows the distribution of beliefs about the labor market impacts of immigrants. Respondents were asked how they thought admitting more low-skilled/high-skilled immigrants would affect (i) “wages,” and (ii) “job opportunities and job security,” for their own household as well as for most Americans.

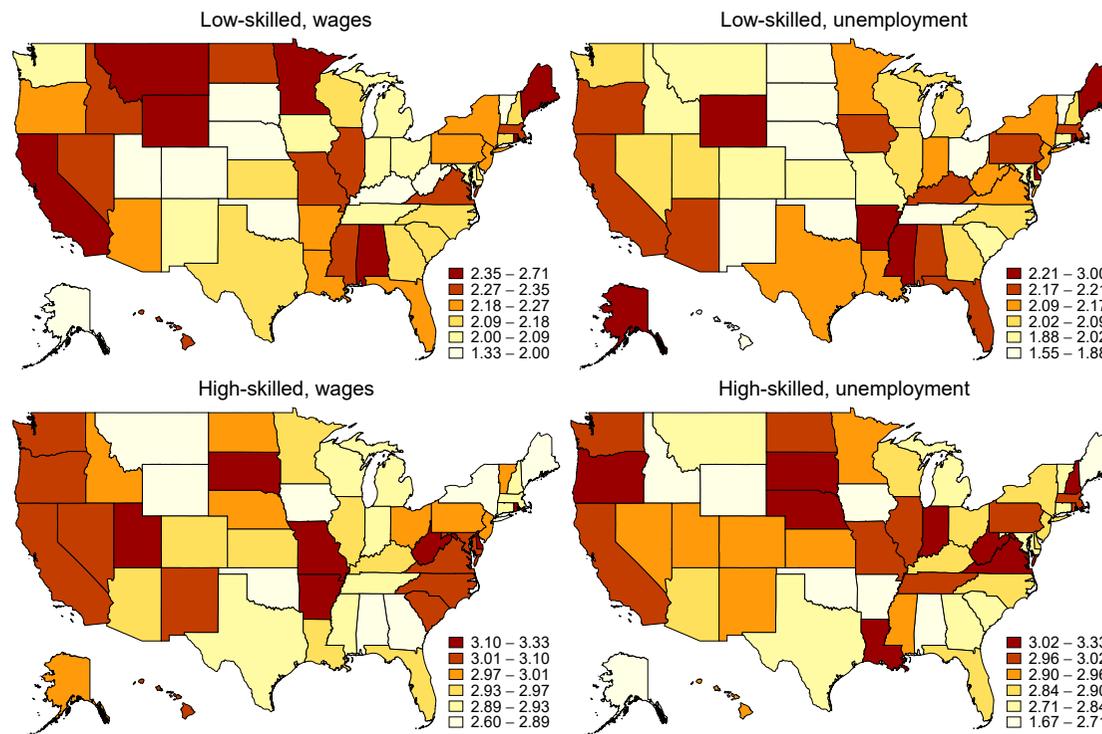
Figure A.2: Pre-treatment beliefs about the labor Market impacts of the Mariel boatlift



N=3130

Notes: The figure shows the distribution of pre-treatment beliefs about the labor market impacts of the Mariel boatlift on wages (left panels) and unemployment (right panels) for low-skilled workers (top panels) and high-skilled workers (bottom panels). Respondents are asked two questions on wages: “In the five-year period after 1980, how do you think wages of low-skilled (high-skilled) workers in Miami were affected by the mass immigration of Cubans?” The responses are on a 5 point-scale ranging from (1) strongly decrease to (5) strongly increase. On top of that respondents answer two questions on unemployment: “In the five-year period after 1980, how do you think unemployment among low-skilled (high-skilled) workers in Miami was affected by the mass immigration of Cubans?” The responses are on a 5 point-scale ranging from (1) strongly increase to (5) strongly decrease.

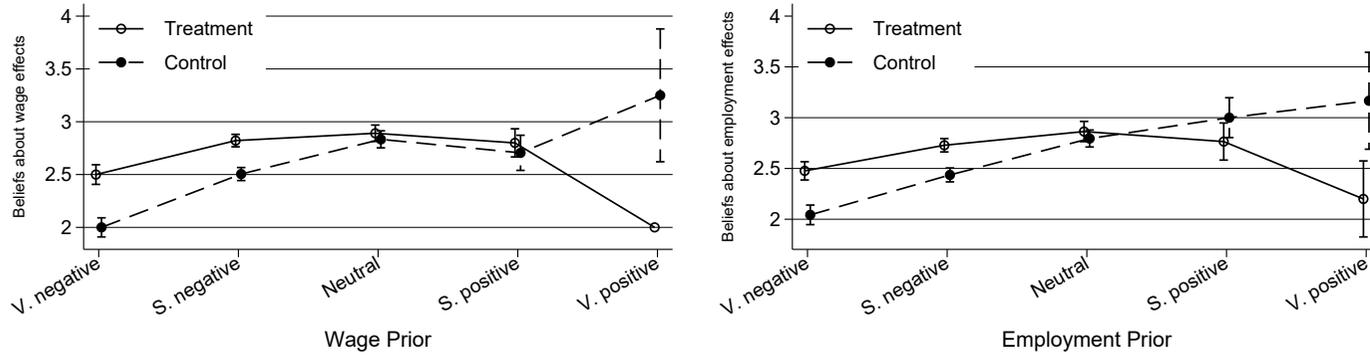
Figure A.3: Spatial distribution of pre-treatment beliefs about the labor market impact of immigration



Notes: The figure shows average pre-treatment beliefs about the labor market impact of the Mariel boatlift. For wages, beliefs were elicited on a five point scale from 1: “strongly decreased wages of low-skilled/high-skilled workers” to 5: “strongly increased wages of low-skilled/high-skilled workers.” For unemployment, beliefs were elicited on a five point scale from 1: “strongly increased unemployment among low-skilled/high-skilled workers” to 5: “strongly decreased unemployment among low-skilled/high-skilled workers.”

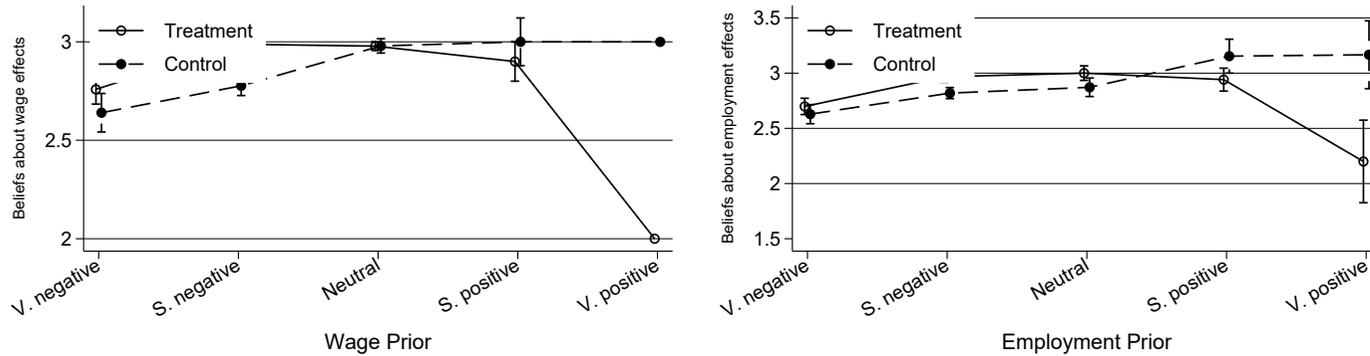
Figure A.4: Heterogeneity in belief updating for respondents with consistent priors

Panel A: Heterogeneity by priors: beliefs about most Americans



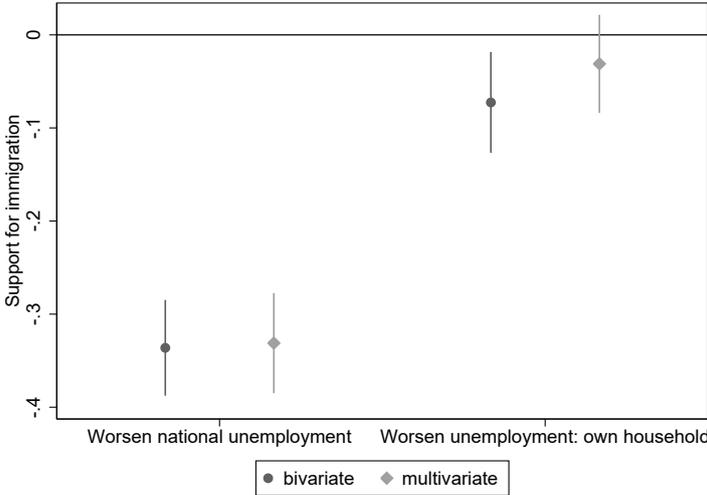
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Panel B: Heterogeneity by priors: beliefs about own household



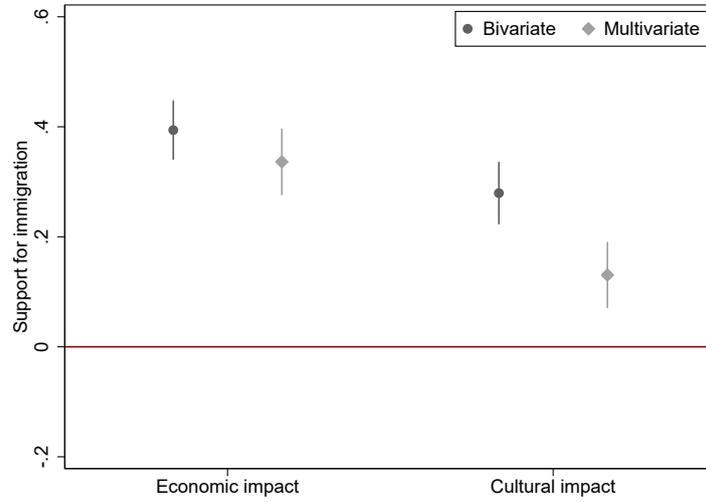
Notes: This figure uses data from respondents with consistent priors, i.e., i.e. people who do not think that unemployment will increase (decrease), while at the same time thinking that wages will decrease (increase). The figure shows beliefs about the wage and employment effects of low-skilled immigrants disaggregated by treatment status and pre-treatment beliefs about the Mariel boatlift. The outcomes are based on the follow questions: how do you think admitting more low-skilled immigrants would affect (i) “wages,” and (ii) “job opportunities and job security,” for their own household as well as for most Americans. The error bars indicate the standard error of the mean.

Figure A.5: Self-interested vs. group level concerns: General Social Survey



Notes: This figure uses data from the 2014 wave of the General Social Survey. Self-interested labor market concerns are measured with people’s answer to the following question: “What about immigrants? Is it very likely, somewhat likely, somewhat unlikely, or very unlikely that you or anyone in your family won’t get a job or promotion while an equally or less qualified immigrant employee receives one instead?” We proxy for people’s group-level labor market concerns with people’s response to the following question: “How much do you agree or disagree with each of the following statements? Immigrants take jobs away from people who were born in America.”

Figure A.6: Economic versus cultural concerns: General Social Survey



Notes: This figure uses data from the 2014 wave of the General Social Survey. Economic concerns is defined by people’s agreement to the following statement: “Immigrants take jobs away from people who were born in America”. Economic concerns is defined by people’s agreement to the following statement: (ii) “American culture is generally undermined by immigrants.”

A.2 Beliefs about the survey and the research evidence

We collected additional data to further understand mechanisms and to assess robustness. To further test for the validity of our evidence, we asked our respondents a series of questions about our experiment, which are summarized in Figure A.7. First, we tested whether our respondents thought that the survey was politically biased. 65 percent of our respondents thought that the survey was not politically biased, 23 percent thought that it was left-wing biased, while the remaining 13 percent perceived the survey as right-wing biased. We also examined whether people's perceptions of bias are correlated with people's responses to the survey, but find only weak correlations with our measures of attitudes towards immigration. People who think that the survey is more right-wing biased display more positive attitudes towards immigration. Also, including our subjective measure of political bias as an additional control variable in the regressions, leaves the results virtually unchanged. These results are displayed in Table A.1.

We asked all of our respondents whether Cuban immigrants who came to Miami were mostly high-skilled or low-skilled in order to test whether our respondents paid attention to the instructions in the belief elicitation. We find that 77.6 percent of respondents correctly remembered that most Cuban immigrants who arrived in Miami were low-skilled.¹ This underlines that most of our respondents actually paid attention to the belief elicitation.

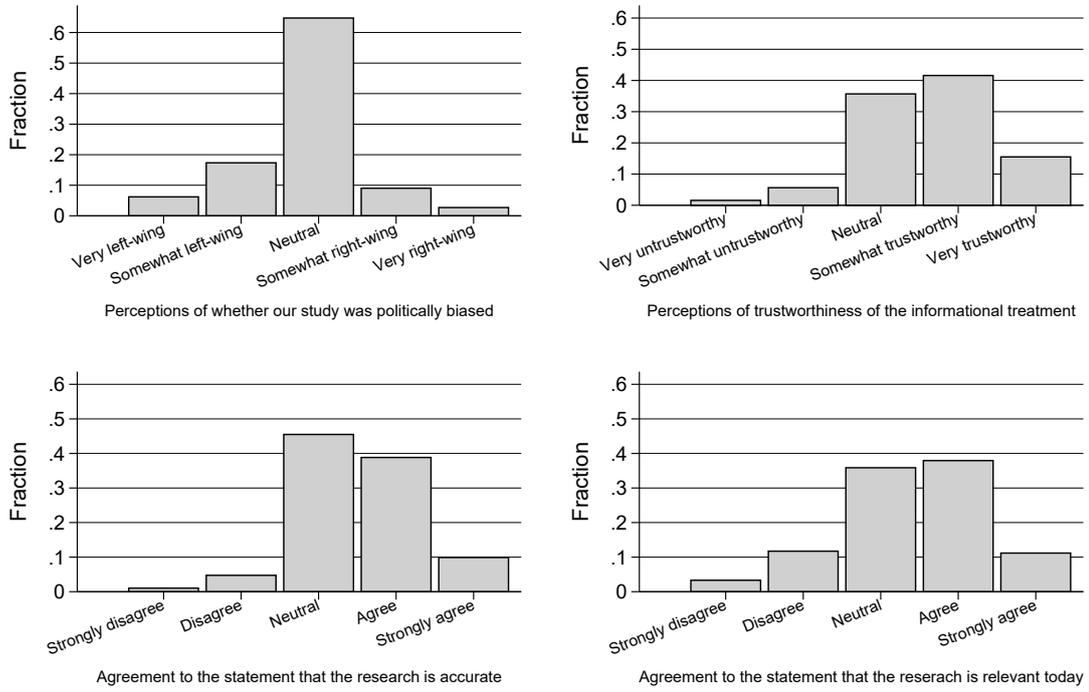
¹76.7 of our respondents thought that most Cuban immigrants who arrived in Miami in 1980 were not familiar with American values rather than highly familiar with American values.

To shed light on mechanisms, we collected rich data among respondents in the treatment group to measure their perception of the research evidence. We first examine to what extent our respondents trusted in the information we presented them with. 57 percent of the respondents deemed the research evidence to be “fully trustworthy” or “somewhat trustworthy.” 35 percent of the respondents considered the information to be “neither trustworthy nor untrustworthy,” while the remaining 7 percent of the respondents deemed the research evidence to be “untrustworthy.” This suggests that a large fraction of our respondents perceives the research evidence as trustworthy.

49 percent of the respondents “agree” or “strongly agree” that the research evidence about the Mariel boatlift was relevant for “assessing the costs and benefit of allowing more or less immigrants into the US today,” while 15 percent “disagree” or “strongly disagree” to this. The remaining 36 percent of the respondents answered that they “neither agree nor disagree” to this. 49 percent of respondents agreed that the research evidence “accurately reflects the labor market effects of the mass immigration of Cubans to Miami in 1980,” while 5 percent disagreed with this.

Table A.2 shows that beliefs about the internal and external validity of the study as well as people’s beliefs about the trustworthiness of the study are strongly correlated with attitudes towards immigrants in the expected direction: people more skeptical of the research evidence display lower support for immigration conditional on a large set of control variables. Table A.3 examines the correlates of trust in the information provided, as well as beliefs about the internal and external validity of the research evidence provided among respondents in the treatment group. Republicans, Independents and older respondents display significantly lower levels of trust in the research evidence, lower agreement that the study is externally valid, and that the study is accurate. Surprisingly, education is not correlated with any of these beliefs.

Figure A.7: Beliefs about the survey and the research evidence



Notes: The figure displays results on a question measuring people’s perception of the trustworthiness in the research evidence. The figure shows the fraction of respondents who think that the survey was (1) very untrustworthy, (2) untrustworthy, (3) neither untrustworthy nor trustworthy, (4) trustworthy, and (5) very trustworthy.

Table A.1: Self-reported attitudes towards immigration: controlling for beliefs about political bias

	Low-skilled			High-skilled		
	Not familiar	Familiar	Index	Not familiar	Familiar	Index
Panel A: With controls						
Treatment	0.162*** (0.037)	0.117*** (0.037)	0.140*** (0.034)	0.103*** (0.037)	0.042 (0.036)	0.073** (0.033)
Political Bias	0.072** (0.028)	0.001 (0.029)	0.037 (0.027)	0.030 (0.028)	-0.004 (0.028)	0.013 (0.026)
Observations	3130	3130	3130	3130	3130	3130
Panel B: Without controls						
Treatment	0.162*** (0.037)	0.117*** (0.037)	0.140*** (0.034)	0.103*** (0.037)	0.042 (0.036)	0.073** (0.033)
Political Bias	0.072** (0.028)	0.001 (0.029)	0.037 (0.027)	0.030 (0.028)	-0.004 (0.028)	0.013 (0.026)
Observations	3130	3130	3130	3130	3130	3130

Notes: The table shows OLS regression results where the dependent variables are attitudes to the four different types of immigrants: (i) low-skilled immigrants not familiar with American values and traditions, (ii) low-skilled immigrants highly familiar with American values and traditions, (iii) high-skilled immigrants not familiar with American values and traditions, and (iv) high-skilled immigrants highly familiar with American values and traditions. The answers were given on a five point scale from 1: “Allow a lot less of these immigrants” to 5: “Allow a lot more of these immigrants.” The question order was randomized (statistical tests show no order effects). The outcomes are z-scored using the mean and standard deviation in the control group. The indices are created by taking the mean of the responses to immigrants with different familiarity with American values and traditions for each skill level. “Treatment” is an indicator equal to 1 if respondents received the research evidence. “Political bias is a question with a 5-point scale: (1) very left-wing-biased, (2) somewhat left-wing biased, (3) neither left-wing nor right-wing biased, (4) somewhat right-wing biased, and (5) very right-wing biased. We use the same controls as described in Table 2. * p<0.1, ** p<0.05, *** p<0.01. Robust standard errors in parentheses.

Table A.2: Beliefs about the research study and attitudes towards immigrants

	Index: Attitudes towards	
	low-skilled immigrants	high-skilled immigrants
Info: trustworthy	0.178*** (0.036)	0.169*** (0.037)
Study: internally valid	0.075* (0.040)	0.060 (0.041)
Study: externally valid	0.169*** (0.028)	0.146*** (0.028)
Observations	1448	1448

Notes: This table uses data from respondents in the treatment group. The table shows OLS regression results where the dependent variables are indices of attitudes towards low-skilled and high-skilled immigrants. The index on low-skilled immigrants is based on the following two types of immigrants: (i) low-skilled immigrants not familiar with American values and traditions, (ii) low-skilled immigrants highly familiar with American values and traditions. The index on high-skilled immigrants is based on the following two types of immigrants: (iii) high-skilled immigrants not familiar with American values and traditions, and (iv) high-skilled immigrants highly familiar with American values and traditions. The answers were given on a five point scale from 1: “Allow a lot less of these immigrants” to 5: “Allow a lot more of these immigrants.” The question order was randomized (statistical tests show no order effects). The outcomes are z-scored using the mean and standard deviation in the control group. The main independent variables in this regressions are people’s assessment of whether the research evidence we provided them with is (i) trustworthy, (ii) reflective of the actual labor market impacts of the Mariel boatlift, and (iii) relevant for assessing the costs and benefits of allowing more or less immigrants into the US today. The questions were asked on 5-point Likert scales, where higher values indicate more positive views on the research evidence. We use the same controls as described in Table 2. * p<0.1, ** p<0.05, *** p<0.01. Robust standard errors in parentheses.

Table A.3: Correlates of beliefs about the research study

	The information is	The research study is	
	trustworthy	internally valid	externally valid
Republican	-0.379*** (0.059)	-0.354*** (0.053)	-0.477*** (0.064)
Independent	-0.303*** (0.052)	-0.266*** (0.046)	-0.362*** (0.055)
Age	-0.004** (0.002)	-0.004*** (0.002)	-0.007*** (0.002)
Log(Income)	-0.006 (0.030)	-0.015 (0.028)	0.006 (0.033)
High-skilled	0.086 (0.059)	0.075 (0.053)	0.052 (0.062)
Employed Full-Time	-0.123* (0.063)	-0.039 (0.056)	-0.069 (0.068)
Employed Part-Time	-0.128 (0.089)	-0.125 (0.079)	-0.079 (0.092)
Unemployed	-0.251** (0.114)	-0.117 (0.115)	-0.084 (0.126)
Self-Employed	-0.207* (0.123)	-0.178* (0.105)	-0.271** (0.124)
Student	-0.051 (0.155)	-0.030 (0.154)	0.054 (0.156)
High Education	-0.052 (0.087)	-0.031 (0.079)	-0.031 (0.090)
Male	0.015 (0.045)	0.038 (0.041)	0.024 (0.050)
Observations	1455	1453	1448

Notes: This table uses data from respondents in the treatment group. The main dependent variables in this regressions are people's assessment of whether the research evidence we provided them with is (i) trustworthy, (ii) reflective of the actual labor market impacts of the Mariel boatlift, and (iii) relevant for assessing the costs and benefits of allowing more or less immigrants into the US today. The questions were asked on 5-point likert scales, where higher values indicate more positive views on the research evidence. * p<0.1, ** p<0.05, *** p<0.01. Robust standard errors in parentheses.

A.3 Additional tables

Table A.4: Mechanisms: Effects of low-skilled and high-skilled: Sample of people in the labor force

	Wages		Employment		Fiscal burden		Culture
	Own household	Most Americans	Own household	Most Americans	Own household	Most Americans	
Panel A: Effect of low-skilled							
Treatment	0.024 (0.062)	0.149*** (0.056)	0.020 (0.061)	0.112* (0.058)	0.017 (0.060)	0.000 (0.058)	0.029 (0.060)
Observations	1067	1067	1062	1062	1057	1057	1047
Panel B: Effect of high-skilled							
Treatment	0.084 (0.060)	0.180*** (0.058)	0.172*** (0.061)	0.233*** (0.058)	0.061 (0.057)	0.071 (0.057)	0.039 (0.058)
Observations	1078	1078	1073	1073	1067	1067	1052

Notes: The table shows OLS regression results for the subsample of our respondents that are in the labor force. The dependent variables are beliefs about the economic impact of low-skilled and high-skilled immigrants. Respondents were asked how they thought admitting more low-skilled/high-skilled immigrants would affect (i) “wages,” (ii) “job opportunities and job security,” and (iii) “taxes” for their own household as well as for most Americans. We randomized whether respondents answered these questions with respect to low-skilled or high-skilled immigrants. All questions were answered on 5-point Likert scales where higher values indicate more optimistic views regarding the effect of immigration. The outcome variables are z-scored using the mean and standard deviation in the control group. All regressions include controls as described in the pre-analysis plan, but the results are not sensitive to the inclusion of controls. * p<0.1, ** p<0.05, *** p<0.01. Robust standard errors in parentheses.

Table A.5: Beliefs about the impact of immigrants and the Republican–Democrat Gap

	Low-skilled Index			High-skilled Index		
Republican	-0.683*** (0.082)	-0.331*** (0.072)	-0.297*** (0.072)	-0.563*** (0.088)	-0.276*** (0.078)	-0.186** (0.079)
Beliefs: overall economic impact		0.568*** (0.038)	0.552*** (0.042)		0.466*** (0.044)	0.385*** (0.050)
Beliefs: overall cultural impact			0.068* (0.038)			0.205*** (0.047)

Notes: This table shows regression results using respondents from the control group who are not Independents. In columns (1) to (3) the outcome variable is an index of support for low-skilled immigration. In columns (4) to (6) the outcome variable is an index of support for high-skilled immigration. Republican takes value 1 for respondents who self-identify as Republican. “Beliefs: overall economic impact” is a z-scored variable on a 5-point scale and takes higher values for respondents with more optimistic beliefs about the economic impact of immigration. “Beliefs: overall cultural impact” is a z-scored variable on a 5-point scale and takes higher values for respondents with more optimistic beliefs about the cultural impact of immigration.

Table A.6: Correlates of beliefs about the impacts of the Mariel boatlift

	Effects on Low-skilled		Effect on High-skilled	
	Wages	Unemployment	Wages	Unemployment
Republican	-0.218*** (0.046)	-0.234*** (0.046)	-0.123*** (0.047)	-0.158*** (0.047)
Independent	-0.066 (0.042)	-0.049 (0.042)	0.010 (0.041)	0.051 (0.041)
Age	0.000 (0.001)	-0.004*** (0.001)	0.001 (0.001)	0.001 (0.001)
Log(Income)	-0.014 (0.025)	0.014 (0.025)	0.140*** (0.025)	0.120*** (0.026)
High-skilled	-0.023 (0.049)	-0.067 (0.048)	-0.167*** (0.048)	-0.143*** (0.047)
Employed Full-Time	-0.027 (0.051)	-0.082 (0.051)	-0.181*** (0.051)	-0.147*** (0.051)
Employed Part-Time	0.068 (0.072)	0.173** (0.079)	0.008 (0.072)	-0.039 (0.068)
Unemployed	0.013 (0.106)	0.098 (0.101)	0.012 (0.109)	-0.129 (0.102)
Self-Employed	0.002 (0.084)	-0.008 (0.091)	-0.188** (0.085)	-0.096 (0.082)
Student	0.061 (0.125)	-0.044 (0.125)	0.156 (0.138)	0.241* (0.142)
High Education	-0.254*** (0.073)	-0.132* (0.072)	-0.040 (0.075)	-0.032 (0.075)
Male	-0.047 (0.037)	-0.015 (0.037)	-0.071* (0.037)	-0.020 (0.037)
Share of immigrants zip code	0.450*** (0.144)	0.284** (0.135)	-0.071 (0.139)	-0.007 (0.136)
Observations	3130	3130	3130	3130

Notes: The outcome variables are people's pre-treatment beliefs about the effect of the Mariel boatlift on wages and unemployment of low-skilled incumbent workers and high-skilled incumbent workers. All questions were answered on 5-point Likert scales where higher values indicate more optimistic views regarding the effect of immigration. The outcome variables are z-scored using the mean and standard deviation in the control group. * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$. Robust standard errors in parentheses.

Table A.7: Correlates of attitudes towards immigrants

	Low-skilled		High-skilled	
	Not familiar	Familiar	Not familiar	Familiar
Republican	-0.595*** (0.067)	-0.691*** (0.063)	-0.435*** (0.068)	-0.716*** (0.064)
Independent	-0.232*** (0.055)	-0.321*** (0.055)	-0.179*** (0.056)	-0.310*** (0.055)
Age	-0.009*** (0.002)	-0.011*** (0.002)	-0.009*** (0.002)	-0.010*** (0.002)
Log(Income)	0.060* (0.035)	-0.008 (0.034)	0.062* (0.035)	0.049 (0.033)
High-skilled	0.155** (0.065)	0.165** (0.064)	0.118* (0.065)	0.102 (0.063)
Employed Full-Time	0.021 (0.072)	0.049 (0.069)	-0.084 (0.073)	-0.027 (0.068)
Employed Part-Time	0.052 (0.107)	0.145 (0.102)	-0.078 (0.105)	0.006 (0.101)
Unemployed	0.010 (0.144)	0.187 (0.129)	-0.099 (0.142)	0.081 (0.140)
Self-Employed	-0.146 (0.115)	-0.088 (0.103)	-0.236** (0.119)	-0.030 (0.107)
Student	-0.062 (0.156)	0.021 (0.164)	0.023 (0.144)	0.186 (0.161)
High Education	-0.023 (0.097)	-0.050 (0.094)	-0.002 (0.097)	-0.048 (0.094)
Male	-0.047 (0.051)	-0.016 (0.049)	0.120** (0.051)	0.081* (0.049)
Share of immigrants zip code	-0.117 (0.177)	0.050 (0.168)	-0.179 (0.175)	0.007 (0.169)
Observations	1567	1567	1567	1567

Notes: This table uses data from respondents in the control group. The table shows OLS regression results where the dependent variables are attitudes to the four different types of immigrants: (i) low-skilled immigrants not familiar with American values and traditions, (ii) low-skilled immigrants highly familiar with American values and traditions, (iii) high-skilled immigrants not familiar with American values and traditions, and (iv) high-skilled immigrants highly familiar with American values and traditions. The answers were given on a five point scale from 1: “Allow a lot less of these immigrants” to 5: “Allow a lot more of these immigrants.” The question order was randomized (statistical tests show no order effects). The outcomes are z-scored using the mean and standard deviation in the control group. * p<0.1, ** p<0.05, *** p<0.01. Robust standard errors in parentheses.

Table A.8: Correlates of confidence in beliefs about the impacts of the Mariel boatlift

	Confidence: Effects on Low-skilled		Confidence: Effect on High-skilled	
	Wages	Unemployment	Wages	Unemployment
Republican	0.182*** (0.044)	0.255*** (0.044)	0.110** (0.045)	0.167*** (0.045)
Independent	-0.070* (0.041)	-0.054 (0.041)	-0.070* (0.041)	-0.057 (0.041)
Age	-0.005*** (0.001)	-0.003** (0.001)	0.000 (0.001)	-0.001 (0.001)
Log(Income)	-0.068*** (0.023)	-0.066*** (0.024)	-0.075*** (0.024)	-0.082*** (0.024)
High-skilled	0.291*** (0.045)	0.215*** (0.046)	0.348*** (0.045)	0.296*** (0.046)
Employed Full-Time	0.134*** (0.051)	0.137*** (0.052)	0.117** (0.050)	0.062 (0.051)
Employed Part-Time	-0.035 (0.071)	-0.071 (0.075)	-0.068 (0.074)	-0.107 (0.075)
Unemployed	0.013 (0.096)	0.050 (0.099)	-0.042 (0.098)	0.004 (0.101)
Self-Employed	0.093 (0.085)	0.122 (0.085)	0.099 (0.086)	0.136 (0.086)
Student	0.081 (0.114)	0.174 (0.113)	0.137 (0.118)	0.175 (0.112)
High Education	0.069 (0.070)	0.075 (0.070)	-0.028 (0.070)	0.052 (0.071)
Male	0.137*** (0.036)	0.140*** (0.036)	0.140*** (0.036)	0.126*** (0.036)
Share of immigrants zip code	0.540*** (0.121)	0.450*** (0.119)	0.582*** (0.120)	0.390*** (0.124)
Observations	3130	3130	3130	3130

Notes: The outcome variables are people's assessment of their confidence in their beliefs about the effect of the Mariel boatlift on wages and unemployment of low-skilled incumbent workers and high-skilled incumbent workers. All questions were answered on 5-point Likert scales where higher values indicate more confidence in the prior belief. The outcome variables are z-scored using the mean and standard deviation in the control group. * p<0.1, ** p<0.05, *** p<0.01. Robust standard errors in parentheses.

Table A.9: The causal effect of labor market concerns

	Low-skilled		High-skilled	
	Not familiar	Familiar	Not familiar	Familiar
Panel A: IV				
Economic Concerns	0.713*** (0.186)	0.614** (0.248)	0.827*** (0.289)	0.301 (0.342)
Adjusted p-value	[0.001]	[0.006]	[0.008]	[0.232]
Observations	1466	1466	1460	1462
Panel B: OLS				
Economic Concerns	0.520*** (0.022)	0.451*** (0.024)	0.500*** (0.023)	0.462*** (0.024)
Adjusted p-value	[0.001]	[0.001]	[0.001]	[0.001]
Observations	1466	1466	1460	1462

Notes: The dependent variables are attitudes to the four different types of immigrants: (i) low-skilled immigrants not familiar with American values and traditions, (ii) low-skilled immigrants highly familiar with American values and traditions, (iii) high-skilled immigrants not familiar with American values and traditions, and (iv) high-skilled immigrants highly familiar with American values and traditions. The answers were given on a five point scale from 1: “Allow a lot less of these immigrants” to 5: “Allow a lot more of these immigrants.” “Economic Concerns” is given by the answers to the following question: “When you think about all of the potential positive and negative economic effects of increasing the number of high-skilled/low-skilled immigrants that are not familiar/highly familiar with American values and traditions coming to the United States, do you think the overall effect would be positive or negative for the finances of most Americans?” The question was answered on a five point scale from 1: “The overall economic effect would be very negative for most Americans” to 5: “The overall economic effect would be very positive for most Americans.” In Panel A we instrument “Economic Concerns” with an indicator for whether our respondent received the research evidence. In Panel B we run OLS regressions. We randomized whether people were asked about the impact of low-skilled or high-skilled immigrants. We use the same controls as described in Table 2. * p<0.1, ** p<0.05, *** p<0.01. Robust standard errors in parentheses.

Table A.10: Stylized facts: Attitudes towards immigrants by self-perceived skill level and objective skill-level

	Low-skilled		High-skilled	
	Not familiar	Familiar	Not familiar	Familiar
Panel A:				
High skilled	0.199*** (0.069)	0.194*** (0.060)	0.135** (0.060)	0.186*** (0.062)
Panel B:				
Higher Education	0.003 (0.036)	0.087*** (0.031)	0.050 (0.031)	0.102*** (0.032)
Observations	1463	1463	1463	1463

Notes: This table uses data from respondents in the control group. The table shows OLS regression results where the dependent variables are attitudes to the four different types of immigrants: (i) low-skilled immigrants not familiar with American values and traditions, (ii) low-skilled immigrants highly familiar with American values and traditions, (iii) high-skilled immigrants not familiar with American values and traditions, and (iv) high-skilled immigrants highly familiar with American values and traditions. The answers were given on a five point scale from 1: “Allow a lot less of these immigrants” to 5: “Allow a lot more of these immigrants.” The question order was randomized (statistical tests show no order effects). The outcomes are z-scored using the mean and standard deviation in the control group. “High-skilled” takes value one for respondents who self-categorize as high-skilled, and zero otherwise. “Higher Education” takes value 1 for people who dropped out of high-school, 2 for people who completed at most high school, 3 for people who completed at least some college and 4 for people who at least finished a bachelor’s degree. We use the same controls as described in Table 2. * p<0.1, ** p<0.05, *** p<0.01. Robust standard errors in parentheses.

Table A.11: Stylized facts: Beliefs about the impact of high and low-skilled immigrants on own household by self-perceived skill level and objective skill-level

	Low-skilled immigrants		High-skilled Immigrants	
	own wages	own employment	own wages	own employment
Panel A:				
High skilled	0.018 (0.086)	0.190** (0.086)	-0.169** (0.084)	-0.105 (0.084)
Panel B:				
Higher Education	0.140*** (0.042)	0.166*** (0.042)	0.005 (0.045)	-0.040 (0.045)
Observations	755	755	708	708

Notes: This table uses data from respondents in the control group. The dependent variables are beliefs about the economic impact of low-skilled and high-skilled immigrants on people’s own household. Respondents were asked how they thought admitting more low-skilled/high-skilled immigrants would affect (i) “wages,” (ii) “job opportunities and job security,” and (iii) “taxes” of their own household. We randomized whether respondents answered these questions with respect to low-skilled or high-skilled immigrants. All questions were answered on 5-point Likert scales where higher values indicate more optimistic views regarding the effect of immigration. The outcome variables are z-scored using the mean and standard deviation in the control group. All regressions include controls as described in the pre-analysis plan, but the results are not sensitive to the inclusion of controls. * p<0.1, ** p<0.05, *** p<0.01. Robust standard errors in parentheses.

Table A.12: Self-interested labor market concerns and immigration preferences

	Low-skilled		High-skilled	
	Not familiar	Familiar	Not familiar	Familiar
Effect of immigrants on own household's wage	0.077 (0.068)	0.115* (0.067)	0.067 (0.055)	0.115** (0.056)
Effect of immigrants on own household's employment	0.103 (0.063)	0.072 (0.062)	0.284*** (0.053)	0.246*** (0.054)
Observations	770	770	720	720

Notes: This table uses data from respondents in the control group. The table shows OLS regression results where the dependent variables are attitudes to the four different types of immigrants: (i) low-skilled immigrants not familiar with American values and traditions, (ii) low-skilled immigrants highly familiar with American values and traditions, (iii) high-skilled immigrants not familiar with American values and traditions, and (iv) high-skilled immigrants highly familiar with American values and traditions. The answers were given on a five point scale from 1: “Allow a lot less of these immigrants” to 5: “Allow a lot more of these immigrants.” The question order was randomized (statistical tests show no order effects). The outcomes are z-scored using the mean and standard deviation in the control group. The independent variables are beliefs about the impact of low-skilled and high-skilled immigrants on the wages and employment of people’s own household. All questions were answered on 5-point Likert scales where higher values indicate more optimistic views regarding the effect of immigration. We use the same controls as described in Table 2. * p<0.1, ** p<0.05, *** p<0.01. Robust standard errors in parentheses.

Table A.13: Self-interested labor market concerns vs. group-level labor market concerns

	Low-skilled		High-skilled		Low-skilled		High-skilled	
	Not familiar	Familiar	Not familiar	Familiar	Not familiar	Familiar	Not familiar	Familiar
Effect of immigrants on own household's wage	-0.108 (0.067)	-0.011 (0.070)	-0.065 (0.061)	0.008 (0.063)	-0.109* (0.065)	-0.008 (0.068)	-0.079 (0.059)	-0.008 (0.061)
Effect of immigrants on most Americans' wages	0.247*** (0.058)	0.156*** (0.060)	0.136** (0.057)	0.127** (0.059)	0.203*** (0.057)	0.113* (0.060)	0.052 (0.056)	0.048 (0.058)
Effect of immigrants on own household's employment	-0.139** (0.063)	-0.129** (0.065)	0.103* (0.061)	0.102 (0.062)	-0.178*** (0.061)	-0.162** (0.064)	0.067 (0.059)	0.076 (0.061)
Effect of immigrants on most Americans' employment	0.363*** (0.054)	0.287*** (0.056)	0.259*** (0.055)	0.193*** (0.057)	0.294*** (0.053)	0.236*** (0.056)	0.210*** (0.054)	0.148*** (0.056)
Effect of immigrants on culture					0.244*** (0.036)	0.200*** (0.038)	0.284*** (0.037)	0.264*** (0.038)
Observations	767	767	718	718	767	767	718	718

Notes: This table uses data from respondents in the control group. The table shows OLS regression results where the dependent variables are attitudes to the four different types of immigrants: (i) low-skilled immigrants not familiar with American values and traditions, (ii) low-skilled immigrants highly familiar with American values and traditions, (iii) high-skilled immigrants not familiar with American values and traditions, and (iv) high-skilled immigrants highly familiar with American values and traditions. The answers were given on a five point scale from 1: "Allow a lot less of these immigrants" to 5: "Allow a lot more of these immigrants." The question order was randomized (statistical tests show no order effects). The outcomes are z-scored using the mean and standard deviation in the control group. The independent variables are beliefs about the impact of low-skilled and high-skilled immigrants on the wages and employment of (i) people's own household and (ii) most Americans. On top of that people's beliefs about the effect of immigrants on American culture are included on columns (5) to (8). All questions were answered on 5-point Likert scales where higher values indicate more optimistic views regarding the effect of immigration. * p<0.1, ** p<0.05, *** p<0.01. Robust standard errors in parentheses.

Table A.14: Assessing relative importance of cultural vs. economic concerns

	Low-skilled		High-skilled	
	Not familiar	Familiar	Not familiar	Familiar
Overall economic impact on most Americans	0.586*** (0.029)	0.492*** (0.032)	0.476*** (0.031)	0.427*** (0.034)
Overall cultural impact on American culture and society	0.157*** (0.029)	0.131*** (0.032)	0.217*** (0.031)	0.196*** (0.034)
Observations	761	761	711	713

Notes: This table uses data from respondents in the control group. We use the same controls as described in Table 2. * p<0.1, ** p<0.05, *** p<0.01. Robust standard errors in parentheses.

Table A.15: Placebo outcomes

	Spending	Taxes	Redistribution
Panel A: With controls			
Treatment	0.013 (0.052)	-0.021 (0.048)	0.016 (0.040)
Observations	2075	2075	2075
Panel B: Without controls			
Treatment	0.008 (0.048)	-0.018 (0.046)	0.012 (0.036)
Observations	2075	2075	2075

Notes: This table uses data from respondents who completed the obfuscated follow-up study. Spending measures people’s support for increased spending. Taxes measures people’s support for increasing taxation. Redistribution measures people’s support for increasing redistribution. Treatment takes value 1 for respondents who received the research evidence in the main experiment. * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$. Robust standard errors in parentheses.

Table A.16: Response to demand treatments

	Pro-immigration:		
	Main study	Main study - with follow-up sample	follow-up study
Demand treatment	0.220*** (0.078)	0.202* (0.103)	0.044 (0.108)
Observations	555	340	340

Notes: This table uses data from MTurk respondents. Pro-immigrant is people's support for immigration (z-scored) as measured by their support for low-skilled and high-skilled immigration. 'Demand treatment' takes value 1 for respondents who received the message that 'we are a group of researchers in favor of increasing immigration'. * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$. Robust standard errors in parentheses.

A.4 Summary statistics, balance and attrition

Table A.17: Characteristics of our sample compared to the US Census

	Mean: Online sample	Mean: Online sample: follow-up	Mean: ACS
Gender	0.48	0.50	0.51
What is your age?	46.6	47.5	47.1
Northeast	0.22	0.23	0.179
Midwest	0.18	0.19	0.211
West	0.24	0.23	0.24
Total household income	72907	73516	82433

Notes: This table summarizes the characteristics of our sample in the main survey as well as the follow-up survey along targeted dimensions as well as the characteristics of the 2015 American Community Survey.

Table A.18: Balance across the treatment and control group

	Treatment	Control	P-value(Treatment - Control)	Observations
Gender	0.48	0.48	0.947	3130
What is your age?	45.83	46.54	0.217	3130
Non-Hispanic White	0.47	0.45	0.207	3130
African American/Black	0.05	0.06	0.091	3130
Republican	0.26	0.24	0.474	3130
Democrat	0.37	0.38	0.351	3130
Independent	0.37	0.36	0.834	3130
Northeast	0.23	0.22	0.366	3130
Midwest	0.18	0.18	0.933	3130
West	0.23	0.25	0.268	3130
Household size	2.52	2.59	0.224	3130
Log household income	10.91	10.91	0.985	3130
High-skilled	0.76	0.75	0.659	3130
Full-time employee	0.49	0.48	0.430	3130
Part-time employee	0.09	0.08	0.417	3130
Self-employed or small business owner	0.06	0.07	0.275	3130
Unemployed and looking for work	0.05	0.05	0.510	3130
Student	0.03	0.03	0.418	3130
Not in labor force	0.27	0.30	0.120	3130
College	0.85	0.83	0.072	3130
Beliefs about effect of immigration on wages of low-skilled workers	2.20	2.23	0.418	3130
Beliefs about effect of immigration on wages of high-skilled workers	2.96	2.97	0.610	3130
Beliefs about effect of immigration on unemployment of low-skilled workers	2.12	2.09	0.424	3130
Beliefs about effect of immigration on unemployment of high-skilled workers	2.90	2.91	0.827	3130
Confidence in beliefs about wages of low-skilled workers	3.44	3.52	0.020	3130
Confidence in beliefs about unemployment of low-skilled workers	3.51	3.57	0.088	3130
Confidence in beliefs about wages of high-skilled workers	3.49	3.51	0.637	3130
Confidence in beliefs about unemployment of high-skilled workers	3.45	3.51	0.055	3130

Notes: This table examines covariate balance based on the sample of respondents from the main study.

Table A.19: Balance across the treatment and control group in the follow-up

	Treatment	Control	P-value(Treatment - Control)	Observations
Gender	0.49	0.50	0.741	3130
What is your age?	46.88	48.01	0.100	3130
Non-Hispanic White	0.48	0.49	0.736	3130
African American/Black	0.05	0.07	0.019	3130
Republican	0.26	0.26	0.973	3130
Democrat	0.37	0.38	0.647	3130
Independent	0.36	0.35	0.660	3130
Northeast	0.23	0.23	0.960	3130
Midwest	0.18	0.20	0.139	3130
West	0.24	0.23	0.603	3130
Household size	2.46	2.50	0.460	3130
Log household income	10.93	10.93	0.797	3130
High-skilled	0.75	0.74	0.734	3130
Full-time employee	0.49	0.45	0.078	3130
Part-time employee	0.09	0.08	0.338	3130
Self-employed or small business owner	0.05	0.06	0.167	3130
Unemployed and looking for work	0.05	0.05	0.948	3130
Student	0.02	0.02	0.523	3130
Not in labor force	0.29	0.33	0.047	3130
College	0.84	0.83	0.601	3130
Beliefs about effect of immigration on wages of low-skilled workers	2.22	2.25	0.527	3130
Beliefs about effect of immigration on wages of high-skilled workers	2.94	2.95	0.787	3130
Beliefs about effect of immigration on unemployment of low-skilled workers	2.13	2.10	0.611	3130
Beliefs about effect of immigration on unemployment of high-skilled workers	2.90	2.91	0.867	3130
Confidence in beliefs about wages of low-skilled workers	3.42	3.51	0.045	3130
Confidence in beliefs about unemployment of low-skilled workers	3.50	3.55	0.213	3130
Confidence in beliefs about wages of high-skilled workers	3.48	3.51	0.547	3130
Confidence in beliefs about unemployment of high-skilled workers	3.45	3.52	0.080	3130

Notes: This table examines covariate balance for the follow-up sample.

Table A.20: Summary statistics

	Mean	SD	Median	Min.	Max.	Obs.
Gender	0.48	0.50	0.00	0.00	1.00	3130
What is your age?	46.64	15.59	49.50	21.00	69.50	3130
Non-Hispanic White	0.46	0.50	0.00	0.00	1.00	3130
African American/Black	0.06	0.23	0.00	0.00	1.00	3130
Republican	0.25	0.43	0.00	0.00	1.00	3130
Democrat	0.37	0.48	0.00	0.00	1.00	3130
Independent	0.36	0.48	0.00	0.00	1.00	3130
Northeast	0.22	0.41	0.00	0.00	1.00	3130
Midwest	0.18	0.39	0.00	0.00	1.00	3130
West	0.24	0.43	0.00	0.00	1.00	3130
Household size	2.38	1.48	2.00	0.00	10.00	3130
Total household income	72907.35	50740.70	62500.00	7500.00	225000.00	3130
Education	4.93	2.07	5.00	0.00	9.00	3130
High-skilled	0.75	0.43	1.00	0.00	1.00	3130
Full-time employee	0.45	0.50	0.00	0.00	1.00	3130
Part-time employee	0.08	0.27	0.00	0.00	1.00	3130
Self-employed or small business owner	0.06	0.23	0.00	0.00	1.00	3130
Unemployed and looking for work	0.05	0.21	0.00	0.00	1.00	3130
Student	0.03	0.16	0.00	0.00	1.00	3130
Not in labor force	0.26	0.44	0.00	0.00	1.00	3130
College	0.78	0.41	1.00	0.00	1.00	3130
Beliefs about effect of immigration on wages of low-skilled workers	2.21	1.00	2.00	1.00	5.00	3130
Beliefs about effect of immigration on wages of high-skilled workers	2.96	0.85	3.00	1.00	5.00	3130
Beliefs about effect of immigration on unemployment of low-skilled workers	2.10	1.01	2.00	1.00	5.00	3130
Beliefs about effect of immigration on unemployment of high-skilled workers	2.90	0.80	3.00	1.00	5.00	3130
Confidence in beliefs about wages of low-skilled workers	3.49	0.97	3.00	1.00	5.00	3130
Confidence in beliefs about unemployment of low-skilled workers	3.55	0.96	4.00	1.00	5.00	3130
Confidence in beliefs about wages of high-skilled workers	3.52	0.97	3.00	1.00	5.00	3130
Confidence in beliefs about unemployment of high-skilled workers	3.50	0.96	3.00	1.00	5.00	3130

Notes: This table displays the summary statistics for our sample.

Table A.21: Attrition in the follow-up study

	Completed Follow-up Survey
Treatment	-0.006 (0.016)
Republican	0.006 (0.021)
Independent	-0.027 (0.019)
Log(Income)	-0.021* (0.011)
High-skilled	-0.118*** (0.020)
Employed Full-Time	-0.004 (0.023)
Employed Part-Time	0.007 (0.034)
Unemployed	0.052 (0.042)
Self-Employed	-0.039 (0.039)
Student	-0.082 (0.058)
High Education	-0.044 (0.032)
Male	0.041** (0.017)
Age	0.002*** (0.001)
Observations	3130

Notes: The outcome variables takes value 1 for respondents who completed the follow-up study. ‘Treatment’ is an indicator equal to 1 if respondents received the research evidence. * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$. Robust standard errors in parentheses.

A.5 Heterogeneous effects

Table A.22: Heterogeneous Treatment Effects: Self-reports

	Low-skilled			High-skilled		
	Not familiar	Familiar	Index	Not familiar	Familiar	Index
Panel A: Prior Belief						
Treatment × (a) Prior	-0.052 (0.043)	-0.057 (0.046)	-0.054 (0.040)	0.042 (0.046)	0.033 (0.049)	0.037 (0.044)
Treatment (b)	0.170*** (0.033)	0.116*** (0.034)	0.143*** (0.031)	0.104*** (0.033)	0.045 (0.034)	0.074** (0.030)
Pr(a+b)=0	0.028	0.291	0.075	0.008	0.166	0.027
Observations	3130	3130	3130	3130	3130	3130
Panel B: Republican						
Treatment × Republican	-0.061 (0.076)	0.006 (0.083)	-0.027 (0.071)	-0.001 (0.078)	-0.041 (0.083)	-0.021 (0.073)
Treatment	0.185*** (0.038)	0.115*** (0.038)	0.150*** (0.035)	0.104*** (0.038)	0.055 (0.038)	0.079** (0.034)
Pr(a+b)=0	0.059	0.100	0.051	0.137	0.846	0.362
Observations	3130	3130	3130	3130	3130	3130
Panel C: High-skill						
Treatment × High-skill	-0.024 (0.075)	-0.053 (0.078)	-0.039 (0.069)	0.081 (0.076)	-0.011 (0.080)	0.035 (0.070)
Treatment	0.188*** (0.065)	0.156** (0.067)	0.172*** (0.059)	0.043 (0.066)	0.053 (0.070)	0.048 (0.060)
Pr(a+b)=0	0.000	0.010	0.000	0.001	0.283	0.019
Observations	3130	3130	3130	3130	3130	3130

Notes: The table shows OLS regression results where the dependent variables are attitudes to the four different types of immigrants: (i) low-skilled immigrants not familiar with American values and traditions, (ii) low-skilled immigrants highly familiar with American values and traditions, (iii) high-skilled immigrants not familiar with American values and traditions, and (iv) high-skilled immigrants highly familiar with American values and traditions. The answers were given on a five point scale from 1: “Allow a lot less of these immigrants” to 5: “Allow a lot more of these immigrants.” The question order was randomized (statistical tests show no order effects). The outcomes are z-scored using the mean and standard deviation in the control group. The indices are created by taking the mean of the responses to immigrants with different familiarity with American values and traditions for each skill level. “Treatment” is an indicator equal to 1 if respondents received the research evidence. “Prior” is people’s pre-treatment belief about the wage and employment effects of the Mariel boatlift on low-skilled (high-skilled) workers. “Republican” takes value 1 if our respondent self-identifies as a Republican and zero otherwise. “High-skill” takes values 1 if our respondent self-identifies as high-skilled and zero otherwise. We use the same controls as described in Table 2. * p<0.1, ** p<0.05, *** p<0.01. Robust standard errors in parentheses.

Table A.23: Heterogeneous Treatment Effects: Petition

	Intention: H2B Visas		
	Increase	Decrease	Net support
Panel A: Prior Belief			
Treatment × (a) Prior	-0.004 (0.019)	0.009 (0.019)	-0.023 (0.042)
Treatment (b)	0.045*** (0.016)	-0.057*** (0.016)	0.130*** (0.034)
Pr(a+b)=0	0.112	0.034	0.044
Observations	3130	3130	3130
Panel B: Republican			
Treatment × (a) Republican	-0.030 (0.033)	-0.013 (0.038)	-0.020 (0.076)
Treatment (b)	0.052*** (0.019)	-0.054*** (0.017)	0.135*** (0.040)
Pr(a+b)=0	0.401	0.048	0.075
Observations	3130	3130	3130
Panel C: High-skill			
Treatment × (a) High-skill	-0.001 (0.035)	-0.022 (0.037)	0.046 (0.079)
Treatment (b)	0.045 (0.030)	-0.041 (0.032)	0.096 (0.068)
Pr(a+b)=0	0.016	0.000	0.000
Observations	3130	3130	3130

Notes: The three first columns show regression results where the dependent variable is intention to sign the petitions. “Increase” (“Decrease”) is an indicator equal to 1 if a respondent wanted to sign the petition suggesting to increase (decrease) the annual cap on the H-2B visa program. “Net support” is a z-scored transformation of a variable taking value 1 (-1) if a respondent wanted to sign the petition to increase (decrease) the annual cap on the H-2B visa program and 0 otherwise. “Treatment” is an indicator equal to 1 if respondents received the research evidence. “Prior” is people’s pre-treatment belief about the wage and employment effects of the Mariel boatlift on low-skilled (high-skilled) workers. “Republican” takes value 1 if our respondent self-identifies as a Republican and zero otherwise. “High-skill” takes values 1 if our respondent self-identifies as high-skilled and zero otherwise. We use the same controls as described in Table 2. * p<0.1, ** p<0.05, *** p<0.01. Robust standard errors in parentheses.

Table A.24: Heterogeneous Treatment Effects: Follow-up study

	Labor Market	Low-skilled	High-skilled
	Concerns	Immigrants	Immigrants
Panel A: Prior Belief			
Treatment × (a) Prior	-0.094* (0.051)	-0.049 (0.050)	-0.036 (0.043)
Treatment (b)	0.113*** (0.040)	0.091** (0.040)	0.056 (0.042)
Pr(a+b)=0	0.760	0.500	0.715
Observations	2075	2075	2075
Panel B: Republican			
Treatment × (a) Republican	0.062 (0.113)	0.063 (0.096)	0.025 (0.100)
Treatment (b)	0.132** (0.062)	0.074 (0.045)	0.050 (0.046)
Pr(a+b)=0	0.041	0.105	0.400
Observations	2075	2075	2075
Panel C: High-skill			
Treatment × (a) High-skill	-0.154 (0.119)	-0.019 (0.090)	-0.019 (0.095)
Treatment (b)	0.263*** (0.102)	0.104 (0.077)	0.071 (0.081)
Pr(a+b)=0	0.073	0.069	0.286
Observations	2075	2075	2075

Notes: The dependent variables are attitudes towards the two types of immigrant we asked about in the follow-up: (i) “workers with little to no education” and (ii) “highly educated workers.” Responses were given on a five point scale indicating that immigration of these workers should be “strongly decreased” to “strongly increased.” Respondents were also asked to what extent they agreed with the following statement: “Immigrants hurt American workers,” which was answered on a five point scale from 1: “strongly disagree” to 5: “strongly agree” (we have reversed the scale). All responses are z-scored using the mean and standard deviation in the control group. “Treatment” is an indicator equal to 1 if respondents received the research evidence. “Prior” is people’s pre-treatment belief about the wage and employment effects of the Mariel boatlift on low-skilled (high-skilled) workers. “Republican” takes value 1 if our respondent self-identifies as a Republican and zero otherwise. “High-skill” takes values 1 if our respondent self-identifies as high-skilled and zero otherwise. We use the same controls as described in Table 2. * p<0.1, ** p<0.05, *** p<0.01. Robust standard errors in parentheses.

Table A.25: Heterogeneous Treatment Effects by pre-treatment beliefs: Labor Market Concerns

	Wages		Employment	
	Own household	Most Americans	Own household	Most Americans
Panel A: Effect of low-skilled				
Treatment × Prior	-0.117* (0.062)	-0.149*** (0.058)	-0.069 (0.057)	-0.161*** (0.055)
Treatment	0.295** (0.147)	0.508*** (0.134)	0.163 (0.133)	0.492*** (0.125)
Observations	1485	1485	1481	1481
Panel B: Effect of high-skilled				
Treatment × Prior	-0.071 (0.074)	-0.038 (0.069)	-0.073 (0.079)	0.043 (0.076)
Treatment	0.272 (0.229)	0.295 (0.211)	0.358 (0.241)	0.127 (0.233)
Observations	1486	1486	1480	1480

Notes: The dependent variables are beliefs about the economic impact of low-skilled and high-skilled immigrants. Respondents were asked how they thought admitting more low-skilled/high-skilled immigrants would affect (i) “wages,” (ii) “job opportunities and job security.” We randomized whether respondents answered these questions with respect to low-skilled or high-skilled immigrants. All questions were answered on 5-point Likert scales where higher values indicate more optimistic views regarding the effect of immigration. “Treatment” is an indicator equal to 1 if respondents received the research evidence. “Prior” is people’s pre-treatment belief about the wage and employment effects of the Mariel boatlift on low-skilled (high-skilled) workers. * p<0.1, ** p<0.05, *** p<0.01. Robust standard errors in parentheses.

Table A.26: Heterogeneous Treatment Effects by Self-perceived Skill-level: Labor Market Concerns

	Wages		Employment		Fiscal burden		Culture
	Own household	Most Americans	Own household	Most Americans	Own household	Most Americans	
Panel A: Effect of low-skilled							
Treatment × High-skilled	0.081 (0.125)	-0.084 (0.116)	-0.064 (0.126)	-0.149 (0.118)	-0.089 (0.119)	-0.030 (0.118)	-0.049 (0.118)
Treatment	-0.023 (0.113)	0.242** (0.104)	0.068 (0.114)	0.266** (0.106)	0.092 (0.105)	0.055 (0.106)	0.077 (0.103)
Observations	1485	1485	1481	1481	1476	1476	1466
Panel B: Effect of high-skilled							
Treatment × High-skilled	0.095 (0.102)	0.032 (0.106)	0.060 (0.107)	0.082 (0.106)	0.028 (0.108)	-0.020 (0.109)	0.202* (0.108)
Treatment	-0.007 (0.086)	0.164* (0.091)	0.104 (0.091)	0.198** (0.090)	0.031 (0.094)	0.089 (0.094)	-0.103 (0.093)
Observations	1486	1486	1480	1480	1474	1474	1459

Notes: The dependent variables are beliefs about the economic impact of low-skilled and high-skilled immigrants. Respondents were asked how they thought admitting more low-skilled/high-skilled immigrants would affect (i) “wages,” (ii) “job opportunities and job security,” and (iii) “taxes” for their own household as well as for most Americans. We randomized whether respondents answered these questions with respect to low-skilled or high-skilled immigrants. All questions were answered on 5-point Likert scales where higher values indicate more optimistic views regarding the effect of immigration. “Treatment” is an indicator equal to 1 if respondents received the research evidence. “High-skill” takes values 1 if our respondent self-identifies as high-skilled and zero otherwise. * p<0.1, ** p<0.05, *** p<0.01. Robust standard errors in parentheses.

Table A.27: Mechanisms: Beliefs about the overall economic impact of immigrants (post-treatment)

	Low-skilled		High-skilled		Follow-up
	Not familiar	Familiar	Not familiar	Familiar	All Immigrants
Panel A: Main					
Treatment	0.222*** (0.048)	0.174*** (0.049)	0.149*** (0.048)	0.130*** (0.048)	0.124*** (0.040)
Panel B: Prior					
Treatment × Prior	-0.025 (0.064)	-0.039 (0.067)	0.104 (0.070)	0.113* (0.067)	-0.110* (0.065)
Treatment	0.222*** (0.048)	0.174*** (0.049)	0.149*** (0.048)	0.130*** (0.048)	0.119*** (0.039)
Panel C: Republican					
Treatment × Republican	-0.006 (0.112)	0.044 (0.114)	0.012 (0.110)	0.030 (0.115)	0.065 (0.085)
Treatment	0.224*** (0.054)	0.163*** (0.056)	0.149*** (0.056)	0.119** (0.054)	0.101** (0.047)
Observations	1469	1469	1469	1466	2075

Notes: The table shows OLS regression results where the dependent variables are beliefs about the overall economic impact on most Americans of the four different types of immigrants. Beliefs were elicited using the following question: “When you think about all of the potential positive and negative economic effects of increasing the number of high-skilled/low-skilled immigrants that are not familiar/highly familiar with American values and traditions coming to the United States, do you think the overall effect would be positive or negative for the finances of most Americans?” The question was answered on a five point scale from 1: “The overall economic effect would be very negative for most Americans” to 5: “The overall economic effect would be very positive for most Americans.” We randomized whether respondents were asked these questions about low-skilled immigrants or high-skilled immigrants. The outcome variables are z-scored using the mean and standard deviation in the control group. We use the same controls as described in Table 2. * p<0.1, ** p<0.05, *** p<0.01. Robust standard errors in parentheses.

B Miscellaneous

Figure A.8: Petition

The image is a screenshot of a web browser displaying a petition on the White House website. The browser's address bar shows the URL: https://petitions.whitehouse.gov/petition/decrease-annual-cap-h-2b-visas-1. The page features a green header with the text 'YOUR VOICE IN THE WHITE HOUSE' and a 'Sign In' button. Below the header, a sub-header reads 'WE THE PEOPLE ASK THE FEDERAL GOVERNMENT TO CALL ON CONGRESS TO ACT ON AN ISSUE:'. The main title of the petition is 'Decrease the annual cap on H-2B visas', created by C.R. on May 31, 2017. The petition's description states: 'This petition suggests a decrease in the annual cap on H-2B visas from 66,000 to 33,000.' A category tag 'IMMIGRATION' is visible. Social media sharing icons for Facebook, Email, and Twitter are present. On the right side, there is a 'Sign This Petition' section with a progress bar. The progress bar shows '59 SIGNED' out of a '100,000 GOAL'. The text indicates that the petition needs 99,941 signatures by June 30, 2017, to get a response from the White House.

YOUR VOICE IN THE WHITE HOUSE Sign In

WE THE PEOPLE ASK THE FEDERAL GOVERNMENT TO CALL ON CONGRESS TO ACT ON AN ISSUE:

Decrease the annual cap on H-2B visas

Created by C.R. on May 31, 2017

This petition suggests a decrease in the annual cap on H-2B visas from 66,000 to 33,000.

IMMIGRATION

Sign This Petition

Needs **99,941 signatures** by **June 30, 2017** to get a response from the White House

59 SIGNED 100,000 GOAL

Figure A.9: Invitation form in the email sent out for the obfuscated follow-up study

Hi John,

You have an opportunity waiting!

Topic: Personal Opinion

Incentive: \$2.5 in e-Rewards® Currency

Length: 10 minutes

[LET'S BEGIN](#)

Figure A.10: Consent form in the main study

This study is conducted by The Choice Lab at NHH Norwegian School of Economics. You must be a US citizen of at least 18 years of age to participate in this study. If you do not fulfill these requirements, please do not continue any further.

You are not allowed to participate in this study more than once. If you experience a technical error or problem, do not try to restart or retake the study. Rather, send us an email with a description of your problem and we will get back to you. If you have any questions regarding this study, please email thechoicelab@nhh.no

I have read and understood the above and want to participate in this study.

Yes

No



Figure A.11: Consent form in the follow-up study

This study has received ethics clearance by the Oxford University Institutional Review Board.

If subjects have questions about this study or their rights, or if they wish to lodge a complaint or concern, they may contact us at the following email: christopher.roth@economics.ox.ac.uk

Consent form

- I have read the information provided on the previous page.
- I have had the opportunity to ask questions about the study.
- I understand that I may withdraw from the study at any time.
- I understand how to raise a concern or make a complaint.
- I understand that I can only participate in this experiment once.
- **I understand that close attention to the survey is required for my responses to count.**

If you are 18 years of age or older, agree with the statements above, and freely consent to participate in the study, please click on the "I Agree" button to begin the experiment.

I agree I disagree

[Next >>](#)

Figure A.12: Screenshot of the informational treatment

NHH



The researchers who analyzed the short- and long-term effects of the mass immigration of Cubans to Miami concluded that, for both high-skilled and low-skilled workers, the mass immigration had **virtually no effect on wages** and **virtually no effect on unemployment**.

According to the researchers, the mass immigration had virtually no effect on wages and unemployment because the new Cuban immigrants increased the overall demand for goods and services, which created more jobs.