Facts, Alternative Facts, and Fact Checking in Times of Post-Truth Politics *

Oscar Barrera, Sergei Guriev, Emeric Henry, and Ekaterina Zhuravskaya

This draft: October 2019
First draft: May 2017

Abstract

How effective is fact checking in countervailing "alternative facts," i.e., misleading statements by politicians? In a randomized online experiment during the 2017 French presidential election campaign, we subjected subgroups of 2480 French voters to alternative facts by the extreme-right candidate, Marine Le Pen, and/or corresponding facts about the European refugee crisis from official sources. We find that: (i) alternative facts are highly persuasive; (ii) fact checking improves factual knowledge of voters (iii) but it does not affect policy conclusions or support for the candidate; (iv) exposure to facts alone does not decrease support for the candidate, even though voters update their knowledge. We find evidence consistent with the view that at least part of the effect can be explained by raising salience of the immigration issue.

*Oscar Barrera and Ekaterina Zhuravskaya are from the Paris School of Economics; Sergei Guriev and Emeric Henry are from Sciences Po, Paris. We also thank Maja Adena, Adam Berinsky, Julia Cage, Matthew Gentzkow, Irena Grosfeld, Elise Huillery, Nonna Mayer, Brendan Nyhan, Maria Petrova, Giacomo Ponzetto, Francesco Sobbrio, David Stromberg, Daniel Treisman and the participants of workshop in HEC Lausanne, PSE seminar, the 15th Annual Media Economics Workshop, and the ENS Institut Jean Nicod seminar as well as anonymous referees for helpful comments. We are grateful to Philipp Ketz for advice on theoretical econometrics. Sergei Guriev thanks Sciences Po's Scientific Advisory Board for financial support. Ekaterina Zhuravskaya thanks the European Research Council (ERC) for funding from the European Union's Horizon 2020 Research and Innovation program (grant agreement No. 646662). This project obtained the approval of the internal Institutional Review Board of the Paris School of Economics, the approval number is IRB 2017-021.

1 Introduction

The recent rise of nativist populism in the West has been accompanied by politicians' extensive use of "alternative facts," statements on key policy issues that directly or indirectly contradict real facts. Many anti-establishment politicians have used easily refutable statements to promote their political agenda. For example, pro-Brexit campaign falsely claimed that EU membership cost the UK over 350 million British pounds per week (about 500 million US dollars at the pre-Brexit exchange rate) and this money could be saved by the national budget in the case of exit from the European Union.[1] Donald Trump and his 2016 campaign staff repeatedly circulated wrong unemployment numbers for the US and made false claims about US homicide rate being at its highest in several decades.[2] Alternative facts are noticed by voters: Allcott and Gentzkow (2017) show that fake news in favor of Trump were shared 30 million times on Facebook. The use of alternative facts is not confined to populists: some mainstream politicians also resort to them.

As alternative facts become part of modern politics in established democracies, so does fact checking: mainstream media have increasingly invested in checking politicians' claims and provided rebuttals. For example, *Le Monde*, one of the leading French newspapers, identified and corrected 19 misleading statements made by Marine Le Pen, the extreme-right candidate who reached the runoff of the 2017 French presidential election, during her televised debate against Emmanuel Macron.[3] Similar efforts are taken by most leading media in the US and Europe — as well as by many independent organisations.[4]

Given the substantial fact-checking efforts, it is puzzling why populist politicians double down on their use of alternative facts. If such behavior is rational, this means that, even in the presence of fact checking, alternative facts bring political benefits. In this pa-

[1] See, for instance: http://www.telegraph.co.uk/news/0/eu-referendum-claims-won-brexit-fact-checked/ (accessed on May 26, 2017).

[2] See, for instance: http://edition.cnn.com/2017/02/07/politics/donald-trump-murder-rate-fact-check/ and http://www.npr.org/2017/01/29/511493685/ahead-of-trumps-first-jobs-report-a-look-at-his-remarks-on-the-numbers (both accessed on May 26, 2017).

[3] http://www.lemonde.fr/les-decodeurs/article/2017/05/03/des-intox-du-debat-entre-emmanuel-macron-et-marine-le-pen-verifiees_5121846_4355770.html (accessed on May 26, 2017).

[4] See for example https://www.nytimes.com/spotlight/fact-checks, https://www.bbc.com/news/topics/cp7r8vgl2rgt/reality-check, https://www.channel4.com/news/factcheck, http://www.repubblica.it/argomenti/Fact_Checking (all accessed on July 13, 2018) and the report on the rise of fact checking in Europe by the Reuters Institute at Oxford (Graves and Cherubini (2016)).

per, we show that fact checking may indeed be ineffective in correcting the impact of the politicians' propaganda.

What are the potential explanations for the ineffectiveness of fact checking? One possibility is that voters lack trust in mainstream media and the experts on whom the media relies for fact checking. If voters are more confident in numbers provided by politicians than by the media, they would rationally update their prior beliefs in the direction of the alternative facts away from the truth provided by the fact checkers. This explanation is empirically testable, by conducting a randomized control trial where some voters are exposed to alternative facts (with attribution to their source), while other voters are exposed to alternative facts and the respective fact checking (also attributed to the source). In such an experiment, if the voters do not have much trust in the source of fact checking, the posterior of voters exposed to alternative facts and fact checking should be closer to the posterior of those exposed to alternative facts alone than to the posterior of the control group.

Another explanation is that being exposed to the numbers (true or false) raises the salience of the issue central to the politician's narrative (for instance, immigration), understood as the story or the argument linking the facts and the conclusions. The voters may then choose to support the politician who focuses on this issue irrespective of their posterior beliefs on facts, and this is all that matters for the politician.[5] To test this explanation one could expose a group of voters to true facts alone (also with attribution to their source). If salience explains the ineffectiveness of fact checking, one should expect to see a shift in voting intentions in favor of the politician who puts this contentious issue at the center of her program, after exposing voters to true facts on a contentious issue (e.g., immigration). This could happen even when voters find official sources credible and do not doubt the numbers provided by fact checkers.

In this paper, we shed light on these alternative hypotheses on the impact of fact checking. We test how exposure of voters to alternative facts, fact checking, or true facts affect

[5]The effect of salience is similar to the "availability heuristic"; both are well documented in experimental economics and psychology. Salience is one of the four pillars of political scientist John Zaller's seminal integrated theory of public opinion (Zaller, 1992). Note that salience is different from priming as the former is about bringing the audience's attention to a specific issue (immigration) rather than influencing the point of view on the issue directly.

voting intentions, policy positions, knowledge of facts, and trust in official institutions.

In March 2017, during the French presidential campaign, we administered an online-survey-based experiment to 2480 voting-age French inhabitants of five French regions with traditionally strong support for the extreme right. The sample was stratified on gender, age and education to make it similar to a nationally representative sample.

The participants were randomly allocated to four equally sized groups: (i) control group, (ii) alternative facts group, (iii) fact checking group, and (iv) real facts group. The participants in different groups were asked to read different messages. The control group was presented with no information. Participants in the group "Alt-Facts" (for alternative facts) were asked to read several statements by Marine Le Pen (MLP) on immigration, each containing factually incorrect or simply misleading information, used as part of a logical argument. Participants in group "Facts" were asked to read a short text containing facts from official sources on the same issues. Participants of the group "Fact-Check" were provided first with the same quotes from MLP and then the same text with facts from official sources. All texts presented to participants had a clear indication of the source. Before being subjected to the treatments, participants of all groups filled in a short questionnaire about their socio-economic background and were asked one question that aimed at measuring their prior knowledge of the statistics on immigration. After the treatments, following general questions on political opinions, participants were asked about their voting intentions (using three different methods), their opinions on immigration policy, and their posterior beliefs about the facts, related to numbers cited in the treatments, as well as their past voting behaviour.

The results of our experiment confirm that on average the use of alternative facts increases the political support of the politicians irrespective of fact checking, which explains why politicians use alternative facts despite facing the risk of being fact checked. We find that political statements based on alternative facts are highly persuasive and fact checking is ineffective in undoing their effect on voting: being exposed to MLP's rhetoric significantly increases voting intentions in favor of MLP by 5 percentage points, *irrespective* of whether they are or are not accompanied by fact checking. The effects of all treatments are stronger for those respondents whose prior belief about the unemployment rate among

migrants is an overestimation compared to the official statistics. Among those with overestimated priors about unemployment of migrants, Alt-Facts treatment increased MLP voting intentions by 8 percentage points, Fact-check treatment by 7 percentage points, and Facts treatment by 5 percentage points.

We explore the reasons for the absence of voters' reaction to fact checking. We start by rejecting the explanation that voters trust the politician providing the alternative facts more than they trust the official sources providing the fact checking. In general, voters behave as Bayesians, updating factual knowledge in the direction of the signal they receive, having much higher confidence in the statistical facts from the official sources than in the alternative facts from MLP. The majority of voters presented with official statistics learn them (irrespective of whether they were exposed to alternative facts). Both the facts and the fact-checking treatment (i.e., the combination of alternative facts with facts) shifts voter posteriors on facts significantly towards the truth (relative to the control group). In other words, fact-checking works well in terms of communicating the facts. Voters also learn facts presented in isolation: posteriors are much closer to the truth in the Facts group compared to the Control group. Voters presented with alternative facts alone move their posterior beliefs away from the truth, but the absolute magnitude of the effect of alternative facts treatment on posterior knowledge is much smaller than that of the facts treatment. Furthermore, the Alt-Facts treatment does not significantly affect the rate of giving correct responses to factual questions but increases the average distance to the truth, which means that those voters who knew correct answers to start with were not misled by the alternative facts and only those who had incorrect priors were moved even further away from the truth by the alternative facts.

To understand better what makes voters turn to MLP as a result of the treatments, we consider the effect of the treatments on the subjective opinion of voters about the policy issues. In particular, the answers to the questions: (i) whether refugees come for security or for economic reasons (MLP argues the latter) and (ii) whether the respondents agree with MLP specifically on immigration policy. Participants in the Alt-Facts and Fact-Check treatments think that refugees come for economic reasons in significantly higher proportions than participants in the control group. The difference with control group is

13 percentage points for Alt-Facts and 7 percentage points for Fact-Check. These effects are statistically different in size. Facts treatment, in contrast, does not significantly affect the assessment of reasons for refugees to come. This suggests that the narrative used in the alternative facts plays a role in persuasion: those voters who are exposed to the MLP's conclusion that refugees come for economic reasons tend to believe it more. In contrast, the agreement with MLP on immigration policy is significantly affected only by Alt-Facts treatment: voters in Alt-Facts treatment are 5 percentage points more likely to agree with MLP, while the agreement with MLP on immigration policy among Fact-Checking and Facts control group is not significantly different from that in the control group (albeit also negative).

We consider several potential explanations of these results. First, we show that neither experimenter demand effects nor the non-linearities in the relationship between facts and voting intentions are consistent with the evidence. Second, we discuss two potential mechanisms. Alt-Facts narrative could send a signal about the candidate in addition to a signal about the state of the world. If this signal is positive, voters can react positively to the communication by the candidate even if she is proven to cite false facts. This could happen, for instance, if voters originally thought that the candidate is more extreme than she appears in the Alt-Facts narrative. Furthermore, all communication (by that Alt-Facts, Fact-Checking or Facts alone) could increase the salience of the immigration issue. We argue that both of these potential channels can be at play, but salience is necessary to explain all pieces of evidence.

In particular, voters exposed to true facts without MLP's statements are not less likely to vote for Marine Le Pen compared to the control group on average and are significantly more likely to vote for MLP if their priors are such that they overestimate the unemployment rate among migrants. This, however, does not mean that the facts are irrelevant — we observe a strong and significant association between facts and voting intentions in control group: those voters who believe that the situation with refugees is worse than it actually is are more likely to vote for MLP. Thus, the exposure to facts alone may have two effects that go in the opposite directions: on the one hand, facts increase the salience of the immigration issue, which boosts support for MLP, and on the other hand, it cor-

rects the beliefs about facts in the direction that lowers the support for MLP. Indeed, we find that the effect of both Facts and Fact-Checking treatments is positive and significant in the full sample when we control for the posterior knowledge of facts. This result is consistent with the hypothesis that the exposure to information about migrants raises the salience of this issue in voters' minds and, therefore, leads to a higher support of a candidate with anti-immigrant agenda. The fact that we find larger effects for voters with incorrect priors compared to voters with correct priors is also consistent with the salience mechanism, as the previous research (e.g., Bordalo, Gennaioli and Shleifer, 2012, 2013) has shown that the role of salience increases with the distance between the prior and the truth. In addition, the finding that Alt-Facts and Fact-Check have the same-size effect on voting, whereas Fact-Check has a smaller effect compared to Alt-Facts on policy conclusions of voters (significant for the beliefs about the reasons for the refugees to come and insignificant for the overall agreement with MLP on immigration policy) is also consistent with the salience mechanism: voters change their voting intentions more than their policy views, on average, because the treatments make them see this particular aspect of policy (i.e., immigration) as more important.

The magnitude of the average treatment effects is fairly large: the persuasion rates to declare the intention to vote for MLP of our treatments, calculated using the formula from DellaVigna and Gentzkow (2010), are 7.8% for the alternative facts treatment and 7.7% for the fact-checking treatment. It is likely that the magnitude of these effects decreases over time, as suggested by existing studies both in experimental and in the real-world settings (e.g., Gerber et al., 2011; Swire et al., 2017). Furthermore, one cannot directly translate a change in reported voting intention to a change in how people vote in an election. The literature generally finds stronger effects for voting intentions than for actual voting (Gerber et al., 2011; Gerber, Karlan and Bergan, 2009; Chiang and Knight, 2011). Importantly, our results and conclusions rely on the direction and on the relative magnitudes of the effect across treatments rather than on the absolute magnitude of the effect in each of the treatments. The important message of our analysis is that the effects of the Alt-Facts and Fact-Check treatments on voting intentions are similar, whereas on posteriors on facts they go in the opposite directions. There is no reason to believe that these relative effects

evolve differentially over time. Another striking comparison is between the persuasion rates for voting intentions and for the factual knowledge. The latter are much larger in magnitude, e.g., for the percentage of men among migrants, they are 37% of the fact-checking treatment and 52% of the Facts treatment; voters do get convinced about the information from the official sources that they receive in these treatments.

We use the self-reported voting intentions as the main political outcome. To show that voting intentions are not just cheap talk, we use two different methods: dictator games and list experiments. The survey participants were asked to play two dictator games with real payoffs: one with a random anonymous counterpart among survey participants and the other with an anonymous counterpart randomly chosen among survey participants who said that he or she intended to vote for MLP. First, we show that larger donations to MLP supporters are associated with the intention to vote for MLP. Second, we show that alternative facts treatment significantly reduces the share of respondents who chose to donate to a random participant, but does not share any money with a MLP supporter. The effects of other treatments on the dictator game outcomes are imprecisely estimated, but the signs of the coefficients are consistent with the effects of treatments on voting intentions.

One could potentially worry about a Bradley effect, i.e., respondents hiding their support for MLP in their responses, for instance due to shame. Even though it is unlikely, as we argue below, we take this concern seriously and carry out a list experiment. This experiment is specifically designed to infer the average support for MLP within a group of participants without having the participants admit that they support MLP. We present each respondent with a list of presidential candidates and ask *how many* of them they would support, without asking *whom* they would support. One half of these lists includes the names of four presidential candidates and does not include MLP; the other half lists the same four names plus MLP. We randomize both the exposure to the lists with and without MLP's name and the order of candidates within each list. The average difference in the responses about the number of candidates between lists with and without MLP is a measure of inferred average support for MLP. The results of the list experiment corroborate our findings for voting intentions. First, we find a statistically significant correlation

between the responses to the question about voting intentions and the support for MLP inferred from the list experiment. Second, the level of inferred support for MLP across treatments lines up in a way consistent with the effect of treatments on voting intentions; however, the differences between treatments are not statistically significant due to a small sample size.

Our main contribution to the literature, which we briefly review in the next section, is in identifying the causal effect of alternative facts and of fact checking in a real-world setting.

The rest of the paper is structured as follows. Section 2 discusses the related literature. Section 3 describes the design of the study. Section 4 presents the main results and discusses potential alternative mechanisms. Section 5 establishes the validity of our measure of voting intentions and examines heterogeneity of the results. Section 6 concludes.

2 Related literature

The impact of slanted political information on political outcomes has been extensively studied in the context of traditional media (e.g., Gerber, Karlan and Bergan, 2009; DellaVigna and Kaplan, 2007*b*; Enikolopov, Petrova and Zhuravskaya, 2011; Adena et al., 2015). Recently, researchers turned to studying the circulation of biased or outright false news on new online media platforms and social media, where fact checking standards are lax or missing? Mocanu et al. (2015), for example, document the rapid spread of fake news over social media during the 2012 elections in Italy. Allcott and Gentzkow (2017) show that fake stories were intensely shared on Facebook during the 2016 U.S. presidential election campaign. Zhuravskaya, Petrova and Enikolopov (2019) review this literature.

With the important exception of the two studies in political science, Swire et al. (2017) and Nyhan et al. (2017), to the best of our knowledge, there is little systematic evidence about the impact of fact checking on subjective beliefs and voting intentions. Both of these studies focus on Trump's presidential campaign of 2016. Swire et al. (2017) conducted a randomized controlled trial treating participants with Trump's misinformation with and without attribution to Trump, subsequently correcting the misinformation ei-

ther immediately or one week later. They found that the impact on the beliefs depend on both attribution to the source and partisanship (i.e., whether the participants were Trump supporters to start with). Using within-subject variation (rather than comparison across treatments), they also found that Trump supporters did not change their voting behavior after seeing the corrective information. Nyhan et al. (2017) conducted a randomization experiment to show that when Trump's misinformation is corrected, Trump voters update their factual beliefs but do not change their level of support of Trump. In both of these studies, the main effect of fact checking is to show that the candidate was lying and both studies conclude that it does not affect voting intentions of Trump's supporters. We reach a similar conclusion about the ineffectiveness of fact checking. The robustness of this finding across different contexts (Trump vs. MLP) and methods (experimental and non-experimental) strongly suggests external validity, which usually is hard to claim for any individual randomized control trial (RCT) study.

Our paper contributes to the literature in a number of additional ways. As the alternative facts are included in a narrative in our study, we explore the effect of fact checking separately on each of the three elements of the narrative: beliefs about facts, policy impressions and voting intentions; this has not been done in the previous literature.[6] Further, we find the effect on both supporters and non-supporters of MLP, showing that policy conclusions can be swayed, even for non-supporters. Finally, because our experiment includes the Facts treatment, absent in the other studies, we provide new evidence for the salience explanation for the ineffectiveness of fact checking.

A growing literature in economics, political science and psychology studies the impact of information on political beliefs and knowledge. Kuziemko et al. (2015) carried out a randomized online experiment exposing participants to information on US income inequality and found a strong effect of this information on the support for the estate tax. Grigorieff, Roth and Ubfal (2016) carried out a series of randomized experiments mea-

[6]Note that our definition of the narrative (the story or arguments linking the facts with the conclusions) is closer to the one in Shiller (2017) ("a simple story or easily expressed explanation of events that many people want to bring up in conversation or on news or social media because it can be used to stimulate the concerns or emotions of others, and/or because it appears to advance self-interest") than to the one in Bénabou, Falk and Tirole (2018) ("stories people tell themselves, and each other, to make sense of human experience that is, to organize, explain, justify, predict and sometimes influence its course"); the latter is not necessarily argumentative.

suring the impact of information on the attitude toward immigrants. Alesina, Miano and Stantcheva (2018) studied the impact of information about immigrants on preference for redistribution in a large sample of respondents in six Western countries. Bursztyn, Egorov and Fiorin (2017) estimate the causal impact of Donald Trump's rise on the willingness to express xenophobic opinions publicly. Yet another important paper by Robbett and Matthews (2018) shows that when information is readily available to the participants, it does correct partisan bias; however, when the access to this information costs them even as little as fifty cents, the voters may choose to remain rationally ignorant and maintain their partisan stereotypes.

A number of studies examined the effect of information on knowledge. For example, Nyhan and Reifler (2010, 2015) document the shift in posterior beliefs about facts in the direction opposite of what the content of the information would imply for extremely salient issues, such as WMD in Iraq in 2005 and vaccine safety. However, the literature finds no such "backfiring" of information on facts for less salient issues (Wood and Porter, 2016) or even more salient issues, such as gun control, minimum wage, and capital punishment (Guess and Coppock, 2018). Hatton (2017) analyzes survey data on Europeans' attitudes to immigration and showing that public opinion on immigration in Europe depends on both preferences and salience of the immigration issue. Swire et al. (2017) synthesize the literature on this issue saying that "backfire effects only occur when an issue is strongly and currently connected with an individual's political identity."[7] In addition, Berinsky (2015) shows that rumors may gain power due to "fluency": attempts to fact check them using credible sources leads to repeating the rumor, which increases its diffusion.

[7]Backfiring can be explained by motivated cognition (or the "self-confirming bias") where information is evaluated in a biased way to reinforce pre-existing views (Lord, Ross and Lepper, 1979; Edwards and Smith, 1996; Taber and Lodge, 2006). Bénabou and Tirole (2016) provide a recent review of this literature and discuss many examples of motivated beliefs and self-deception. They suggest three mechanisms avoiding costly cognitive dissonance: strategic ignorance, reality denial and self-signaling. Strategic ignorance involves choosing to avoid information sources that contradict the preferred beliefs. Reality denial is the failure to update the beliefs even in the presence of the bad news. Finally, self-signaling is the manufacturing of signals that can be interpreted as the objective proof of desired conclusions. While our experiment does not allow for a direct test of self-signaling, we can distinguish between strategic ignorance and reality denial. The respondents in our experiment do learn the facts but fail to update conclusions based on these facts. Thus, our results are consistent with the importance of reality denial rather than strategic ignorance.

3 Experimental design

3.1 Context

We use the context of the French presidential election and focus on the misleading statements of the extreme-right candidate Marine Le Pen (MLP). The 2017 French presidential election was held on April 23 (first round) and May 7 (runoff). It attracted global attention for a number of related reasons. First, this election witnessed the downfall of traditional parties: the candidates from both mainstream parties, the one on the right (LR) and the other one on the left (PS), did not qualify for the runoff. Second, this election led to the victory of a relative newcomer in politics, who created his party a few months before the election and ran on a pro-European platform. Finally, candidates from populist parties, both of the extreme left (Jean-Luc Melenchon) and the extreme right (Marine Le Pen) performed very well.[8]

Marine Le Pen's strong results in 2017 elections followed a series of electoral successes of her party National Front (FN, for *Front National* in French) in the preceding years. In the elections for the European Parliament in May 2014 the FN came first with nearly 25% of the votes. In the regional elections of December 2015 it nearly won several regions in spite of an alliance between the other main parties against FN. Throughout the 2017 campaign, Marine Le Pen was expected to get into the runoff polling first or close second. The final result was considered disappointing for MLP. She did qualify for the runoff but by a relatively small margin (21% of votes against Emmanuel Macron's 24% and François Fillon's 20%) and lost by a large margin in the second round with 34% of the total vote.

3.2 Facts and alternative facts

Following an influx of refugees into Europe, the issue of immigration policy played an important role in the 2017 presidential campaign. The anti-immigration stance was one of the MLP's key messages during the campaign, even though she did not make it the central one during the first stages of the campaign, preferring to focus on economic and

[8]We follow the conventional French classification of parties into extreme left (Melenchon), center-left (PS), center (Macron), center-right (LR), and extreme right (Le Pen).

social issues and on attacking the European union, in an effort to change the image of her party in the public opinion. She returned to immigration as a central theme only in late April 2017 after the 1st round of the election (i.e., after our experiment was completed).

Her immigration policy proposals included closing the French borders to refugees and substantially limiting legal immigration. MLP tried to convince voters that immigrants, including refugees, come to France for economic rather than security reasons, in particular, with the intention to benefit from the generous French welfare system. She often provided factually incorrect or misleading numbers, albeit with substantial prudence in the way they were expressed, and provided arguments that used these misleading numbers to make her point.

In the experiment, we use three quotes from MLP, which were characteristic of the arguments she made during the campaign. The *alternative facts* on which MLP based her arguments can be and were checked using official sources, such as the UN High Commissioner for Refugees (UNHCR) and INSEE, the French statistical institute. Each of the statements of MLP that we use for the experiment were made in the media and were subsequently fact checked by the newspaper *Liberation* and/or the online edition of the radio station *Europe 1*.[9] Below, we present the precise quotes of MLP and the corresponding text with facts from official sources as they were presented to the participants of our experiment. The full text can be found in the Online Appendix.

Argument 1: If refugees had really been fleeing their countries for security reasons, they would not have left their families behind.

- **Alternative fact:** *MLP: "A very small minority of them are really political refugees (...). I have seen the pictures of illegal immigrants coming down, who were brought to Germany, to Hungary, etc... Well, on these pictures there are* ***99%*** *of men (...). Men who leave their country leaving their families behind, it is not to flee persecution but of course for financial reasons. Let's stop telling stories. We are facing an economic migration, these migrants will settle."*[10]

[9] In the Facts and Fact-Check treatments we did not expose participants to the whole text of the published fact-checking articles; instead, we showed short factual statements containing the statistical figures and their sources.

[10] Source: http://lelab.europe1.fr/marine-le-pen-affirme-a-tort-que-les-refugies-sont-tres-

- **Official fact:** *The UNHCR estimates that among the migrants crossing the Mediterranean in 2015,* 17% *are women,* 25% *are children and* ***58%*** *are men.*

Argument 2: Migrants come to benefit from France's generous welfare system.

- **Alternative fact:** *MLP: "*5% *of the foreigners who come to France have a work contract. This means there are* 95% *of those coming to France who are taken care of by our nation (...). There are* ***95****% of people who settle in France who don't work, either because of their age, or because they can't as there is no work in France."*[11]

- **Official fact:** *According to the National Statistics Institute (INSEE) in 2015,* 54.8% *of the immigrant population were in the labor force (working or looking for a job) versus* 56.3% *for the rest of the French population. The rate of unemployment for the immigrant population is* 18.1% *against* 9.1% *for the rest of the population. There is therefore* ***44.9****% of the immigrant population that works (*51.1% *for the rest of the population).*

Argument 3: Refugees should really not flee but fight.

- **Alternative fact:** *MLP: "Everyone of us has good reasons to flee war, but there are also some who fight. Imagine during the Second World War, there were surely many French, believe me, who had good reasons to flee the Germans and yet, they went to fight against the Germans."*[12]

- **Official fact:** *During the First and Second World Wars, the French fled war zones in much larger numbers than the current refugees. After the defeat of the French army in the North of France in the Spring 1940, 8 million civilians, that is one quarter (****25%****) of the population of the time, took the road to go to the South of the country that was not occupied (according to Jean-Pierre Azema, a renowned French historian).*

majoritairement-des-migrants-economiques-debarquant-sans-leur-famille-2511737 (accessed on July 15, 2017).

[11]Source: http://www.liberation.fr/france/2013/12/09/le-pen-met-les-immigres-au-chomage-force_965300 (accessed on July 15, 2017).

[12]Source: http://lelab.europe1.fr/refugies-comme-nadine-morano-marine-le-pen-prend-lexemple-des-francais-qui-sont-alles-se-battre-contre-les-allemands-pendant-la-seconde-guerre-mondiale-2515045 (accessed on July 15, 2017).

Some of the "alternative facts" statements are somewhat ambiguous because one is not sure whether the statement is a lie or not. For example's MLP's "99% refugees crossing the Mediterranean are men" claim could be considered to be a figure of style that just means "mostly men." Moreover, MLP mentions that her evidence comes from pictures and is therefore not falsifiable. It is an open question whether our results would extend to the case of outright lies. We, however, believe that the type of statements that we study is highly relevant, as it is predominantly used by politicians in practice.

3.3 Setup of the experiment

In March 2017, one month before the first round of the presidential election, we conducted an online survey of 2480 French voting-age individuals using the Qualtrics online platform, an analogue of the Amazon Mechanical Turk. This platform is mostly used by companies to conduct market research. The survey respondents were drawn at random from a pool of Qualtrics subscribers, individuals who participate in online surveys for pay. The pool of potential participants of our survey was contacted by Qualtrics team via email. This email indicated the compensation fee upon completion of the survey and the link to it, which the participants could chose to click on. At the start of the survey, the participants were presented with a brief introduction to the survey indicating its focus on political preferences, voting intentions, and attitudes toward immigrants. It was also stated that only aggregate results would be published. There was no mention of any political party or political candidate. The introductory page allowed participants to drop out at that stage. The academic institutions to which we belong were not specified, since the participants might have inferred possible ideological biases of survey designers from that information. We describe the sample in detail in the next section.

The survey consisted of four parts. In the first part, we asked all participants a series of questions regarding their socio-economic characteristics, such as age, gender, education, income, religion. In addition, the first part of the survey included one question measuring the respondents' prior knowledge of facts related to immigration. In particular, we asked: "What do you think the unemployment rate among immigrants was in France in 2015?"

The respondents were asked to pick their response from 10 intervals: (1): 0-10%, (2): 11-20%, ..., (10): 91-100%.

The second part of the survey varied across treatments. The participants were randomly allocated to four equally-sized groups. Each participant in three out of four groups was asked to read a short text before going to the third part of the survey. The texts were different across groups. In the online appendix, we present the full text of each treatment.

- *Control group (Control)* received no text to read, and the respondents were immediately directed to the third part of the survey;
- *Alternative facts group (Alt-Facts)* was presented with a one-sentence introduction (*"You will read several statements by Marine Le Pen about migrants: their reasons for coming, the impact of migrants on French working and retired population; read them carefully"*), and then with quotes from MLP containing alternative facts, including those that we presented in the previous section, stating the exact date these statements were made;
- *Facts group (Facts)* was presented with a different one-sentence introduction ("*You will read below several numbers about migrants related to their reasons to come and their impact on French working and retired population; read them carefully*") followed by the real facts corresponding to alternative facts from the MLP's quotes, stating their official sources;
- *Fact-checking group (Fact-Check)* was first presented with the same text as the Alt-Facts group followed by exactly the same text as in the Facts group.

The third part of the survey was designed to measure voting intentions and attitudes toward MLP's program. In addition to asking a set of questions regarding voting intentions, we carried out a list experiment. We also used two dictator games: the first one played with a random participant and the second played with a participant who reported that he/she was likely or very likely to vote for MLP.[13]

[13]The participants got no new information or payoffs in between the two games.

The fourth part of the survey examined opinions on the reasons for migration, asking the participants whether they thought migrants were coming for security or economic reasons and then tested the participants knowledge on the three main facts used in the study.[14]

3.4 Sample, balance across treatments and descriptive statistics

The sample was drawn from five French regions, presented in Figure A1 in the online appendix. These five regions were those with the highest score for the FN in the regional elections of 2015 (as presented on the left of Figure A2 in the online appendix) and were chosen to guarantee a sufficient proportion of MLP supporters among respondents. The regions are Hauts de France, Provence-Alpes-Côte d'Azur, Occitanie, Grand Est et Centre Val de Loire.[15] Most of our sample comes from the region Hauts-de-France (35,8%), followed by Provence-Alpes-Côte d'Azur (26,1%) and Grand Est (19%).[16] MLP indeed did relatively well in these regions in the 2017 election: they ranked 1st, 2nd, 3rd, 6th, and 7th out of 13 regions of mainland France in terms of MLP's vote share in the first round of the presidential election (see the map on the right of Figure A2 in the online appendix).

We stratified our sample on education, age and gender by treatment. The sampling quotas were designed to make the sample as representative of the French adult population eligible to vote as possible.[17]

For a broad range of variables, Table 1 presents the means by treatment group (Columns 1 to 4 show the means in Alt-Facts, Fact-Check, Facts, and Control groups, respectively) and the p-values for the test of the equality of these means across different treatment

[14]The questionnaire translated into English is presented in the online appendix. The original survey in French is available online at: $https://survey.eu.qualtrics.com/jfe/form/SV\_cZ80nbVMLPTfvYFj$ (accessed on June 12, 2017).

[15]The region Bourgogne Franche Comté had a slightly higher score for the FN in the 1st round of the regional election than Centre Val de Loire, but this was an unexpected result due to the particularities of the race in the region. We thus chose Centre Val de Loire instead.

[16]The respective population of these regions in 2016 was Hauts-de-France 6 million, Occitanie 5.7M, Grand Est 5.5M, Provence-Alpes-Côte d'Azur 5M and Centre Val de Loire 2.6M. The unemployment rates in these regions was as follows in 2016: 12.2 for Hauts de France, 11.7 for Provence-Alpes-Côte d'Azur, 11.7 for Occitanie, 9.9 for Grand Est and 9.6 for Centre Val de Loire.

[17]Qualtrics allowed for three levels of quotas. We imposed quotas on gender (50% male, 50% female), on birth year (25% 1981 - 1989, 45% 1956 - 1980, 30% $\leq$ 1955), on education (high school and below 72%, undergraduate degree 12%, graduate degree 16%).

groups (columns 5 to 10). In column 11, we correct for multiple hypotheses testing. The table suggests that the four randomized groups are largely balanced in observable characteristics. The largest imbalance that we observe is in the proportion of wage earners vs. pensioners: wage earners are 7 and 5 percentage points more frequent in the Fact-Check group and in the Facts group, respectively, compared to Control and the Alt-Facts groups; and there are no significant differences between Control and Alt-Facts groups and between Facts and Fact-Check groups. In all regressions that we present below, we control for a dummy indicating whether respondent is a wage earner as well as other socio-economic characteristics.

In line with the results of the European elections of 2014, regional elections of 2015, and the presidential elections of 2017 in the regions from which the sample was drawn, 22% of the sample voted for Marine Le Pen in the previous presidential election. Television is the main source of information for the majority of respondents, that is 61% of the sample, whereas about 22% of the sample prefer to get information from the Internet and only 10% of the respondents use radio as their main source of information. In addition, we observe that our sample has a strong representation of Catholics (57%) and of those who reported no religion (37%). Table A1 in the online appendix provides summary statistics for the main variables of interest in the full sample.

3.5 Variables

3.5.1 Voting intentions

Participants were asked how likely they were to vote for MLP in the upcoming presidential election using a four-point scale ("very unlikely", "unlikely", "likely", "very likely"). We created a binary measure of voting intentions that indicates whether the respondent self-reports that she is "likely" or "very likely" to vote for Marine Le Pen.[18] To check whether self-reported measure is a valid measure of support for MLP, we use two additional methods to assess political preferences. A potential concern is the Bradley effect mentioned in the introduction. While underreporting of the intended vote for FN was a

[18]The mean of this voting intention outcome, namely, 37% is close to the vote share of MLP in the second round of the election where she obtained 34% of the vote.

big issue for pollsters during the 2002 presidential campaign leading to a surprise qualification of MLP's father for the second round of elections, underreporting is no longer quantitatively important: in the 2017 campaign pollsters applied the same intentions-to-vote correction factor to FN as to other parties and they were proven right to do so *ex post*.[19] Nevertheless, we take this issue seriously and address it in two ways.

First, we use the list method (as described in Blair and Imai, 2012). Each respondent is randomly allocated to one of the two groups: participants in the first group are presented with a list of four key MLP's competitors in the 2017 presidential elections: Francois Fillon, Benoit Hamon, Emmanuel Macron, Jean-Luc Melenchon (in random order). Participants in the second group are presented with a list of five candidates, which includes the four who appear in the list of the first group plus Marine Le Pen, also in random order. Then, all respondents, irrespective of which list they see, are asked how many politicians they support overall (see the exact formulation of the question in the Appendix). There are no questions *which* politicians the respondents support — the respondents only are asked to give the *number* of supported politicians. Due to the law of large numbers, the average difference in the number of supported politicians between the two groups reveals the average support of Marine Le Pen in the population.

The second approach is based on the dictator game with real payoffs. All participants played two dictator games in a row. In the first game they were asked how much out of 10 euros they would send to another randomly selected participant of the study. In the second game participants were asked how much out of 10 euros they would send to another randomly selected participant of the study among those who reported he/she was likely or very likely to vote for MLP. The difference in amounts transmitted between the first and the second game can be seen as a measure of support for MLP. The literature shows a strong in-group bias for supporters of the same party in such dictator games.[20]

[19]See, for instance, the articles published on June 2, 2016 in the French addition of *the Slate* magazine entitled "A taboo has fallen: the vote FN is no longer under-declared in the polls," http://www.slate.fr/story/118917/tabou-vote-fn-sondages (accessed on September 29, 2017) and on April 24, 2017 in *the Guardian* entitled "Pollsters breathe sigh of relief after calling French election right," https://www.theguardian.com/world/2017/apr/24/french-pollsters-relief-after-calling-election-right (accessed on September 29, 2017).

[20]For instance, Fowler and Kam (2007) found that Democrats and Republicans in the US both give more to the anonymous experiment participants from their own party than to those from the opposing party. In

3.5.2 Past election outcomes

As it is often harder to influence voting intentions of those voters who once already voted for the candidate (Mullainathan and Washington, 2009), we asked respondents whom they voted for in the 2012 presidential elections. In order not to contaminate the experiment by framing effect or other aspects of cognitive dissonance, we asked this question after the experiment (in the third part of the survey). This, however, means that the answers to could potentially be affected by the treatment. We check this and find that the past vote for each candidate, including MLP, is balanced across treatment and control groups as reported in Table 1. 21.6% of respondents reported having voted for MLP in 2012, which is consistent with the aggregate election results for the regions in our sample.[21]

3.5.3 Prior knowledge

In order to test how the effects of alternative facts and fact checking depends on the knowledge of voters about the subject matter, we need a measure of prior beliefs. In the first part of the survey, before the experiment, all participants were asked about their beliefs on the rate of unemployment among the immigrant population in 2015. In particular, they were asked to chose their response from ten 10-percentage-point intervals. Unemployment rate among working-age foreign-born residents of France in 2015 was 18%, thus falling into the second category. Overall, 27.1% have a correct prior, 9.6% of respondents (238 people) underestimate the unemployment rate among immigrants, and 63.3% of respondents overestimate the unemployment rate among immigrants to a varying de-

addition, they observed that independents give more to independents than to partisans, while partisans behave in the opposite way (see also Rand et al., 2009).

[21] We also asked whether respondents ever voted for the National Front in the past. In this variable, we find a small, but statistically significant imbalance: in each of the treatment groups, Alt-Facts, Fact-Check, and Facts, the share of those who voted for FN in the past is 33%, wheres as in control group, it is 38%. These differences are statistically significant but only if we do not correct standard errors for multiple hypothesis testing (see the last row of "prior voting behavior" section of Table 1). In order not to contaminate our analysis by controlling for a variable that potentially can be affected by the treatments, we do not control for whether respondents voted for FN in the past in our regressions. Note, however, that this imbalance (if it is a result of random realization) potentially could bias our results against finding positive effect of the treatments on the intention to vote for MLP compared to the control group. Consequently, our results are qualitatively similar, but stronger when this variable is included in the list of covariates (results are available upon request).

gree. 39% of respondents overestimate the unemployment among immigrants grossly, i.e., by at least two categories (believing that unemployment among immigrants is 31% or above).[22] In the analysis below, we differentiate between respondents with "correct priors," "overestimated priors" and "underestimated priors." The priors are balanced across the four treatments as can be seen from the last four rows of Table 1.

Figure A3 in the online appendix present the histograms of the answers to the question on prior knowledge splitting the sample by the level of education, vote for MLP in 2012, rural/urban status, and level of regional unemployment. The figure shows that MLP supporters in 2012 elections, rural residents, residents in regions with higher unemployment rate, and less educated respondents are more likely to overstate the level of unemployment among migrants.

4 Results

The experimental design allows us measuring the impact of alternative facts and fact checking on voting intentions and understand whether it is driven by differences in knowledge of facts or by impressions about policy conclusions. We address the following questions: How do different treatments affect voting intentions? Do the participants learn factual information differently depending on who provides it? Does knowledge of facts translate into policy impressions, such as opinions on the reasons for migration? Do policy impressions translate into voting intentions?

4.1 The average treatment effect

Figures 1-5 provide an illustration of the main results by plotting the distributions of raw outcome variables across treatments. Due to randomization and balance across treatments, our empirical methodology is based on a simple comparison of means conditional

[22]This is consistent with the results of polls that show that Europeans countries overestimate the presence of immigrants and their importance of the economy. See, for instance, the results of a study by Ipsos MORI, which shows that native populations of France, Italy, Belgium, Poland and Germany vastly overestimate the number of Muslims living in their countries, and that the largest misconception was in France: https://www.theguardian.com/society/datablog/2016/dec/13/europeans-massively-overestimate-muslim-population-poll-shows (accessed on October 12, 2017).

on several covariates. In particular, to make the estimates more precise, as the baseline, we control for the conventional determinants of political preferences. We regress the outcomes on dummies indicating each of the three treatments, namely, Alt-Facts, Fact-Check, and Facts (our main variables of interest) controlling for gender, age (linearly and as a dummy for each age quota), family status, income (with dummies for each of the 10 income categories), education (with dummies for each of the 9 education levels), regional dummies, religion dummies, a dummy indicating that the respondent is a wage-earner, and dummies for having voted for each of the main candidates in the 2012 presidential elections. In all the reported results, we adjust standard errors for heteroscedasticity.

In Table 2, we present the baseline results for the main outcomes. Panel A of the table presents the regression results. Column 1 shows that the exposure to MLP's rhetoric, *with or without* fact checking from official sources, results in additional 5 percentage points in terms of intention to vote for MLP relative to the control group. Thus even in the presence of fact checking, alternative facts do deliver political benefits for the populist politician. Moreover, exposure to facts from official sources positively affects voting intentions for MLP, with a 3 percentage point difference between Facts and the Control groups, even though this difference is not significant.

The last four rows of panel A of Table 2 report the p-values of the tests for the equality of the effects between different treatments (Alt-Facts vs. Fact-Check; Facts vs. Fact-Check; and Alt-Facts vs Facts) and of the test for whether the coefficient on the Fact-Check treatment is equal to the sum of the coefficients on the Alt-Facts and Facts treatments. The point estimates of the effects of the Alt-Facts and Fact-Check treatments are virtually identical. The point estimate of the effect of Facts treatment is substantially smaller in magnitude than that of the other two treatments; however, we cannot reject the equality of the effects across all three treatments.[23] The magnitude of the effect of Alt-Facts and Fact-Check treatments is large compared to the average intention to vote for MLP in the Control group, which is equal to 37.3% (as reported at the bottom of the table), but it is consistent with the immediate effects of political campaign ads on voting intentions

[23] As we discuss below, the fact that the effect of Alt-Facts is not significantly different from the effect of true Facts on voting intentions suggests the importance of salience as a mechanism explaining the impact of Alt-Facts.

found in the literature.[24]

In Table A2 in the online appendix, we show the effect of including controls on the point estimates and their standard errors. Columns 1 to 4 focus on voting intention outcome. In column 1, there have no controls apart from the variables that determined our sampling strategy: gender, age, education, and region dummies. In column 2, we add only the individual-level controls. Column 3 presents our baseline specification, i.e., including controls for voting in 2012 presidential elections. In column 4, in addition to baseline controls, we include the full set of interactions between the demeaned measures of past voting behaviour and treatment dummies into the list of covariates.

We find that the results for voting intentions are not statistically significant without controls for past voting behaviour. The inclusion of these controls with or without interacting them with treatment dummies reduces standard errors by about 15%, which makes a difference for the statistical significance of the average treatment effects on voting intentions for the Alt-Facts and Fact-Check treatments. The magnitude of the coefficients without controls is such that the effects would have been significant if the level of standard errors was as in the specification with the past-voting controls. The question is whether adding controls beyond strata dummies to an RCT, like ours, is a valid empirical strategy. In a general case, even when the treatment is uncorrelated with controls—which the balancing tests show to be the case in our data—adding controls to RCT could lead to an underestimation of standard errors (Freedman, 2008). However, Lin (2013) shows that this does not occur when samples are sufficiently large and covariates are balanced across treatments. Furthermore, he shows that OLS estimates generate asymptotically valid confidence intervals and consistent point estimates when a full set of treatment-covariate interactions is included. The comparison between columns 3 and 4 of Table A2 shows that the estimates are virtually the same in specifications with baseline set of controls and with interactions of controls with treatments in addition to the baseline. This suggests that the problem described in (Freedman, 2008) does not apply to our setting.

[24]The magnitudes are also comparable to those reported by Bartels (1996) who analyzes survey data on the actual voting in the U.S. presidential elections and shows that the incumbent candidate's vote share would have been five percentage points lower if all voters were "fully informed." He shows that the informed voters are more likely to vote right (Republican) rather than left (Democrat): the Republican candidate would have had two percentage points higher score if all voters were "fully informed."

Note that previous voting behaviour is an important determinant of voting intentions. In particular, having voted for MLP in the past is a single most important determinant of voting intentions. In the control group, among those who reported having voted for MLP in the past, 81% report intention to vote for her in 2017, whereas among those who did not vote for MLP in 2012, only 24% intend to vote for her in 2017. Left panel of Figure 1 illustrates the average voting intention across treatments in the absence of controls.[25]

The comparison of the effects of Alt-Facts and Fact-Check treatments suggests that fact checking is completely ineffective in undoing the persuasion effect of populist arguments based on alternative facts: both of these treatments, on average, increase the voting intention by 5 percentage points. Does this mean that fact checking fails in communicating the facts or that voters distrust official sources more than MLP? In columns 2-5 of Table 2, we address this question. In column 2, the dependent variable is the absolute value of the distance between individual (posterior) responses and the true value for the proportion of men among refugees crossing the Mediterranean. In column 3, it is the absolute value of the distance between the responses and the true value for the share of working among migrants. We find that participants do learn the statistical facts when the facts are provided to them. Both alternative facts and facts are effective but participants attach a much higher weight to the official sources compared to MLP. The absolute value of the distance to true value for both questions decreases substantially after the Facts treatment and slightly increases after the Alt-Facts treatment; both effects are statistically significant. The absolute value of the point estimate is much smaller for Alt-Facts treatment than for the Facts treatment. Furthermore, the Fact-Check treatment significantly reduces the absolute value of the distance to truth compared to the control group, suggesting that information from official sources dominates the effect of alternative facts. The effect of the Fact-Check treatment on the distance to truth is similar in magnitude to the sum of the positive effect of the Facts treatment and the negative effect of the Alt-Facts treatment.

We compare the shares of participants who report the correct answers across treat-

[25]Figure A4 in the online appendix presents differences in voting intentions across treatments separately for those who reported having voted and not having voted for MLP in the past. The figures show that, qualitatively, the effects of the treatments are similar, but the level of intention to vote for MLP is drastically different.

ments in columns 4 and 5. Alt-Facts treatment does not significantly affect the probability of being correct on either of these factual questions in sharp contrast to both Facts and Fact-Check treatments. The comparison between the results presented in columns 2 and 3 vs. columns 4 and 5 implies that MLP manages to change the opinion about the facts mostly among those who did not know these facts to begin with. We explicitly test this hypothesis below.

Facts and Fact-Check treatments increase the probability of a correct response about the share of men among refugees by 44 and 31 percentage points from the 16% mean (i.e., the share of correct responses in the control group) and increase the probability of a correct response about the share of working among migrants by 38 and 26 percentage points from the mean of 8%.

The results about the effect of treatments on posterior knowledge are not sensitive to the choice of covariates as shown on Table A3 in the online appendix. We illustrate how respondents update their posteriors on facts as a results of the treatments without any controls in Figures 2 and 3. The figures present the distributions of answers to the questions on the proportion of men among refugees and on the share of working among migrants across treatments. We do observe that the mass of respondents moves slightly toward the alternative facts in the Alt-Facts treatment and moves substantially towards the true facts in Facts and Fact-Check treatments, as compared to the control group.[26]

The evidence presented so far shows that fact checking moves voting intentions and posteriors on facts in the opposite directions. In column in column 6 of Table 2, we examine how the treatments affect voters' impressions about the reasons for refugees' migration. Respondents in both the Alt-Facts and the Fact-Check group are more likely to believe that migrants come for economic reasons. Fact checking corrects the factual knowl-

[26]Table A4 and Figure A5 in the online appendix present the results for the effect of the treatments on the respondents' knowledge about the percentage of French population that fled to the South during the Second World War. We find no significant effect of any of the treatments for the absolute value of the distance to truth, but for the probability of the correct response, treatments have similar effect as for getting correct responses on other factual questions: Alt-Facts had no effect, while Facts and Fact-Checking groups have significantly higher rate of correct responses (by 11 and 14 percentage points, respectively) compared to the Control group, in which 5% of respondents gave the right answer. Note, however, that on this particular question, MLP did not provide an actual alternative figure but just suggested that the French had not fled but had fought during the war. We relegate these results to appendix because there are no explicit alternative facts.

edge, but does not correct the policy conclusions advocated by MLP. The fact-checking treatment increases the belief that refugees come for economic reasons by 7 percentage points and alt-facts treatment by 13 percentage points (compared to the 32% mean in the control group.) The Facts treatment does not affect the policy-relevant impressions at all. We illustrate these findings in Figure 4 and show that they are also unaffected by controls in columns 4 to 6 of Table A2 in the online appendix.

Finally, column 7 of Table 2 shows that the discourse of MLP (Alt-Facts) makes people more likely to agree with her on immigration policy. Participants in the Alt-Facts group are 5 percentage points more likely to agree with MLP than those in the control group. The rate of agreement with MLP in Fact-Check and Facts treatment is not statistically different from that in the control group. Yet, both coefficients have positive signs. Panel B of Table 2 presents persuasion rates of treatments for each of the binary outcomes. In particular, the persuasion rate of MLP's narrative with or without fact-checking on voting intentions for her candidacy is about 8%. As for the beliefs about the reasons for migration, alternative facts are about twice as persuasive as alternative facts accompanied by fact checking (12 vs. 7%).[27]

As with voting intentions, for the agreement with MLP on immigration policy, standard errors are substantially smaller when we control for past voting (see results in column 9 of Table A2 in the online appendix as compared to column 7). The reason for this is that the agreement with MLP is also strongly affected by the past voting behaviour. Figure 5 illustrates the unconditional treatment effects for this outcome.

Overall, we find that alternative facts treatment does convince voters to vote for MLP, fact checking corrects the beliefs about facts but does nothing for voting intentions and only partially corrects policy conclusions of voters, the fact treatment has no significant effect on average on voting intentions or policy conclusions, but corrects posterior knowledge.

[27]The magnitudes of these persuasion rates are similar to those found in comparable papers, see Figure A6 in the Appendix. In their survey of the empirical literature on persuasion, DellaVigna and Gentzkow (2010) list thirteen estimates of persuasion rates for studies of persuading voters in different contexts. These estimates range from 1% to 20% with the mean of 10% and the standard deviation of 6%.

4.2 Heterogeneity with respect to the prior knowledge

Priors should matter for Bayesian updating. The variation in prior beliefs about the unemployment rate among migrants allows us to study the heterogeneity of the effects of the treatments with respect to prior knowledge. As described above, we measure the correctness of the prior with three dummy variables: correct, overestimated, and underestimated unemployment rate among migrants. The numbers of respondents with these types of priors are 672, 1,570, and 238, respectively.

Experimental design limited solicitation of the prior to one question only in order to avoid framing. Moreover, for that same reason, the prior and the posterior beliefs are about related, but not exactly the same questions. We start with documenting that the prior about the unemployment rate among migrants is a good proxy for the priors about the share of men among refugees and about the percentage of working migrants. We have information about the priors on all three dimensions of knowledge in the control group, as posteriors were solicited in the absence of any treatment. Table A5 presents the correlation in the control group between the answers to all three questions about facts. It shows that respondents with overestimated prior about unemployment among migrants are also more likely to believe that there is a larger share of men among refugees and smaller share of migrants working. This is true both at the extensive margin (Panel A compares the average beliefs for correct and overestimated priors on migrant unemployment rate) and intensive margin (Panel B shows the significant correlation of among the 10-category measures of knowledge). In all regressions, we control for the dummy for underestimated prior, for which we do not find significant differences from correct priors. This evidence suggests that we can use the correctness of the prior to test for heterogeneity in treatment effects.

We take the specification presented in Table 2 and add to it the dummies for correct and underestimated priors and their interaction terms with treatment dummies (leaving the respondents with overestimated priors as the comparison group). The results for the main outcome of interest, voting intentions, and for the posteriors on facts, for which priors should matter most, are presented in Table 3. The coefficients on the treatment

dummies estimate the treatment effects for the respondents with overestimated priors. Column 1 focuses on voting intentions as outcome variable. It shows that there is a large and significant effect of all three treatments, including the Facts treatment, on the voting intention for MLP. In this group of voters the mean voting intention in control group is 41%, Alt-Facts, Fact-Check, and facts treatments increase the self-reported voting intention by 8.2, 6.8, and 4.8 percentage points, respectively. The coefficients on the interaction of treatment dummies with the dummy for correct prior are negative and large in magnitude, implying that the point estimates of the treatment effects for the correct-prior group are negative 4 percentage points for Alt-Facts and Facts and about zero for Fact-Check treatment. The effects of treatments on respondents with correct priors are not statistically significant. The difference between the effects for informed respondents and uninformed respondents, who overestimate the unemployment among migrants, is significant for the Alt-Facts treatment and imprecise for the other two treatments. Nonetheless, the estimates of the treatment effects for the respondents with overestimated priors are large and precise. Right panel of Figure 1 illustrates the unconditional means of voting intentions by treatment in this group of voters. The fact that the results are larger and more precise for those who hold overestimated priors is consistent with the salience explanation (considered in the following section), which implies that the topic becomes particularly salient when the truth is far from the prior (e.g., Bordalo, Gennaioli and Shleifer, 2012, 2013). The estimates for the 238 respondents who underestimated the prior are not precise, so that we cannot conclusively differentiate them from respondents with correct or overestimated priors.

In columns 2 to 5 of Table 3 we examine how the priors affect updating beliefs about facts following the treatments. The most striking result is the difference between the effects of the Fact-Checking treatment on respondents with correct and with overestimated priors: the informed respondents update in the direction of true facts a lot more than the uninformed respondents. Note also that Alt-Facts treatment has a precisely-estimated zero effect on the the probability to get a correct posterior on the share of men among refugees and on the share of migrants working among those respondents whose prior is correct. This evidence suggests that respondents behave as Bayesian updaters, who have

higher confidence in the official sources than in MLP, when they update their knowledge of facts. Figures A7 and A8 in the online appendix provide further evidence in that regard. They show how the non-parametric relationship between the prior and the posterior is affected by the treatments. For every prior, the Facts and the Fact-Check treatments lower the posterior on the share of men among refugees (with a stronger effect of the Facts treatment), whereas the Alt-Facts treatment increases respondents' posteriors about the share of men among refugees and about immigrants' employment rates. Overall, we find overwhelming evidence that participants learn the facts whenever exposed to them.

4.3 Interpretation

To sum up, our main findings are as follows: fact checking corrects posterior knowledge of facts, but does not undo the strong persuasion effect of alternative facts and the effects are stronger for uninformed voters, such that all treatments lead to a significant increase in intention to vote for MLP among respondents with overestimated priors. While we cannot establish all the exact mechanisms driving these results because our experimental design is not suited for testing between alternative mechanisms, below we discuss whether the non-experimental evidence is consistent with four potential explanations behind these results. We first examine whether our results could be explained by two purely technical explanations: the non-linear relationship between facts and voting intentions and Experimenter Demand Effects and conclude that they cannot be. Second, we consider two potential mechanisms: (1) treatments are viewed by voters as two-dimensional signal: providing information about the quality of the candidate and about facts and (2) treatments increasing the salience of the immigration issue. We argue that both of these potential channels can be at play, but the salience mechanism is necessary to explain all pieces of evidence.

4.3.1 Nonlinearities in mapping facts to votes

The conflicting effects of fact-checking treatment on posteriors about facts and on voting intentions could emerge if the relationship between facts and voting intentions were

highly non-linear. To illustrate this, suppose that the support for MLP depends only on the beliefs about the unemployment rate among immigrants. Suppose further that voters have a simple decision rule in which they vote for MLP if they think that the unemployment among immigrants is above 10%. If the prior is uniformly distributed, the average belief about the unemployment among migrants in the control group would have been 50% and the share of MLP supporters would have been 90%. Further, suppose that voters have full confidence in the official figures, which means that in the Facts and Fact-Check treatments they learn that the unemployment rate among immigrants is 18%. In that case, the average posterior beliefs would have converged to the true value, i.e., would have fallen from 50 to 18%, but the voting intentions would have increased from 90 to a 100%. This theoretical possibility is, however, not supported by our data. In Figure A9 in the online appendix we plot the unconditional non-parametric relationships between factual knowledge in the control group and the likelihood of voting for MLP; this exercise does not reveal any striking nonlinearities, suggesting that this mechanism is not at play.

4.3.2 Experimenter demand effects

Large magnitudes of effects in experimental studies may be driven by the Experimenter Demand Effects (EDE) (Zizzo, 2010), such as the Hawthorne effect.[28] Even though it is difficult to rule out such effects formally, they seem unlikely for the outcome of voting intentions in our study for three reasons. First, for the demand effect to be the main driver of the magnitude, the participants would have to infer from the way we present the evidence on MLP (which was rather neutral) that we actually want them to express support for MLP. Second, to generate the comparison between Alt-Facts and Fact-Check treatment, they would in addition need to infer that the facts can be ignored when they report voting intentions. Note that it was very difficult to make inferences about our own preferences based on the experiment's introduction.[29]

[28]See, however, Mummolo and Peterson (2018) who show that in studies like ours EDEs are actually uncommon.

[29]One cannot completely rule out experimenter demand effects for the posteriors on facts if the respondents believed that the survey designers shared the official rather than MLP's version of facts, despite the fact that there was no indication of experimenter preferences or affiliations presented to the participants. Yet, if the pro-establishment EDE were present for the facts treatment, they should have worked in the

4.3.3 Signal about the candidate

It could be that case that the MLP's statements provide information about the candidate herself in addition to numbers and the narrative's conclusion. If this information is positive, the treatments could lead to a boost in MLP's electoral support irrespective of the treatments' impact on the posteriors on facts. One possibility is that the narrative based on numbers makes MLP look more competent. If the prior of a median voter is that she is not familiar with statistical facts, the quotes in the treatment may impress the respondents with MLP's command of statistics. Alternatively, the MLP's rhetoric could signal that she has different policy positions from her father, who was the leader of the National Front before her and held extreme nationalistic views. As the MLP's quotes justify the tough immigration policy by economic needs rather than outright xenophobia (which was the case for her father), they could be seen as a positive signal and as a result increase her political support.

Updating on facts and quality of the candidate separately could explain why MLP's rhetoric in Alt-Facts treatment is effective in changing voting intentions in her favor compared to the control group. Is this mechanism consistent with the results for the other treatments? The respondents appear to accept the Fact-Check correction of the numbers (as documented in Table 2), and so believe that MLP is proven wrong. If competence is the quality of the candidate, on which the voters update, Fact-Check treatment should decrease their propensity to vote for her, as they learn that her numbers are not correct after all.

If the quality that the voters update on is MLP's distance from her father's views, Fact-Check should be completely ineffective because what is important is that MLP views immigration as an economic problem rather than a threat to French national identity. The actual numbers used in MLP's narrative are irrelevant for the conclusion how extreme or moderate her policy positions are. Thus, updating on MLP's distance from her father in addition to numbers is consistent with the results for both Alt-Facts and Fact-Check treatments.

opposite direction to our findings for the voting intentions, making participants less likely to report voting intentions for MLP in all treatments containing the official facts.

However, updating on the quality of MLP as a candidate cannot explain why Facts alone have a positive impact on MLP's vote share among the uninformed voters, since MLP is never mentioned in this treatment.

4.3.4 Salience

Finally, we consider a possibility that the effects of the Fact-Check and Facts treatments could be driven by raising salience of the immigration issue in voters' minds. Thinking about immigration may bring about fears associated with it and, therefore, could shift voters closer to MLP's agenda, who has always identified immigration as the top issue of her agenda. The salience mechanism can explain that the Facts treatment significantly increases the propensity to vote for MLP among voters who overestimate the unemployment among migrants since these voters presumably have higher fears associated with immigration.

Below, we discuss whether the salience mechanism is consistent with the results in the full sample. We start by showing that beliefs about facts are related to political outcomes independently of the treatments. In order to do so, we regress the three political outcomes (voting intentions, beliefs of respondents about the reason for refugees to come to France, and the general agreement with MLP on immigration policy) on the individual beliefs about the share of men among refugees and the share of working among migrants, focusing only on the Control subsample. Columns 1, 3, and 5 of Table 4 present the results. In the absence of any treatment, all three outcomes are significantly associated with stronger beliefs that refugees come for economic reasons and that immigrants do not work.[30]

Given this relationship, the salience mechanism implies the following testable predictions. After controlling for posteriors on facts, all the treatments—including the Facts

[30]In Figures A9, A10, and A11 we present the relationships (again, for the Control group) between, on the one hand, the factual beliefs (on unemployment among migrants, their employment rates and share of men among refugees) and, on the other hand, the voting intentions, agreement with MLP on immigration issues, and the belief that immigrants come for economic reasons. The graphs are generally consistent with the results in the Columns 1, 3, and 5 of Table 4. An important takeaway from Figure A11 is that the French voters interpret the "economic reason" as the risk that immigrants come to abuse France's generous welfare system rather than to "steal jobs." If the latter were the case, the voters would be more likely to believe that the reason to migrate is economic whenever they believed that most migrants actually work and are never unemployed. This is not what the second and the third charts in Figure A11 show.

treatment—should have a positive effect on the support for Marine Le Pen in the full sample. This is because all three treatments, including the Facts treatment, attract voters' attention to the issue of immigration. Furthermore, controlling for posteriors on facts, the effects of both the Facts treatment and the Fact-Check treatment should be larger in magnitude than without such a control because these treatments make people update away from the belief that immigrants pose a threat to them. In contrast, the effect of the Alt-Facts treatment should decrease in magnitude with the inclusion of the controls for the posteriors on facts because this treatment moves factual beliefs in the anti-immigrant direction.

Columns 2, 4, and 6 of Table 4 test and confirm these predictions. Controlling for the (posterior) beliefs about the share of men among refugees and the share of working among immigrants, Facts treatment, despite having no negative content about refugees, makes people significantly more likely to report intention to vote for MLP, more likely to agree with her on immigration policy and more likely to believe that refugees come for economic rather than security reasons. The magnitudes of both Facts and Fact-Check treatments conditional on posteriors on facts are larger than without this control (which can be seen from comparing the coefficients on treatment dummies in Tables 2 and 4) and the opposite is true for the effect of the Alt-Facts treatment, which, nonetheless, remains positive for all outcomes and statistically significant and rather large for the belief about the economic reason for refugees to come.

The salience mechanism explains why fact checking is ineffective: the effect of the shift in factual knowledge, which makes voters move away from the anti-immigrant policy position, is compensated by the increased salience of the issue of immigration.

Overall, the salience mechanism can explain all our results, possibly in combination with the mechanism related to updating on MLP's degree of extremism.

5 Additional results

5.1 Credibility of self-reported voting intentions

In the analysis above we proxied the support for Marine Le Pen by the self-reported voting intentions. In this section we check the validity of this measure.

5.1.1 Evidence from the dictator games

In order to check whether the self-reported voting intentions are not a cheap talk, we administered two dictator games involving real payoffs to survey participants (see section 3.5.1). In the first game, every respondent was given a 10 percent chance to win 10 euros. He/she was *ex ante* requested to decide which part of this prize he/she would share with another, randomly selected respondent. The second game was exactly the same except that respondents were told that they are sharing the money with another participant randomly selected among those who reported that they were likely or very likely to vote for MLP in the upcoming election. 42% of respondents did not share any money with a random counterpart; 50% of respondents did not share money with a MLP supporter; 18.5% of respondents decided to share a higher amount with a potential MLP voter than with a random participant; 13.2% of respondents chose to give some money to a random participant but gave nothing to a MLP supporter.

In Panel A of Table 5, we examine how donations in these dictator games are related to self-reported voting intentions and whether outcomes of dictator games were affected by the treatments. In column 1 we show that the amount given to a MLP supporter is highly correlated with self-reported willingness to vote for MLP. Column 2 shows that the individuals reporting intention to vote for MLP are less likely to make a donation to a random participant and are more likely to give to another MLP supporter. As we express donations in euros (with the potential range from 0 to 10), a one euro increase in a donation to a MLP supporter, conditional on the amount donated to a random counterpart, is associated with additional 3.9 percentage points in the probability to vote for MLP. In column 3, we show that those who shared monetary payoffs with a random participant,

but gave no money to an MLP supporter are 18.4 percentage points less likely to be supporters of MLP themselves. These results suggest that the self-reported voting intentions do reflect the real preferences of respondents.

The last two columns Panel A of Table 5 examines differences in the outcome of dictator games across treatments. In column 5, we show that there is no significant effect of treatments on the amounts donated to the MLP supporters in the second dictator game. Column 6, however, shows that people who donated a non-zero amount to a random counterpart and gave strictly zero a MLP supporter are significantly less frequent in Alt-Facts group. Among those who gave non-zero amounts in the first dictator game, those who received Alt-Facts treatment are 3.5 percentage points more likely to give to MLP supporters as well. The effects of other treatments on this outcome are imprecisely estimated, but have the same sign as the effects of treatments on voting intentions.

Given that the overall rate of donations is rather small, and therefore, one would need very large samples to detect significant differences across treatments, we take this evidence as supportive of the conclusion that we can rely on voting intentions as an informative measure of political preferences. Another reason to use the survey question rather than the approach using the dictator game is that donations are on average low, even in the first dictator game where 41.7% of the participants transferred 0, compared to the standard results in the literature (Fowler and Kam, 2007; Rand et al., 2009). It is worth noting that there are two differences between our setup and the conventional dictator games. First, we stated that there was one chance out of ten that participants would actually receive the amount and have the transfer implemented. Second, the amounts were expressed in Qualtrics points rather than euros, yielding higher nominal amounts.[31] Both differences might account for the nonstandard behavior of our subjects in the dictator game. Future research could use the behavior of the dictator game as an outcome variable with larger samples and a more standard version of the dictator game.

[31] 10 euros is equivalent to 2500 Qualtrics points. These points are used also to reward the participation in the survey and can be used as currency with the Qualtrics partners.

5.1.2 Evidence from the list experiments

We use the results of the list experiment (see section 3.5.1) as yet another check of the validity of self-reported voting intentions. Panel B of Table 5 reports the results. In the first column, we regress the response about the total number of supported politicians from the list on a dummy indicating whether the list contained the name of Marine Le Pen. The estimated coefficient on this dummy equals 0.44. This implies that in our sample about 44% of the respondents support MLP. This is slightly higher than 39% share of those who self-reported their intention to vote for MLP. This difference may mean that about 5% of voters do support MLP but are not willing to openly declare intentions to vote for her. However, this difference may also be due to the difference in the formulations of the list experiment's question ("overall support of the politician's program") and the voting intention question ("intention to vote"). On that point, we note that the percentage of participants reporting 0 candidates in the list without MLP is 35% while it is 18% in the list with MLP. The difference between these two figure corresponds closely to the percentage of individuals reporting to be very likely to vote for MLP, suggesting that many participants considered a rather conservative interpretation of "overall support of the politician's program."

In columns 2 and 3 of Table 5 we check whether support for Marine Le Pen inferred from the list experiment is higher among those who declared an intention to vote for her. In particular, we repeat the exercise presented in column 1 separately for the subsample of those who did and who did not declare intention to vote for MLP (columns 2 and 3, respectively). As expected, the inferred level of support for MLP is much higher among those who self-report their support of her: 91.5% vs. 12%. To show that this difference is statistically significant we use the whole sample and add the voting intention dummy and its interaction with the dummy for the list with MLP to the set of covariates (in column 4). The coefficient on the interaction term is highly statistically significant. The confidence interval for the inferred support for MLP among those who self-declare the intention to vote for her is $[0.79; 1.04]$ and therefore includes 1. Thus, we cannot reject the hypothesis that everyone who reported intention to vote for MLP supported her in the

list experiment.

Finally, in the last column of Table 5, we report the estimates of the inferred support for MLP in each of the treatment groups and in the control group. The sample size is not sufficiently large for the differences in the inferred support for MLP to be significantly different across treatments, but the differences in magnitudes of point estimates are consistent with the effects of the treatments on voting intentions. The inferred support for MLP is the lowest in the control group, and is equal to 38%. It is 46% in both Alt-Facts and Fact-Checking groups, and it is 45% in the Facts group. (Formal tests cannot reject equality of any of these numbers.) Overall, the list experiment's results also suggest that the self-reported voting intentions are rather reliable.

5.2 Heterogeneity with respect to other observables

Tables A6 and A7 in the online appendix explore potentially relevant dimensions of heterogeneity of treatment effects on the main political outcomes (voting intentions, the dummy for a belief that refugees come for economic reason, and a dummy for agreement with MLP on immigration policy) and on posteriors on facts (absolute value of the distance to truth on the posterior beliefs about the share of men among refugees and absolute value of the distance to truth on the posterior about the share of working among migrants). Each panel of these Tables presents the coefficients on the interaction terms between each treatment and a particular characteristic from five different regressions. We also present the coefficients estimating direct effects of these characteristics in the control group, when they matter for interpretation of the results about the treatment heterogeneity.

In Panel A of Table A6, we show that having voted for MLP in the past does not interact with treatments despite being an important determinant of voting intentions. In Panel B, we show that those individuals who get their news mainly from TV (about 60% of the sample) are more responsive to MLP's arguments when it comes to voting intentions and posteriors on the reasons for refugees to come. In contrast, Panel D shows that Alt-Facts treatment is less effective on those who get their news from internet (20% of

the sample). Panel D shows that those who get most of their income from social security and pensions (35% of the sample) are, on average, more inclined to vote for MLP, but their voting intentions are less sensitive to any of the treatments than for the rest of the population. In Panel E, we show that having completed secondary education (62% of the sample) makes people adjust their posteriors more toward the truth after being exposed to official information in facts and fact-checking treatments, but does not affect sensitivity of respondents' voting intentions to treatments.

Panel A of Table A7 shows that individuals with higher income tend to be more sensitive to official information in the Fact-checking and Facts treatment, which makes them less likely to believe that refugees come for economic reason. The rest of the Table A7 shows no heterogeneity of treatments' effects with respect to age, gender, being a second-generation immigrant (we have no first-generation immigrants in the sample), self-reported score on the left-right political axis, or regional-level election results.

6 Concluding remarks

We report the results of an online randomization experiment to measure the persuasion power of alternative facts and the effectiveness of fact checking to counter their impact. We find that fact checking can correct biases in factual knowledge introduced by politically-charged alternative facts. Voters update their priors as rational Bayesian updaters with greater confidence in official sources than in politicians providing alternative facts. On the other hand, the fact checking's success in correcting factual knowledge does not translate into an impact on voting intentions. Alternative facts are equally effective with and without fact checking in convincing voters to vote for the politician who uses narratives based on alternative facts.

We cannot definitively establish the mechanism behind these results, but the evidence is consistent with a hypothesis that mentioning the immigration issue in alternative facts or real facts statements raises salience of this issue in voters minds, which in turn moves some voters toward anti-immigration policy agenda. In addition, it is possible that alternative-facts narrative in our experiment was interpreted by voters as a signal

not only about the state of the word, but also about the candidate herself.

Taken together, our results suggest that providing the correct statistical evidence is not sufficient to counter the effect that populist politicians have on voters. When a statistical fact is used in a narrative presenting a logical link to reach a conclusion, fact checking would presumably need to question the policy conclusion, using the correct facts, logical links and narratives. In our experiment, fact checking is the exposure of voters to raw facts from official sources. In practice, fact checkers do sometimes produce longer analyses and discussions of facts. For instance, the article in newspaper *Le Monde* which fact checked the statement by Marine Le Pen on the proportion of men among refugees, embedded true facts in a short narrative containing several paragraphs. The exposure to this sort of fact checking may have a different effect from the one demonstrated by our experiment.

The effects of counter-narratives are understudied and should become subject of future research. However, if salience is, indeed, one of the mechanisms behind our results, the main conclusion of our paper should hold even in the case of a counter-narrative: by insisting on the same issue as the original political communication based on alternative facts, fact checking may contribute to an increase in the salience of this issue, which may indirectly serve the goal of the original communication.This assertion, however, needs to be verified by future research as the salience mechanism should be studied directly in experimental setting.

References

Adena, Maja, Ruben Enikolopov, Maria Petrova, Veronica Santarosa, and Ekaterina Zhuravskaya. 2015. "Radio and the Rise of The Nazis in Prewar Germany." *The Quarterly Journal of Economics*, 130(4): 1885–1939.

Alesina, Alberto, Armando Miano, and Stefanie Stantcheva. 2018. "Immigration and Redistribution." *CEPR Discussion Paper 13035*.

Allcott, Hunt, and Matthew Gentzkow. 2017. "Social Media and Fake News in the 2016 Election." *Journal of Economic Perspectives*, 31(2): 211–36.

Bartels, Larry. 1996. "Uninformed Votes: Information Effects in Presidential Elections." *American Journal of Political Science*, 40(1): 194–230.

Bassi, Vittorio, and Imran Rasul. 2017. "Persuasion: A case study of papal influences on fertility-related beliefs and behavior." *American Economic Journal: Applied Economics*, 9(4): 250–302.

Bénabou, Roland, and Jean Tirole. 2016. "Mindful economics: The production, consumption, and value of beliefs." *The Journal of Economic Perspectives*, 30(3): 141–164.

Bénabou, Roland, Armin Falk, and Jean Tirole. 2018. "Narratives, Imperatives, and Moral Reasoning." National Bureau of Economic Research Working Paper 24798.

Berinsky, Adam J. 2015. "Rumors and health care reform: experiments in political misinformation." *British Journal of Political Science*, 1–22.

Blair, Graeme, and Kosuke Imai. 2012. "Statistical analysis of list experiments." *Political Analysis*, 47–77.

Bordalo, Pedro, Nicola Gennaioli, and Andrei Shleifer. 2012. "Salience theory of choice under risk." *Quarterly Journal of Economics*, 127(3): 1243–1285.

Bordalo, Pedro, Nicola Gennaioli, and Andrei Shleifer. 2013. "Salience and Consumer Choice." *Journal of Political Economy*, 121(5): 803–843.

Bursztyn, Leonardo, Georgy Egorov, and Stefano Fiorin. 2017. "From Extreme to Mainstream: How Social Norms Unravel." National Bureau of Economic Research, Inc NBER Working Papers 23415.

Chiang, Chun-Fang, and Brian Knight. 2011. "Media Bias and Influence: Evidence from Newspaper Endorsements." *The Review of Economic Studies*, 78(3): 795–820.

DellaVigna, Stefano, and Ethan Kaplan. 2007*a*. "The Fox News effect: Media bias and voting." *The Quarterly Journal of Economics*, 122(3): 1187–1234.

DellaVigna, Stefano, and Ethan Kaplan. 2007*b*. "The Fox News Effect: Media Bias and Voting." *The Quarterly Journal of Economics*, 122(3): 1187–1234.

DellaVigna, Stefano, and Matthew Gentzkow. 2010. "Persuasion: Empirical Evidence." *Annual Review of Economics*, 2(1): 643–669.

DellaVigna, Stefano, Ruben Enikolopov, Vera Mironova, Maria Petrova, and Ekaterina Zhuravskaya. 2014. "Cross-border media and nationalism: Evidence from Serbian radio in Croatia." *American Economic Journal: Applied Economics*, 6(3): 103–32.

Edwards, Kari, and Edward E Smith. 1996. "A disconfirmation bias in the evaluation of arguments." *Journal of Personality and Social Psychology*, 71(1): 5.

Enikolopov, Ruben, Maria Petrova, and Ekaterina Zhuravskaya. 2011. "Media and political persuasion: Evidence from Russia." *American Economic Review*, 101(7): 3253–85.

Fowler, James H, and Cindy D Kam. 2007. "Beyond the self: Social identity, altruism, and political participation." *Journal of Politics*, 69(3): 813–827.

Freedman, David A. 2008. "On regression adjustments to experimental data." *Advances in Applied Mathematics*, 40(2): 180–193.

Gentzkow, Matthew. 2006. "Television and voter turnout." *The Quarterly Journal of Economics*, 121(3): 931–972.

Gentzkow, Matthew, Jesse M Shapiro, and Michael Sinkinson. 2011. "The effect of newspaper entry and exit on electoral politics." *American Economic Review*, 101(7): 2980–3018.

Gerber, Alan S, Dean Karlan, and Daniel Bergan. 2009. "Does the media matter? A field experiment measuring the effect of newspapers on voting behavior and political opinions." *American Economic Journal: Applied Economics*, 1(2): 35–52.

Gerber, Alan S., James G. Gimpel, Donald P. Green, and Daron R. Shaw. 2011. "How Large and Long-lasting Are the Persuasive Effects of Televised Campaign Ads? Results from a Randomized Field Experiment." *The American Political Science Review*, 105(1): 135–150.

González, Felipe, and Mounu Prem. 2018. "Can television bring down a dictator? Evidence from Chile's "No" campaign." *Journal of Comparative Economics*, 46(1): 349–361.

Graves, Lucas, and Federica Cherubini. 2016. "The Rise of Fact-Checking Sites in Europe." Reuters Institute for the Study of Journalism, University of Oxford.

Grigorieff, Alexis, Christopher Roth, and Diego Ubfal. 2016. "Does Information Change Attitudes Towards Immigrants? Representative Evidence from Survey Experiments." Institute for the Study of Labor (IZA) IZA Discussion Papers 10419.

Guess, Andrew, and Alexander Coppock. 2018. "Does Counter-Attitudinal Information Cause Backlash? Results from Three Large Survey Experiments." *British Journal of Political Science*, Forthcoming: 1–19.

Hatton, Timothy J. 2017. "Public Opinion on Immigration in Europe: Preference versus Salience." Institute for the Study of Labor (IZA) IZA Discussion Papers 10838.

Kuziemko, Ilyana, Michael I Norton, Emmanuel Saez, and Stefanie Stantcheva. 2015. "How elastic are preferences for redistribution? Evidence from randomized survey experiments." *The American Economic Review*, 105(4): 1478–1508.

Lin, Winston. 2013. "Agnostic notes on regression adjustments to experimental data: Reexamining Freedman's critique." *The Annals of Applied Statistics*, 7(1): 295–318.

Lord, Charles G, Lee Ross, and Mark R Lepper. 1979. "Biased assimilation and attitude polarization: The effects of prior theories on subsequently considered evidence." *Journal of personality and social psychology*, 37(11): 2098.

Mocanu, Delia, Luca Rossi, Qian Zhang, Marton Karsai, and Walter Quattrociocchi. 2015. "Collective attention in the age of (mis) information." *Computers in Human Behavior*, 51: 1198–1204.

Mullainathan, Sendhil, and Ebonya Washington. 2009. "Sticking with Your Vote: Cognitive Dissonance and Political Attitudes." *American Economic Journal: Applied Economics*, 1(1): 86–111.

Mummolo, Jonathan, and Erik Peterson. 2018. "Demand effects in survey experiments: An empirical assessment." *American Political Science Review*, 1–13.

Nyhan, Brendan, and Jason Reifler. 2010. "When corrections fail: the persistence of political misperceptions." *Political Behaviour*, 32(2): 303–330.

Nyhan, Brendan, and Jason Reifler. 2015. "Does correcting myths about the flu vaccine work? An experimental evaluation of the effect of correcting information." *Vaccine*, 33: 459–464.

Nyhan, Brendan, Ethan Porter, Jason Reifler, and Thomas Wood. 2017. "Taking Corrections Literally But Not Seriously? The Effects of Information on Factual Beliefs and Candidate Favorability." Unpublished.

Rand, David G, Thomas Pfeiffer, Anna Dreber, Rachel W Sheketoff, Nils C Wernerfelt, and Yochai Benkler. 2009. "Dynamic remodeling of in-group bias during the 2008 presidential election." *Proceedings of the National Academy of Sciences*, 106(15): 6187–6191.

Robbett, Andrea, and Peter Hans Matthews. 2018. "Partisan bias and expressive voting." *Journal of Public Economics*, 157: 107–120.

Romano, Joseph P, and Michael Wolf. 2005. "Exact and approximate stepdown methods for multiple hypothesis testing." *Journal of the American Statistical Association*, 100(469): 94–108.

Shiller, Robert J. 2017. "Narrative Economics." *American Economic Review*, 107(4): 967–1004.

Swire, Briony, Adam Berinsky, Lewandowsky, and Ullrich Ecker. 2017. "Processing political misinformation: comprehending the Trump phenomenon." *Royal Society Open Science*, 4(3).

Taber, Charles S, and Milton Lodge. 2006. "Motivated skepticism in the evaluation of political beliefs." *American Journal of Political Science*, 50(3): 755–769.

Wood, Thomas, and Ethan Porter. 2016. "The Elusive Backfire Effect: Mass Attitudes' Steadfast Factual Adherence." Unpublished.

Zaller, John R. 1992. *The Nature and Origins of Mass Opinion.* Cambridge: Cambridge University Press.

Zhuravskaya, Ekaterina, Maria Petrova, and Ruben Enikolopov. 2019. "Political Effects of the Internet and Social Media." Annual Review of Economics, submitted, https://doi.org/10.1146/annurev-economics-081919-050239.

Zizzo, Daniel John. 2010. "Experimenter Demand Effects in Economic Experiments." *Experimental Economics*, 13(1): 75–98.

Figures

FIGURE 1: Voting intentions, by treatment

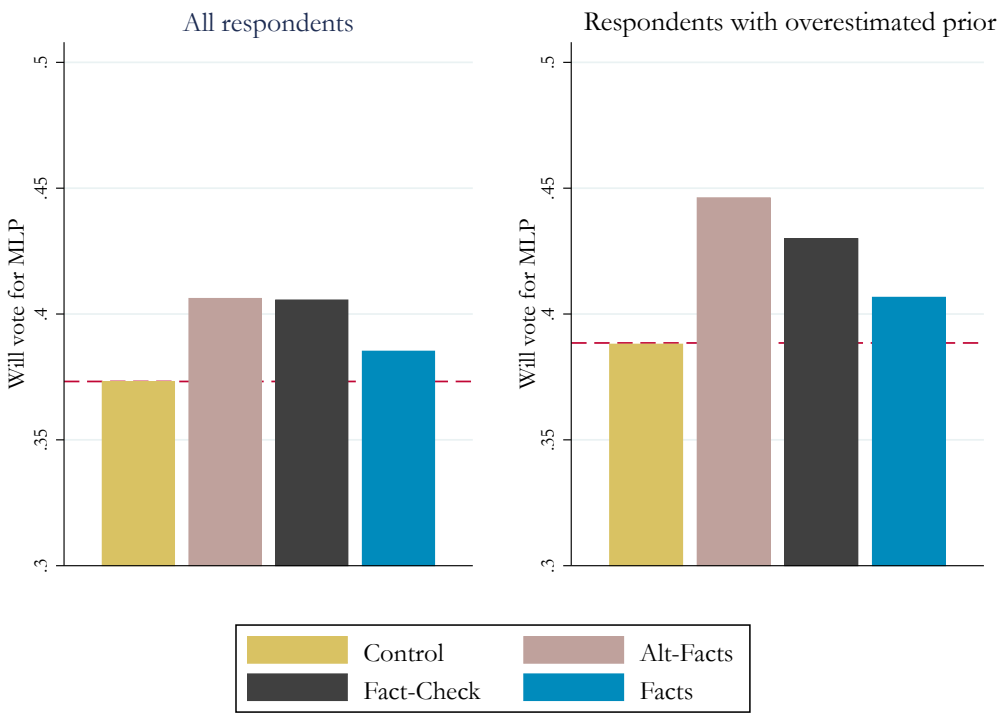
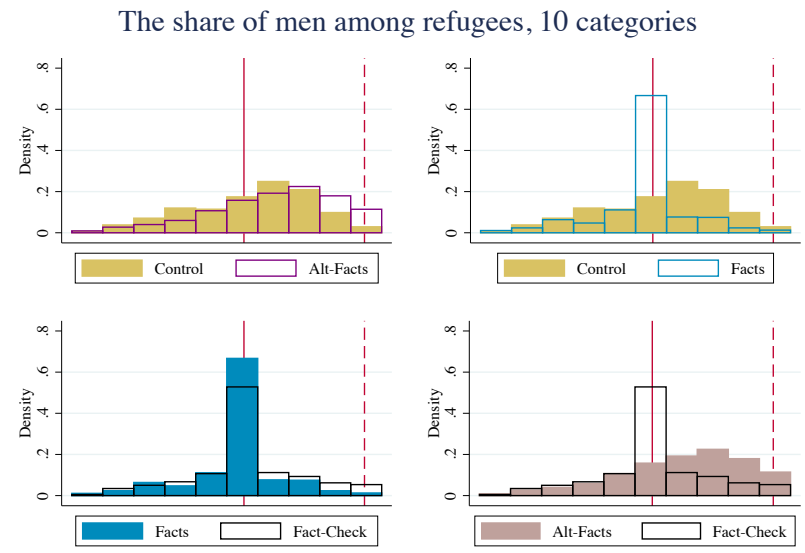
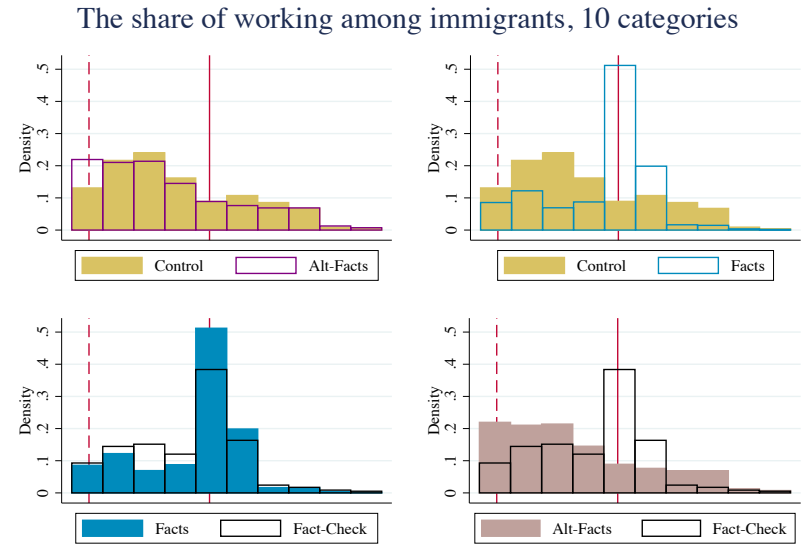


FIGURE 2: Posterior beliefs on proportion of men among refugees



Note: Horizontal axis represents the 10 percentage point intervals for the proportion of men among refugees.

FIGURE 3: Posterior beliefs on the share of working among migrants



Note: Horizontal axis represents the 10 percentage point intervals for the share of working among migrants.

FIGURE 4: Reported reasons for migrants to come

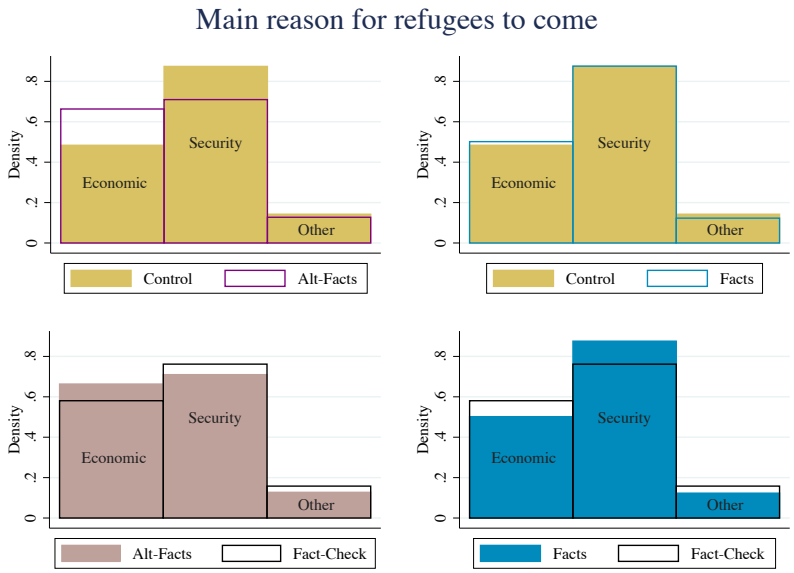
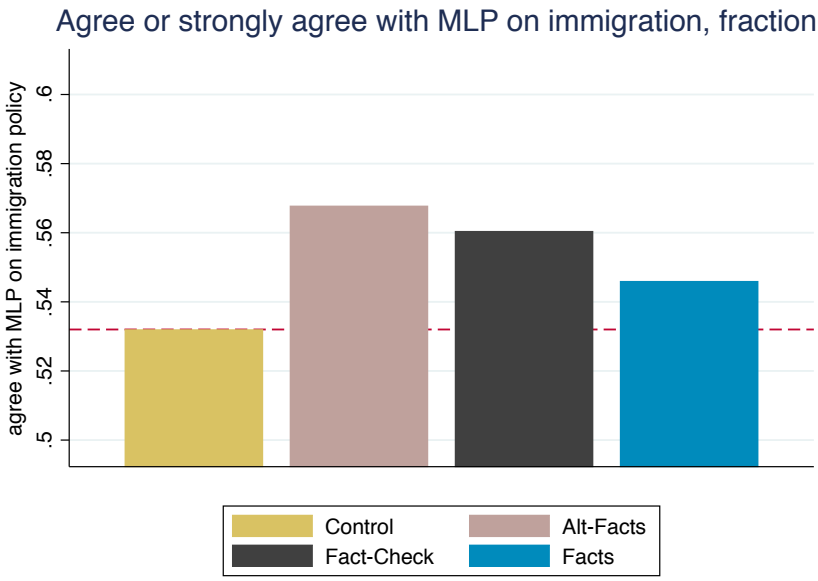


FIGURE 5: Overall policy impressions: agreement with MLP on immigration policy



Tables

TABLE 1: Balancing test across randomized groups

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
	Mean of variable by treatment				P-value for the test of equality of means						Signif. under
	Alt-Fact	Fact-Check	Facts	Control	Alt-Fact vs Control	Fact-Check vs Control	Facts vs Control	Alt-Fact vs Fact-Check	Facts vs Fact-Check	Alt-Fact vs Facts	multiple hypotheses testing:
Socio-economic characteristics											
Have children	0.68	0.71	0.70	0.70	0.48	0.69	0.97	0.27	0.73	0.46	No
Number of children	2.08	2.19	2.10	2.10	0.73	0.18	0.97	0.09*	0.18	0.77	No
Married	0.49	0.48	0.43	0.41	0.01**	0.02**	0.67	0.87	0.06*	0.04**	No
Single	0.18	0.20	0.23	0.21	0.30	0.72	0.36	0.49	0.20	0.05*	No
Income level	4.95	5.03	4.91	4.76	0.17	0.05***	0.27	0.55	0.38	0.78	No
Land owner	0.50	0.53	0.51	0.48	0.53	0.10*	0.27	0.31	0.60	0.63	No
Student	0.05	0.04	0.03	0.04	0.41	0.62	0.54	0.74	0.27	0.15	No
Unemployed	0.08	0.08	0.09	0.08	0.90	0.99	0.68	0.89	0.68	0.59	No
Full or part time worker	0.52	0.48	0.51	0.53	0.86	0.08*	0.55	0.11	0.24	0.67	No
Retired	0.24	0.31	0.26	0.26	0.49	0.05**	0.99	0.01***	0.05**	0.48	No
Source of income – wage	0.63	0.53	0.57	0.62	0.83	0.00***	0.05**	0.00***	0.15	0.03**	Yes (at 1%)
Source of income – social benefits	0.06	0.08	0.08	0.06	0.73	0.16	0.21	0.29	0.90	0.36	No
Source of income – pension	0.25	0.32	0.29	0.26	0.72	0.01**	0.14	0.01***	0.36	0.06**	Yes (at 10%)
Source of news – TV	0.58	0.65	0.61	0.60	0.35	0.10	0.74	0.01***	0.19	0.21	No
Source of news – radio	0.11	0.09	0.10	0.09	0.20	0.76	0.62	0.11	0.42	0.42	No
Source of news – internet	0.23	0.20	0.21	0.24	0.82	0.09*	0.22	0.15	0.66	0.32	No
Religion – Catholic	0.54	0.60	0.56	0.57	0.25	0.32	0.59	0.03**	0.12	0.54	No
Religion – Muslim	0.03	0.02	0.02	0.02	0.26	0.73	0.43	0.14	0.25	0.73	No
Religion – none	0.38	0.34	0.38	0.37	0.67	0.30	0.62	0.14	0.13	0.95	No
Prior voting behavior											
Voted in 2012 – Hollande	0.22	0.21	0.22	0.19	0.21	0.29	0.13	0.83	0.64	0.80	No
Voted in 2012 – Sarkozy	0.20	0.21	0.23	0.20	0.97	0.73	0.16	0.76	0.28	0.17	No
Voted in 2012 – Melenchon	0.07	0.07	0.05	0.07	0.81	0.88	0.19	0.93	0.24	0.29	No
Voted in 2012 – Le Pen	0.22	0.22	0.20	0.23	0.61	0.70	0.27	0.90	0.47	0.56	No
Voted in 2012 – Other candidate	0.12	0.10	0.12	0.12	0.61	0.28	0.99	0.11	0.28	0.62	No
Did not vote in 2012	0.18	0.20	0.18	0.20	0.30	0.94	0.28	0.32	0.31	0.97	No
Voted for FN in the past	0.33	0.33	0.33	0.38	0.05*	0.05**	0.05*	0.99	0.99	0.99	No
Prior knowledge											
Unemployment rate among immigrants, scale 1-10	3.56	3.54	3.63	3.60	0.74	0.60	0.78	0.54	0.85	0.42	No
Correct prior, dummy	0.29	0.26	0.26	0.28	0.73	0.36	0.57	0.37	0.21	0.73	No
Overestimated prior, dummy	0.62	0.64	0.64	0.63	0.80	0.65	0.65	0.48	0.48	1.00	No
Underestimated prior, dummy	0.09	0.10	0.10	0.09	0.91	0.54	0.92	0.82	0.46	0.61	No

Note: First four columns present mean values by randomized groups and the rest of the table presents p-values for the test of difference in means across groups. Standard errors are corrected for heteroscedasticity. Last column reports the results of these balancing tests if one, in addition to heteroscedasticity, corrects for the multiple hypotheses testing (Romano and Wolf, 2005). * $p \leq 0.05$, ** $p \leq 0.01$, *** $p \leq 0.001$.

TABLE 2: Effect of the treatments on the main outcomes

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Panel A: Differences in outcomes across treatments							
Dep.Var.	Will vote for MLP	Distance to truth on %: men-refugees	Distance to truth on %: migrants working	Correct posterior on %: men-refugees	Correct posterior on %: migrants working	Reason for refugees: Economic	Agree with MLP on immigrants
Alt-Facts	0.049**	0.298***	0.253***	-0.023	-0.006	0.127***	0.050**
	(0.023)	(0.070)	(0.069)	(0.021)	(0.016)	(0.027)	(0.024)
Fact-Check	0.048**	-0.505***	-0.685***	0.312***	0.255***	0.067**	0.036
	(0.024)	(0.070)	(0.070)	(0.025)	(0.022)	(0.027)	(0.024)
Facts	0.030	-0.845***	-0.984***	0.444***	0.376***	0.017	0.022
	(0.023)	(0.068)	(0.071)	(0.025)	(0.023)	(0.027)	(0.025)
Observations	2480	2480	2480	2480	2480	2480	2480
Adjusted R^2	0.305	0.137	0.175	0.188	0.172	0.068	0.280
Mean of DV in control group	0.373	1.651	2.115	0.157	0.080	0.322	0.532
p-val: Alt-Facts=Fact-Check	0.959	0.000	0.000	0.000	0.000	0.026	0.570
p-val: Facts=Fact-Check	0.432	0.000	0.000	0.000	0.000	0.062	0.576
p-val: Alt-Facts=Facts	0.403	0.000	0.000	0.000	0.000	0.000	0.272
p-val: Alt-Facts+Facts=Fact-Check	0.351	0.680	0.649	0.002	0.000	0.046	0.300

Panel B: Persuasion rates of treatments for binary outcomes						
Dep.Var.	Will vote for MLP	Correct posterior on %: men-refugees	Correct posterior on %: migrants working	Reason for refugees: Economic	Agree with MLP on immigrants
Alt-Facts	7.8%	–	–	12.2%	3.7%
Fact Check	7.7%	37.0%	23.6%	6.5%	2.6%
Facts	4.8%	52.7%	34.8%	1.6%	1.6%

Note: The set of unreported covariates is as follows: gender, age (linearly and as a dummy for each age quota), family status, income (with dummies for each of the 10 income categories), education (with dummies for each of the 9 education levels), regional dummies, religion dummies, a dummy indicating that the respondent is a wage-earner, dummies for voting for each candidate in the 2012 presidential elections. Robust standard errors are in parentheses. * p<0.1, ** p<0.05, *** p<0.01.

TABLE 3: Heterogeneity with respect to accuracy of prior knowledge

	(1)	(2)	(3)	(4)	(5)
Dep.Var.	Will vote for MLP	Distance to truth on % of: men-refugees	migrants working	Correct posterior on % of: men-refugees	migrants working
Alt-facts	0.082***	0.345***	0.205**	-0.031	-0.023
	(0.029)	(0.084)	(0.086)	(0.027)	(0.021)
Fact-Check	0.068**	-0.361***	-0.509***	0.283***	0.196***
	(0.029)	(0.087)	(0.087)	(0.031)	(0.027)
Facts	0.048*	-0.819***	-0.855***	0.441***	0.317***
	(0.029)	(0.080)	(0.088)	(0.031)	(0.029)
Alt-Facts × Correct prior	-0.122**	-0.174	0.034	0.040	0.062*
	(0.052)	(0.156)	(0.154)	(0.048)	(0.035)
Fact-Check × Correct prior	-0.060	-0.444***	-0.557***	0.099*	0.187***
	(0.053)	(0.152)	(0.155)	(0.057)	(0.050)
Facts × Correct prior	-0.085	0.026	-0.379**	-0.024	0.177***
	(0.053)	(0.155)	(0.160)	(0.057)	(0.052)
Alt-Facts × Underestimated prior	0.013	0.027	0.406*	-0.038	0.001
	(0.088)	(0.272)	(0.238)	(0.059)	(0.042)
Fact-Check × Underestimated prior	-0.025	-0.283	-0.270	0.036	0.096
	(0.084)	(0.268)	(0.250)	(0.077)	(0.067)
Facts × Underestimated prior	0.047	-0.302	-0.246	0.097	0.110
	(0.087)	(0.269)	(0.255)	(0.081)	(0.075)
Observations	2480	2480	2480	2480	2480
Adjusted R^2	0.307	0.142	0.185	0.189	0.177

Note: The set of unreported covariates is as follows: dummies for correct prior and for underestimated priors, gender, age (linearly and as a dummy for each age quota), family status, income (with dummies for each of the 10 income categories), education (with dummies for each of the 9 education levels), regional dummies, religion dummies, a dummy indicating that the respondent is a wage-earner, dummies for voting for each candidate in the 2012 presidential elections. Robust standard errors are in parentheses. * p<0.1, ** p<0.05, *** p<0.01.

TABLE 4: The effect of the treatments on voting intention and policy preferences controlling for posterior knowledge

	(1)	(2)	(3)	(4)	(5)	(6)
Dep. Var:	Will vote for MLP		Reason for refugees: Economic		Agree with MLP on immigration policy	
Sample:	Control	Full	Control	Full	Control	Full
(Posterior) knowledge about % men-refugees	0.021**	0.020***	0.050***	0.042***	0.015*	0.025***
	(0.009)	(0.005)	(0.009)	(0.005)	(0.009)	(0.005)
(Posterior) knowledge about % working migrants	-0.027***	-0.021***	-0.019**	-0.022***	-0.026***	-0.035***
	(0.009)	(0.004)	(0.010)	(0.005)	(0.008)	(0.004)
Alt-Facts		0.028		0.089***		0.020
		(0.023)		(0.027)		(0.024)
Fact-Check		0.058**		0.080***		0.050**
		(0.023)		(0.027)		(0.024)
Facts		0.051**		0.050*		0.053**
		(0.023)		(0.027)		(0.025)
Observations	611	2480	611	2480	611	2480
Adjusted R^2	0.300	0.316	0.086	0.098	0.309	0.303

Note: (Posterior) knowledge about % of men among refugees and (Posterior) knowledge about % of working among migrants range from 1 to 10 and measure 10-percentage-point intervals: from 0-10% (category 1) to 91-100% (category 10). The set of unreported covariates is as follows: gender, age (linearly and as a dummy for each age quota), family status, income (with dummies for each of the 10 income categories), education (with dummies for each of the 9 education levels), regional dummies, religion dummies, a dummy indicating that the respondent is a wage-earner, dummies for voting for each candidate in the 2012 presidential elections. Robust standard errors in parentheses. * p<0.1, ** p<0.05, *** p<0.01.

TABLE 5: Voting intentions are not cheap talk

	Panel A: The results of the dictator game				
	(1)	(2)	(3)	(4)	(5)
Dep. Var.:	Will vote for MLP			Donation to MLP	Give others not MLP
Donation to MLP	0.010***	0.039***			
	(0.004)	(0.005)			
Donation to anybody		-0.037***		0.679***	
		(0.004)		(0.024)	
Give others, not MLP			-0.184***		
			(0.018)		
Alt-Facts				0.004	-0.035*
				(0.091)	(0.019)
Fact-Check				-0.073	-0.017
				(0.092)	(0.019)
Facts				0.029	-0.007
				(0.104)	(0.020)
Observations	2480	2480	2480	2480	2480
Adjusted R^2	0.306	0.324	0.319	0.529	0.051

	Panel B: The results of the list experiment				
	(1)	(2)	(3)	(4)	(5)
Dep. Var.:	Number of supported politicians on the list				
Sample:	Full	Will vote for MLP:		Full	Full
		Yes	No		
List with MLP	0.438***	0.915***	0.122**		
	(0.042)	(0.061)	(0.055)		
Will vote MLP				-0.698***	
				(0.048)	
Will vote MLP × List with MLP				0.915***	
				(0.061)	
List with MLP × Control					0.380***
					(0.070)
List with MLP × Alt-facts					0.457***
					(0.069)
List with MLP × Fact Check					0.464***
					(0.064)
List with MLP × Facts					0.447***
					(0.070)
Observations	2480	974	1506	2480	2480
Adjusted R^2	0.041	0.187	0.003	0.083	0.040

Note: The set of unreported covariates in Panel A is as follows: gender, age (linearly and as a dummy for each age quota), family status, income (with dummies for each of the 10 income categories), education (with dummies for each of the 9 education levels), regional dummies, religion dummies, a dummy indicating that the respondent is a wage-earner, dummies for voting for each candidate in the 2012 presidential elections. There are no additional covariates in Panel B. * p<0.1, ** p<0.05, *** p<0.01.

Online Appendix

Facts, Alternative Facts, and Fact Checking in Times of Post-Truth Politics

Oscar Barrera
Sergei Guriev
Emeric Henry
Ekaterina Zhuravskaya

Appendix Tables

TABLE A1: **Summary statistics for main outcome and treatment variables**

	Obs.	Mean	SD	Min	Max
Outcomes:					
Will vote for MLP	2,480	0.39	0.49	0	1
Reason for migration: economic	2,480	0.37	0.48	0	1
Agree with MLP on immigration policy	2,480	0.55	0.50	0	1
Distance to truth for:					
The share of men among refugees	2,480	1.37	1.31	0	5
The share of migrants working	2,480	1.73	1.37	0	5
The share of french refugees during WWII	2,480	1.57	1.59	0	7
Correct about:					
The share of med among refugees	2,480	0.35	0.48	0	1
The share of migrants working	2,480	0.24	0.43	0	1
The share of french refugees during WWII	2,480	0.32	0.47	0	1
Treatment groups:					
Alt-Facts	2,480	0.25	0.43	0	1
Fact-Check	2,480	0.26	0.44	0	1
Facts	2,480	0.25	0.43	0	1
Control	2,480	0.25	0.43	0	1

TABLE A2: Adding controls to regressions with voting and impressions as outcomes

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Dep. Var.	Will vote MLP				Reason for migration: Economic				Agree with MLP's immigration policy			
Alt-Facts	0.038	0.039	0.049**	0.049**	0.123***	0.121***	0.127***	0.129***	0.039	0.042	0.050**	0.049**
	(0.027)	(0.027)	(0.023)	(0.024)	(0.028)	(0.028)	(0.027)	(0.027)	(0.028)	(0.027)	(0.024)	(0.025)
Fact-Check	0.043	0.043	0.048**	0.046*	0.068**	0.066**	0.067**	0.065**	0.036	0.031	0.036	0.033
	(0.027)	(0.027)	(0.024)	(0.023)	(0.027)	(0.028)	(0.027)	(0.027)	(0.027)	(0.027)	(0.024)	(0.024)
Facts	0.009	0.016	0.030	0.028	0.012	0.012	0.017	0.017	0.012	0.014	0.022	0.019
	(0.027)	(0.027)	(0.023)	(0.023)	(0.027)	(0.027)	(0.027)	(0.027)	(0.028)	(0.028)	(0.025)	(0.025)
Observations	2480	2480	2480	2480	2480	2480	2480	2480	2480	2480	2480	2480
Adjusted R^2	0.040	0.073	0.305	0.306	0.014	0.016	0.068	0.073	0.049	0.092	0.280	0.281
Strata controls	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Individual controls		✓	✓	✓		✓	✓	✓		✓	✓	✓
Prior voting controls			✓	✓			✓	✓			✓	✓
Interactions of prior voting w/ treatments				✓				✓				✓

Note: Robust standard errors in parentheses. * p<0.1, ** p<0.05, *** p<0.01. Strata controls: gender, 3 age groups, 4 education groups, and region dummies. Individual controls: 10 income categories, linear age, 9 education levels, religion dummies, dummy indicating that the respondent is a wage-earner, marital status. Voting controls: 6 dummies for voting for each candidate in the 2012 presidential elections. Interactions of voting controls with treatments: interactions between demeaned votes for each of the candidate in the 2012 presidential elections and each treatment dummy.

TABLE A3: Adding controls to regressions with posterior knowledge as outcome variables

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Panel A:	Distance to truth about share of men among refugees				Right about share of men among refugees			
Alt-Facts	0.291***	0.292***	0.298***	0.302***	-0.023	-0.022	-0.023	-0.023
	(0.069)	(0.070)	(0.070)	(0.070)	(0.021)	(0.021)	(0.021)	(0.021)
Fact-Check	-0.504***	-0.506***	-0.505***	-0.505***	0.311***	0.312***	0.312***	0.313***
	(0.070)	(0.070)	(0.070)	(0.070)	(0.025)	(0.025)	(0.025)	(0.025)
Facts	-0.854***	-0.851***	-0.845***	-0.846***	0.446***	0.445***	0.444***	0.444***
	(0.067)	(0.068)	(0.068)	(0.068)	(0.025)	(0.025)	(0.025)	(0.025)
Observations	2480	2480	2480	2480	2480	2480	2480	2480
Adjusted R^2	0.126	0.127	0.137	0.136	0.188	0.187	0.188	0.187
Strata controls	✓	✓	✓	✓	✓	✓	✓	✓
Individual controls		✓	✓	✓		✓	✓	✓
Prior voting controls			✓	✓			✓	✓
Prior voting controls			✓	✓			✓	✓
Interactions of prior voting w/ treatments				✓				✓
Panel B:	Distance to truth about share of migr. working				Right about share of migr. working			
Alt-Facts	0.229***	0.243***	0.253***	0.248***	-0.002	-0.004	-0.006	-0.004
	(0.069)	(0.069)	(0.069)	(0.069)	(0.016)	(0.016)	(0.016)	(0.016)
Fact-Check	-0.705***	-0.686***	-0.685***	-0.690***	0.262***	0.255***	0.255***	0.258***
	(0.070)	(0.071)	(0.070)	(0.070)	(0.022)	(0.022)	(0.022)	(0.022)
Facts	-0.999***	-0.996***	-0.984***	-0.987***	0.380***	0.378***	0.376***	0.379***
	(0.072)	(0.072)	(0.071)	(0.072)	(0.023)	(0.023)	(0.023)	(0.023)
Observations	2480	2480	2480	2480	2480	2480	2480	2480
Adjusted R^2	0.156	0.163	0.175	0.177	0.164	0.167	0.172	0.178
Strata controls	✓	✓	✓	✓	✓	✓	✓	✓
Individual controls		✓	✓	✓		✓	✓	✓
Prior voting controls			✓	✓			✓	✓
Prior voting controls			✓	✓			✓	✓
Interactions of prior voting w/ treatments				✓				✓

Note: Robust standard errors in parentheses. * p<0.1, ** p<0.05, *** p<0.01. Quota controls: gender, 3 age groups, 4 education groups, and region dummies. Individual controls: 10 income categories, linear age, 9 education levels, religion dummies, dummy indicating that the respondent is a wage-earner, marital status. Voting controls: 6 dummies for voting for each candidate in the 2012 presidential elections. Interactions of voting controls with treatments: interactions between demeaned votes for each of the candidate in the 2012 presidential elections and each treatment dummy.

TABLE A4: Effect of the treatments on knowledge about French refugees in WWII

	(1)	(2)
	The share of refugees among French population in WWII:	
	distance to truth	correct answer
Alt-Facts	0.058	-0.022
	(0.088)	(0.025)
Fact-Check	-0.106	0.136***
	(0.089)	(0.026)
Facts	0.033	0.105***
	(0.093)	(0.027)
Observations	2480	2480
Adjusted R^2	0.021	0.052
mean of Dep. Var. in control	1.589	0.264

Note: Robust standard errors in parentheses. * p<0.1, ** p<0.05, *** p<0.01. The set of unreported covariates is as follows: gender, age (linearly and as a dummy for each age quota), family status, income (with dummies for each of the 10 income categories), education (with dummies for each of the 9 education levels), regional dummies, religion dummies, a dummy indicating that the respondent is a wage-earner, dummies for voting for each candidate in the 2012 presidential elections.

TABLE A5: Correlation between the priors about unemployment and priors (posteriors in control group) about % of men among refugees or % of working among migrants

Dep. Var.:	(1) Prior knowledge (i.e., posterior in control group): % men-refugees (10 categories)	(2) Prior knowledge (i.e., posterior in control group): % men-refugees (10 categories)	(3) Prior knowledge (i.e., posterior in control group): % working migrants (10 categories)	(4) Prior knowledge (i.e., posterior in control group): % working migrants (10 categories)
Panel A: Dummies for correct/incorrect priors about about unemployment among migrants				
Dummy: Overestimated migrant unemployment	0.610***	0.634***	-0.537**	-0.323*
	(0.185)	(0.199)	(0.209)	(0.192)
Dummy: Underestimated migrant unemployment	-0.245	-0.261	-0.534	-0.410
	(0.354)	(0.350)	(0.348)	(0.348)
Adjusted R^2	0.025	0.059	0.010	0.129
Panel B: Continuous priors about about unemployment among migrants				
Prior about migrant unemployment (10 categories)	0.199***	0.226***	-0.175***	-0.101**
	(0.041)	(0.044)	(0.048)	(0.049)
Dummy: Underestimated migrant unemployment	-0.098	-0.077	-0.665*	-0.465
	(0.350)	(0.346)	(0.343)	(0.341)
Adjusted R^2	0.042	0.082	0.021	0.132
Controls		✓		✓
Observations	611	611	611	611

Note: Robust standard errors in parentheses. * p<0.1, ** p<0.05, *** p<0.01. Controls are: gender, age (linearly and as a dummy for each age quota), family status, income (with dummies for each of the 10 income categories), education (with dummies for each of the 9 education levels), regional dummies, religion dummies, a dummy indicating that the respondent is a wage-earner, dummies for voting for each candidate in the 2012 presidential elections.

TABLE A6: Heterogeneity

	(1)	(2)	(3)	(4)	(5)
	Will vote for MLP	Distance to truth on %: men-refugees	migrants working	Reason for refugees: economic	Agree with MLP on immigrants
	Panel A: Voted for MLP during 2012 presidential elections				
Voted for MLP, 2012 × Alt-facts	0.033	0.072	-0.279*	0.026	-0.014
	(0.053)	(0.170)	(0.167)	(0.068)	(0.042)
Voted for MLP, 2012 × Fact-Check	-0.000	0.069	0.007	0.008	0.012
	(0.054)	(0.179)	(0.173)	(0.067)	(0.039)
Voted for MLP, 2012 × Facts	0.070	-0.107	0.092	-0.015	0.019
	(0.053)	(0.178)	(0.180)	(0.069)	(0.042)
Observations	2480	2480	2480	2480	2480
Adjusted R^2	0.305	0.137	0.176	0.067	0.279
	Panel B: News from TV				
News from TV × Alt-facts	0.093**	0.016	-0.014	0.118**	0.064
	(0.047)	(0.143)	(0.142)	(0.056)	(0.050)
News from TV × Fact-Check	0.007	-0.196	-0.017	0.140**	0.016
	(0.048)	(0.147)	(0.146)	(0.055)	(0.050)
News from TV × Facts	0.048	-0.118	0.038	0.031	-0.019
	(0.049)	(0.140)	(0.148)	(0.056)	(0.052)
News from TV	-0.010	0.061	-0.076	-0.041	0.051
	(0.034)	(0.095)	(0.097)	(0.040)	(0.036)
Observations	2415	2415	2415	2415	2415
Adjusted R^2	0.307	0.137	0.173	0.071	0.285
	Panel C: News from internet				
News from internet × Alt-facts	-0.118**	0.030	-0.218	-0.076	-0.066
	(0.054)	(0.162)	(0.160)	(0.065)	(0.056)
News from internet × Fact-Check	-0.047	0.424**	-0.059	-0.077	-0.048
	(0.058)	(0.173)	(0.166)	(0.065)	(0.058)
News from internet × Facts	-0.040	0.108	-0.126	0.039	-0.033
	(0.058)	(0.162)	(0.174)	(0.066)	(0.060)
News from internet	0.051	-0.146	0.162	0.014	0.020
	(0.040)	(0.105)	(0.108)	(0.046)	(0.040)
Observations	2415	2415	2415	2415	2415
Adjusted R^2	0.306	0.139	0.173	0.069	0.280
	Panel D: Recipient of social security benefits				
Income from soc.security × Alt-facts	-0.076	-0.252*	-0.113	-0.037	0.023
	(0.051)	(0.151)	(0.145)	(0.059)	(0.054)
Income from soc.security × Fact-Check	-0.076	-0.232	-0.149	-0.048	0.069
	(0.049)	(0.146)	(0.143)	(0.056)	(0.051)
Income from soc.security × Facts	-0.125**	-0.286**	-0.185	-0.020	-0.039
	(0.049)	(0.143)	(0.147)	(0.058)	(0.053)
Income from soc.security	0.116**	0.275*	0.211	0.066	-0.025
	(0.049)	(0.145)	(0.145)	(0.056)	(0.051)
Observations	2480	2480	2480	2480	2480
Adjusted R^2	0.306	0.137	0.175	0.067	0.280
	Panel E: Secondary education				
Secondary education × Alt-facts	0.022	-0.092	-0.004	-0.028	0.021
	(0.050)	(0.143)	(0.141)	(0.056)	(0.051)
Secondary education × Fact-Check	0.085*	-0.324**	-0.110	-0.047	0.032
	(0.049)	(0.143)	(0.143)	(0.055)	(0.049)
Secondary education × Facts	0.019	-0.391***	-0.314**	-0.067	0.030
	(0.050)	(0.142)	(0.151)	(0.056)	(0.051)
Observations	2480	2480	2480	2480	2480
Adjusted R^2	0.305	0.140	0.176	0.067	0.279

Note: Robust standard errors in parentheses.

Baseline set of controls and the direct effects of treatments and of the variable with respect to which we study heterogeneity are included.

* p<0.1, ** p<0.05, *** p<0.01

TABLE A7: Heterogeneity, continued

	(1) Will vote for MLP	(2) Distance to truth on %: men-refugees	(3) migrants working	(4) Reason for refugees: economic	(5) Agree with MLP on immigrants
Panel A: Income					
Income × Alt-facts	-0.002	0.002	-0.013	-0.014	0.000
	(0.009)	(0.029)	(0.030)	(0.011)	(0.010)
Income × Fact-Check	0.009	-0.032	-0.076***	-0.017	0.001
	(0.010)	(0.028)	(0.028)	(0.011)	(0.010)
Income × Facts	-0.004	-0.040	-0.031	-0.029***	-0.006
	(0.010)	(0.028)	(0.030)	(0.011)	(0.010)
Observations	2480	2480	2480	2480	2480
Adjusted R^2	0.305	0.137	0.177	0.070	0.279
Panel B: Age					
Age × Alt-facts	-0.000	-0.007	-0.004	-0.004**	0.002
	(0.002)	(0.005)	(0.004)	(0.002)	(0.002)
Age × Fact-Check	-0.003*	-0.009*	-0.005	-0.005***	-0.000
	(0.002)	(0.005)	(0.005)	(0.002)	(0.002)
Age × Facts	-0.003*	-0.002	-0.001	-0.003*	-0.001
	(0.002)	(0.004)	(0.005)	(0.002)	(0.002)
Observations	2480	2480	2480	2480	2480
Adjusted R^2	0.306	0.138	0.175	0.070	0.280
Panel C: Gender					
Male × Alt-facts	-0.009	-0.291**	-0.009	-0.039	-0.060
	(0.047)	(0.138)	(0.138)	(0.054)	(0.049)
Male × Fact-Check	-0.031	-0.022	-0.086	-0.064	-0.079*
	(0.047)	(0.138)	(0.139)	(0.053)	(0.048)
Male × Facts	-0.033	0.043	0.286**	0.017	-0.055
	(0.047)	(0.133)	(0.140)	(0.054)	(0.049)
Observations	2480	2480	2480	2480	2480
Adjusted R^2	0.304	0.138	0.177	0.068	0.280
Panel D: Parents born outside France					
Immigrant parents × Alt-facts	-0.100	0.385*	-0.027	-0.004	-0.046
	(0.065)	(0.207)	(0.208)	(0.078)	(0.070)
Immigrant parents × Fact-Check	-0.097	0.100	-0.174	-0.051	-0.130*
	(0.069)	(0.206)	(0.196)	(0.077)	(0.071)
Immigrant parents × Facts	-0.008	0.298	-0.042	0.085	0.034
	(0.075)	(0.203)	(0.222)	(0.084)	(0.079)
Observations	2480	2480	2480	2480	2480
Adjusted R^2	0.305	0.137	0.175	0.069	0.281
Panel E: Political orientation					
Score on left-right axis × Alt-facts	0.010	0.015	-0.000	0.027***	0.005
	(0.008)	(0.025)	(0.024)	(0.009)	(0.008)
Score on left-right axis × Fact-Check	0.003	-0.012	0.022	0.021**	0.007
	(0.007)	(0.024)	(0.024)	(0.009)	(0.007)
Score on left-right axis × Facts	0.010	-0.027	0.002	0.005	0.007
	(0.007)	(0.023)	(0.025)	(0.009)	(0.007)
Score on left-right axis	0.036***	0.016	-0.001	0.017**	0.039***
	(0.006)	(0.018)	(0.018)	(0.007)	(0.006)
Observations	2480	2480	2480	2480	2480
Adjusted R^2	0.338	0.137	0.174	0.090	0.315
Panel F: Regional-level election results					
Reg. vote for MLP, 2nd round × Alt-facts	0.010	0.011	-0.026	0.007	0.007
	(0.007)	(0.019)	(0.019)	(0.007)	(0.007)
Reg. vote for MLP, 2nd round × Fact-Check	0.001	0.031*	-0.002	0.007	-0.005
	(0.006)	(0.018)	(0.018)	(0.007)	(0.007)
Reg. vote for MLP, 2nd round × Facts	0.009	0.018	-0.002	0.003	-0.000
	(0.007)	(0.021)	(0.023)	(0.008)	(0.008)
Reg. vote for MLP, 2nd round	-0.002	0.007	0.018	-0.001	0.006
	(0.007)	(0.021)	(0.022)	(0.008)	(0.008)
Observations	2480	2480	2480	2480	2480
Adjusted R^2	0.305	0.137	0.175	0.067	0.280

Note: Robust standard errors in parentheses

Baseline set of controls and the direct effects of treatments and of the variable with respect to which we study heterogeneity are included.

* p<0.1, ** p<0.05, *** p<0.01

Appendix Figures

FIGURE A1: 5 regions from which the sample was drawn

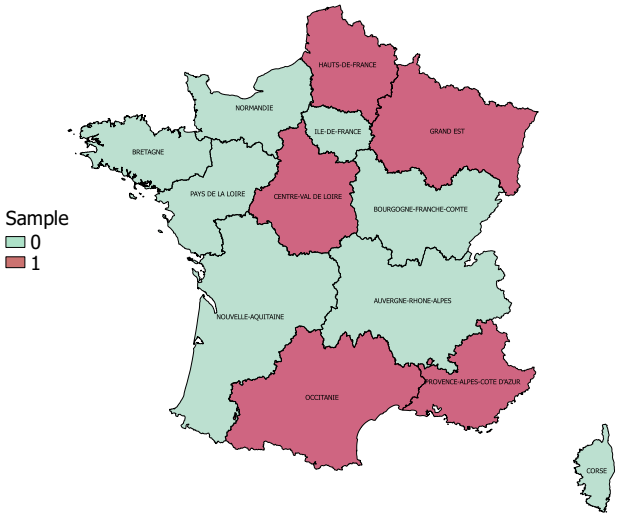


FIGURE A2: Vote for FN in the 2015 regional elections (left) and for MLP in the first round of the 2017 presidential elections (right)

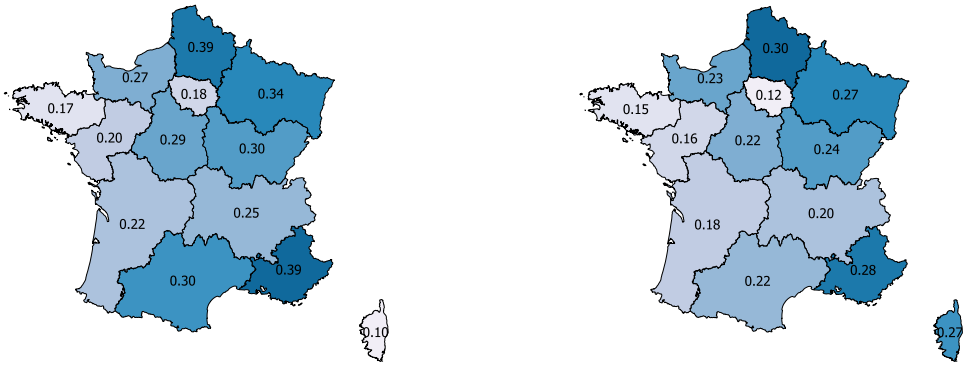
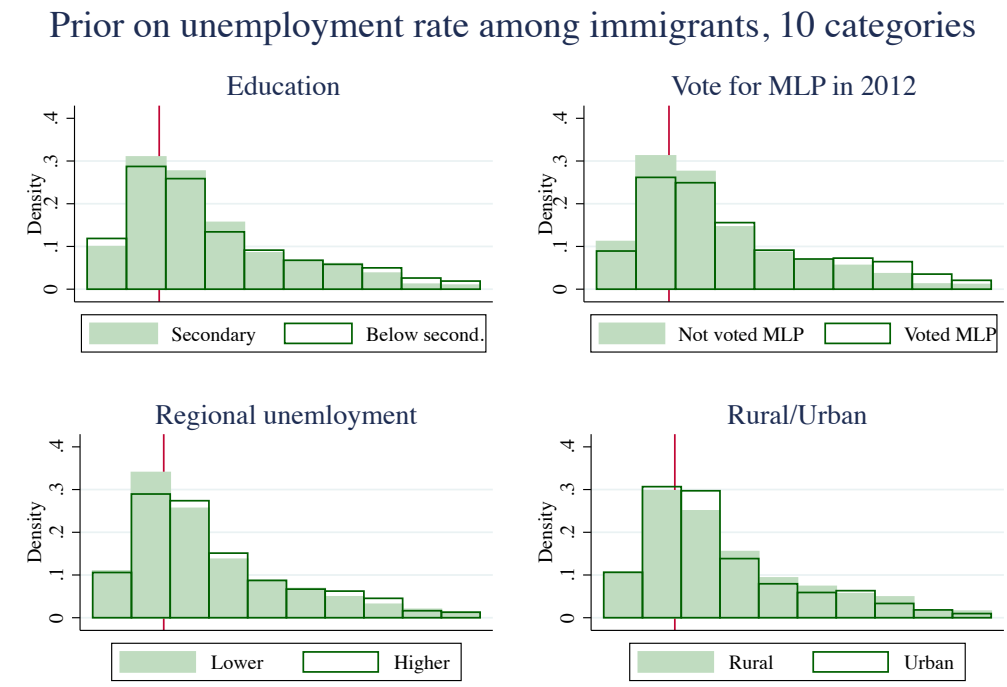


FIGURE A3: Prior beliefs about unemployment among immigrant population



Full sample; vertical lines indicate 18\%

Note: Horizontal axis represents the 10 percentage point intervals for the unemployment among immigrant population.

FIGURE A4: Voting intentions separately for non-supporters of MLP (left) and supporters of MLP (right)

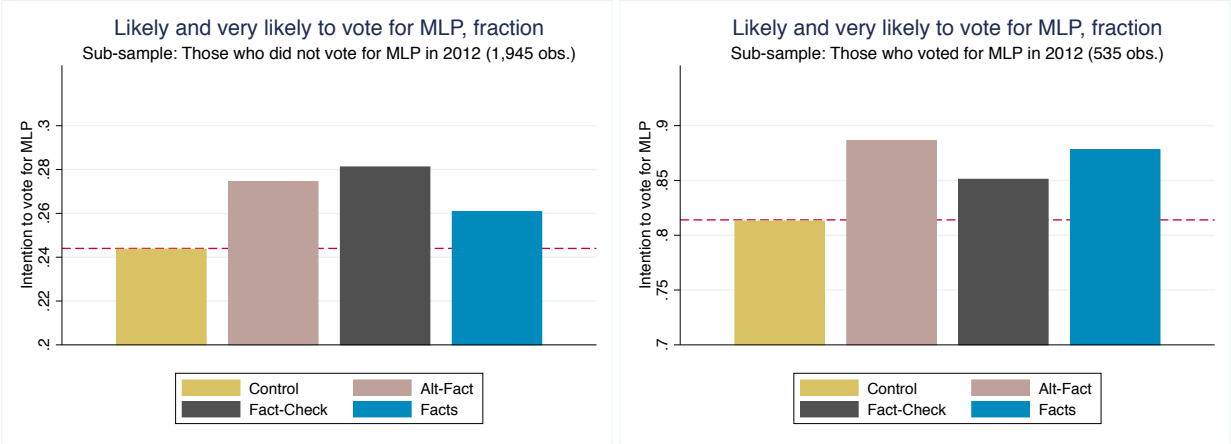
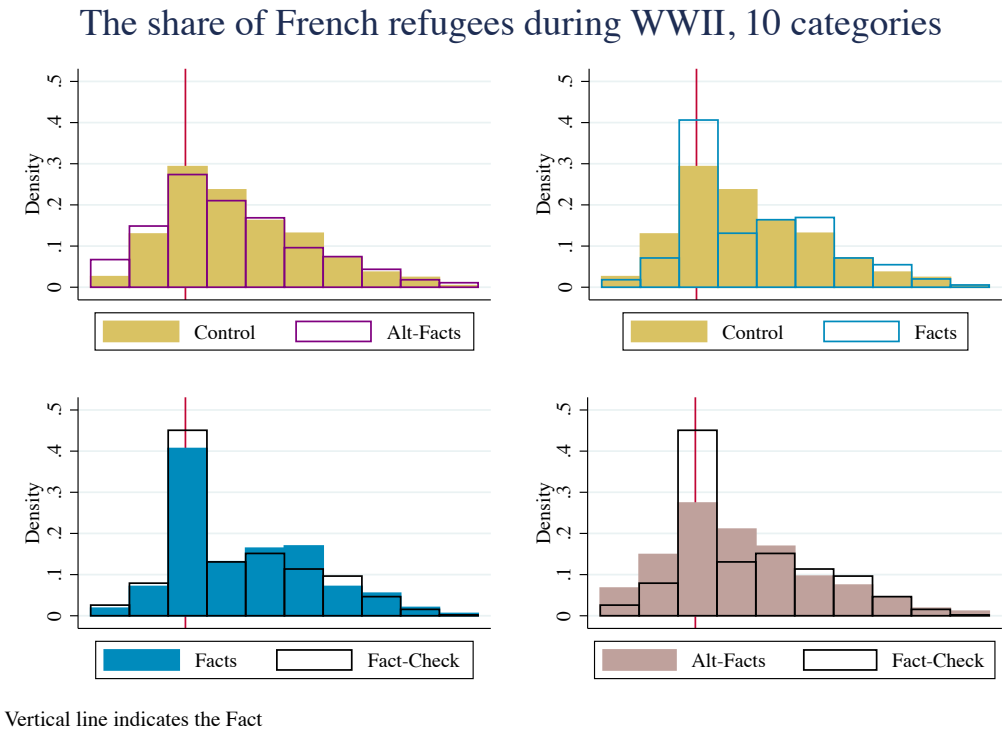
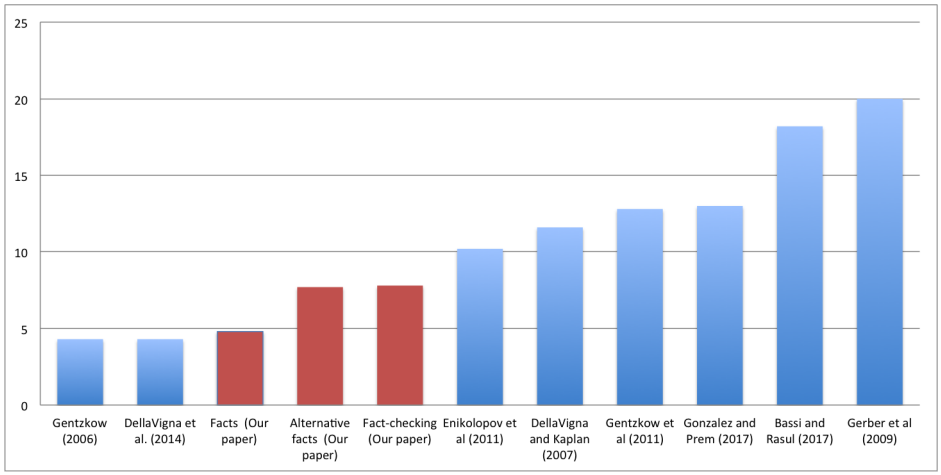


FIGURE A5: Posterior beliefs on the share of French refugees during WWII



Note: Horizontal axis represents the 10 percentage point intervals for the share of French refugees during WWII.

FIGURE A6: Persuasion rates in comparable papers vs. estimates in Table 2.



References in order of appearance on Figure A6:

Gentzkow, M. (2006). Television and voter turnout. *Quarterly Journal of Economics*, 121(3): 931–972.

DellaVigna, S., Enikolopov, R., Mironova, V., Petrova, M., and Zhuravskaya, E. (2014). Cross-border media and nationalism: Evidence from Serbian radio in Croatia. *American Economic Journal: Applied Economics*, 6(3):103–32.

Enikolopov, R., Petrova, M., and Zhuravskaya, E. (2011). Media and political persuasion: Evidence from Russia. *American Economic Review*, 101(7): 3253–85.

DellaVigna, S. and Kaplan, E. (2007a). The Fox news effect: Media bias and voting. *Quarterly Journal of Economics*, 122(3):1187–1234.

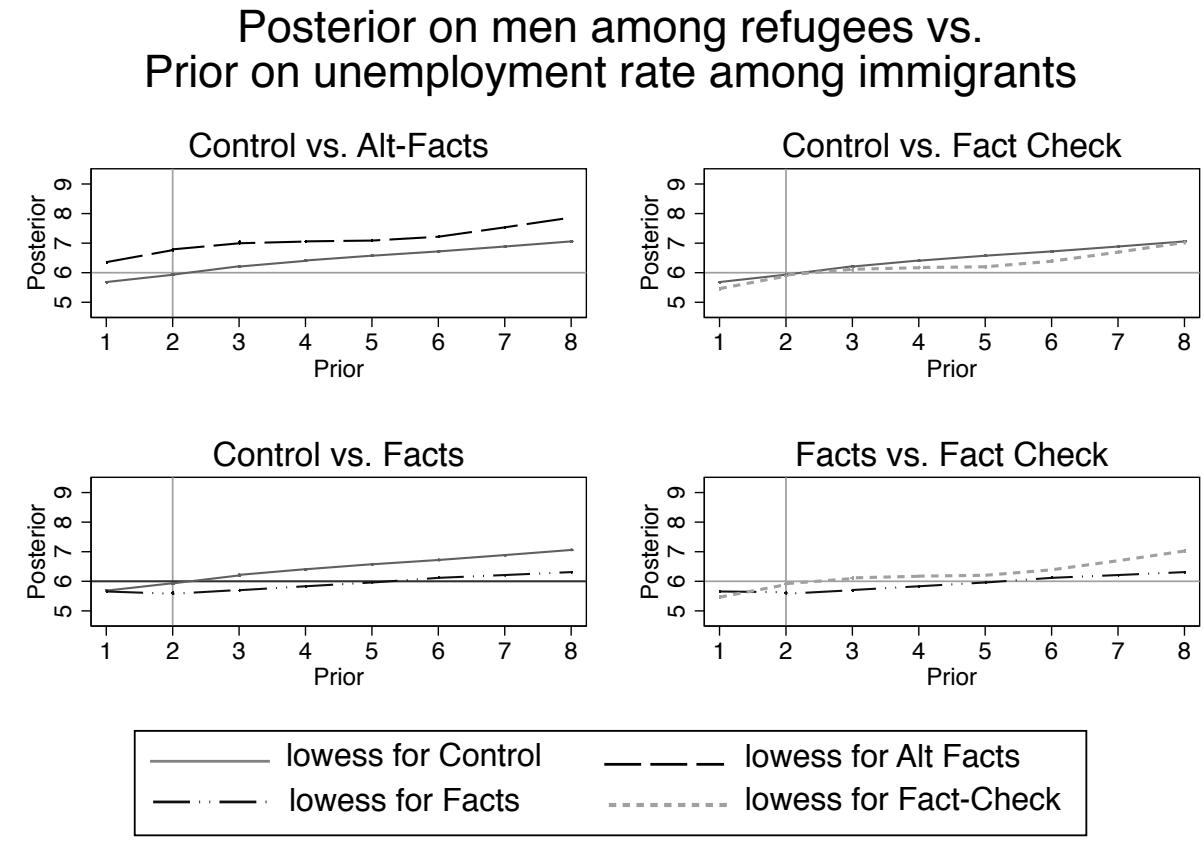
Gentzkow, M., Shapiro, J. M., and Sinkinson, M. (2011). The effect of newspaper entry and exit on electoral politics. *American Economic Review*, 101(7): 2980–3018.

González, F. and Prem, M. (2018). Can television bring down a dictator? Evidence from Chile's "No" campaign. *Journal of Comparative Economics*, 46(1):349–361.

Bassi, V. and Rasul, I. (2017). Persuasion: A case study of papal influences on fertility-related beliefs and behavior. *American Economic Journal: Applied Economics*, 9(4):250–302.

Gerber, A. S., Karlan, D., and Bergan, D. (2009). Does the media matter? A field experiment measuring the effect of newspapers on voting behavior and political opinions. *American Economic Journal: Applied Economics*, 1(2):35–52.

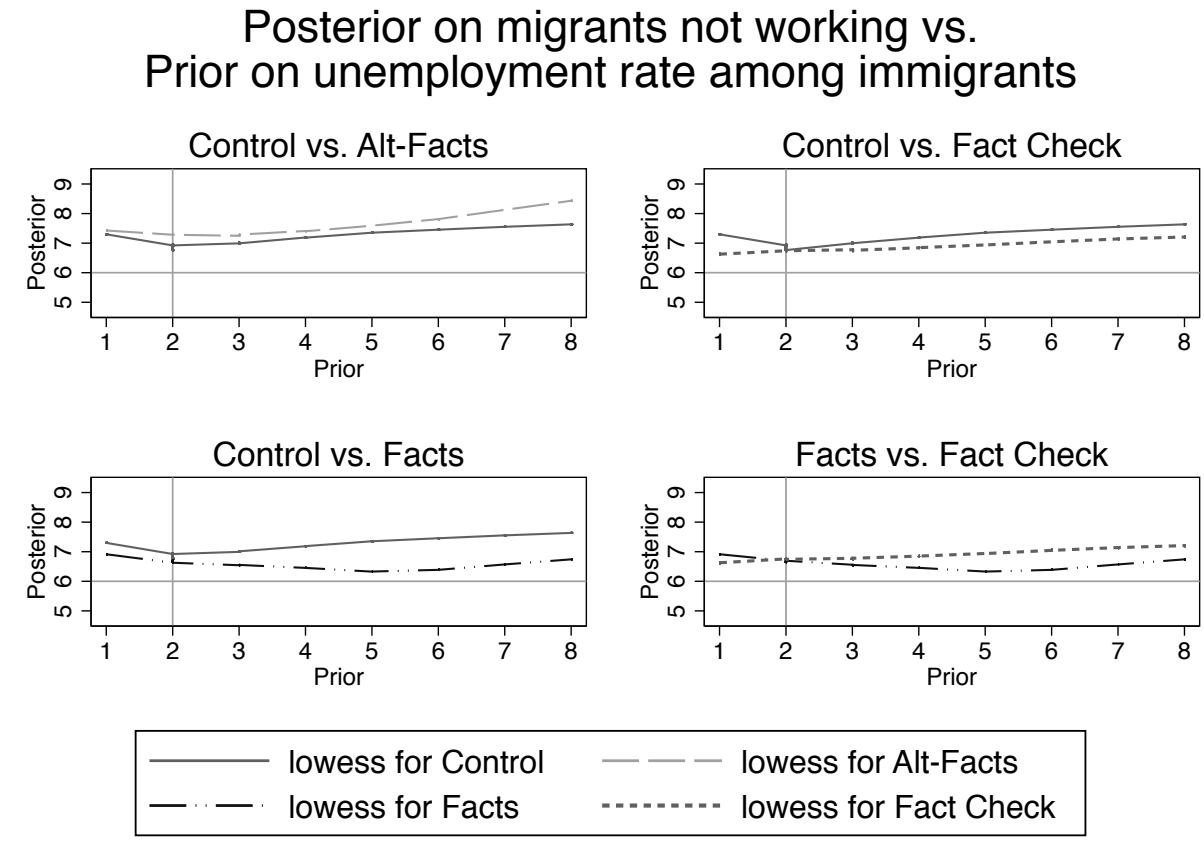
FIGURE A7: The relationship between posteriors and priors by treatment



Vertical and horizontal lines indicate the truth for prior and posterior, respectively.

Horizontal axis: categories of priors on unemployment rate among immigrants: 1 for 0-10%, 2 for 11-20% etc. We do not report the 9th and 10th categories where the number of observations is very small. Vertical axis: average for the posterior on the share of men among refugees crossing the Mediterranean Sea (1 for 0-10%, 2 for 11-20% etc.) averaged out for the respondents with the respective priors.

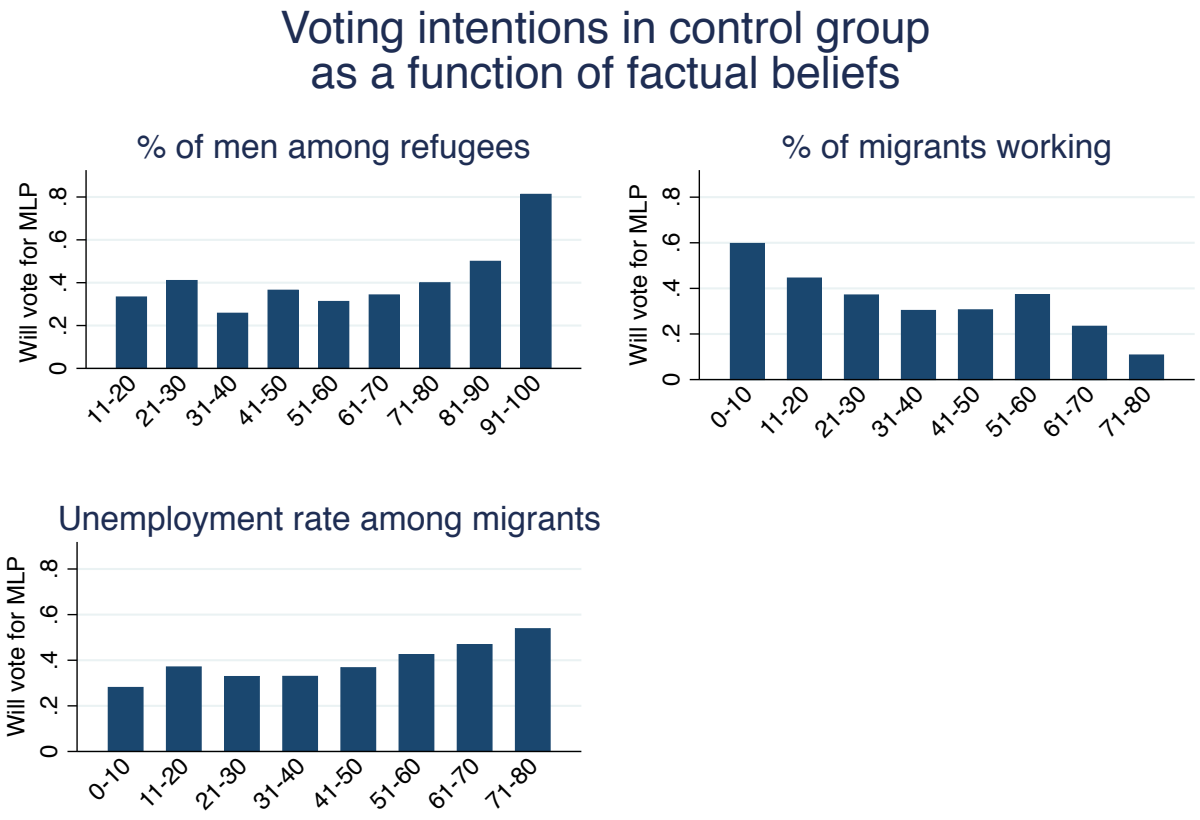
FIGURE A8: The relationship between posteriors and priors by treatment



Vertical and horizontal lines indicate the truth for prior and posterior, respectively.

Horizontal axis: categories of priors on unemployment rate among immigrants: 1 for 0-10%, 2 for 11-20% etc. We do not report the 9th and 10th categories where the number of observations is very small. Vertical axis: average for the posterior on share of immigrant population working (1 for 0-10%, 2 for 11-20% etc.) averaged out for the respondents with the respective priors.

FIGURE A9: The relationship between voting intentions and factual beliefs in the control group



Voting intentions calculated for categories of x-variable with at least 20 observations in each graph

FIGURE A10: The relationship between agreement with MLP on immigration and factual beliefs in the control group

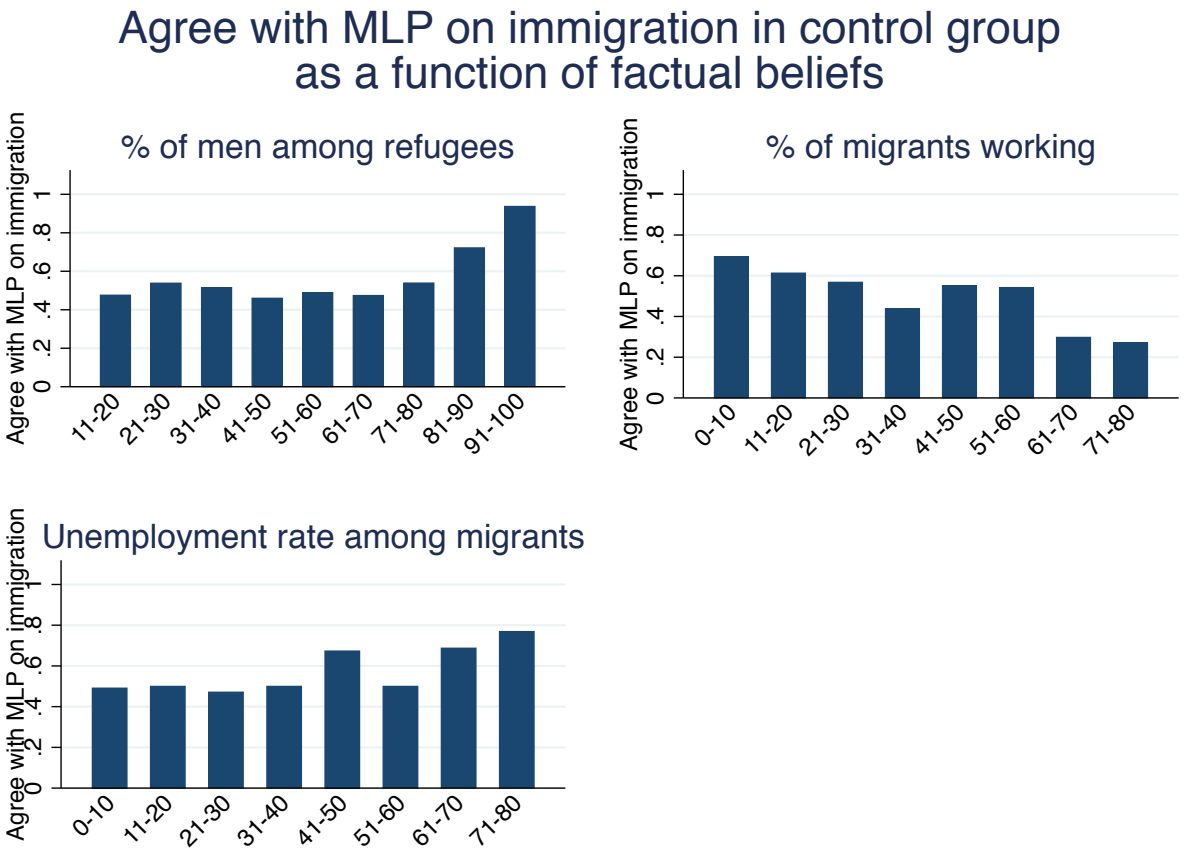
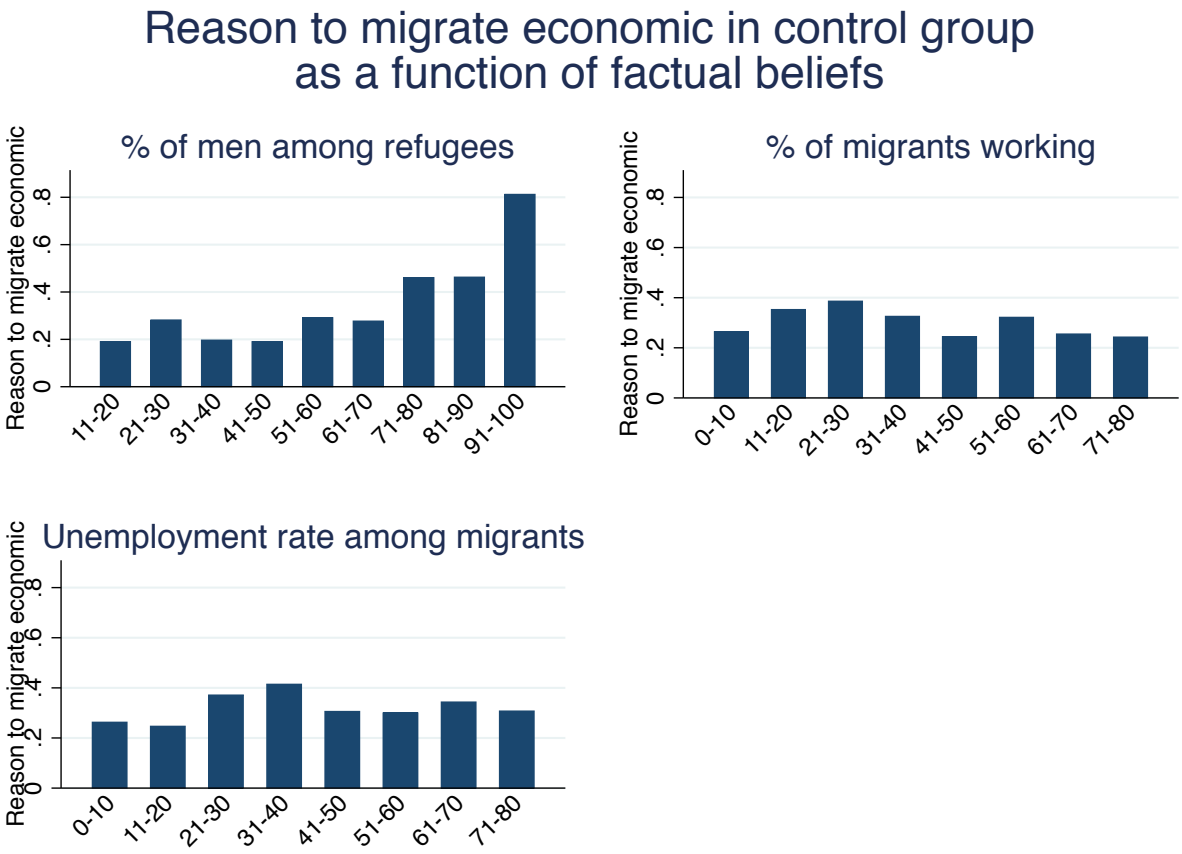


FIGURE A11: The relationship between belief that immigrants come for economic reasons and factual beliefs in the control group



The text of the treatments as it appeared in the experiment (English translation)

Treatment: Alt-Facts

You will read several statements by Marine Le Pen about migrants: their reasons for coming and the impact of migrants on French working and retired population; please read them carefully.

Screen 1

Reasons to come: the National Front, in its program, promises a drastic reduction of the number of asylum seekers allowed to stay in France. This follows a number of statements by Marine Le Pen about migrants and refugees:

8/9/2015: "A very small minority of them are really political refugees (...) I have seen the pictures of illegal immigrants coming down, who were brought to Germany, to Hungary, etc... Well, on these pictures there are 99% of men (...). Men who leave their country leaving their families behind, it is not to flee persecution but of course for financial reasons. Let's stop telling stories. We are facing an economic migration, these migrants will settle."

15/09/2015: "Everyone of us has good reasons to flee the war, but there are also some who fight. Imagine during the Second World War, there were surely many French, believe me, who had good reasons to flee the Germans; and yet, they went to fight against the Germans."

Screen 2

Pensions and work: in the program of the Front National, immigration is presented as being used by big firms to push wages down. This follows a number of statements by Marine Le Pen relative to work and retirement benefits going to refugees:

8/12/2016: "Without mentioning the policies that allow people to obtain a minimum pension under the single condition of coming to France and being above 65, i.e., without having ever worked or paid social contributions in France; and we hand out 750 euros per person, 1500 euros for a couple (...) close to you there are farmers who live with 300 or 400 euros."

27/11/2013: "5% of the foreigners who come to France have a work contract. This means that there is 95% who come to France who are taken care of by our nation (...). There are 95% of people who settle in France who don't work, either because of their age, either because they cannot as there is no work in France."

08/12/2016: "But they [the immigrant population] do not work. They do not work. There are seven million unemployed in our country. How could they work? They do not work, these lies have to stop."

Treatment: Facts

You will read below several numbers and statistics about migrants, related to their reasons to come and their impact on French working and retired population; please read them carefully.

Screen 1

Reasons to come

According to the UNHCR, among the migrants crossing the Mediterranean in 2015, the vast majority was coming from countries at war or in conflict, 50% were Syrians, 21% Afghans, 9% Iraqis and 4% Eritreans.

The UNHCR estimates that among the migrants crossing the Mediterranean in 2015, 17% are women, 25% are children and 58% are men.

During the First and Second World Wars, the French fled war zones in much larger numbers than the current refugees. After the defeat of the French army in the North of France in the Spring 1940, 8 million civilians, that is one quarter (25%) of the population of the time, took the road to go to the South of the country that was not occupied (according to Jean-Pierre Azema, a renowned French historian).

Screen 2

Pensions and work

The "old age minimum" guarantees elderly people a minimum of 801 euros for people above 65. This social benefit is available to all French nationals, under the condition of being below a certain level of income. It is also available to foreigners, under the condition of meeting at least one of the following requirements: have a work visa for the past 10 years. Have the refugee status or benefit from French protection for having fought under the French flag. Be a national from a EU state or from Switzerland.

According to the National Statistics Institute (INSEE) in 2015, 54.8% of the immigrant population were in the labor force (working or looking for a job) against 56.3% for the rest of the French population. The rate of unemployment for the immigrant population is 18.1% against 9.1% for the rest of the population. There is therefore 44.9% of the immigrant population that works (51.1% for the rest of the population).

Treatment: Fact-Check

The respondents first are shown the full text of Alt-Facts treatment and then full text of Facts treatment.

Questionnaire (English translation)

Q1 We are running a study of electoral behavior and attitudes toward migrants. This survey involves a series of questions about yourself and your political beliefs. You will also be asked to play short games that will allow you to win up to 5000 Maximille points. Finally, at the end of the survey you will be asked a series of questions on your political attitudes. You should be able to complete the survey in 10 minutes. Your answers will remain anonymous and we will only publish aggregate results of the study. You can now decide whether you want to continue answering the survey:

- Yes
- No

Q2 What is your birth year?

Q2a What is your place of residence?

- Centre-Val de Loire
- Grand Est
- Hauts-de-France
- Occitanie
- Provence-Alpes-Cote d'Azur

Q3 What is the size of the village or town you live in?

- Less than 2000 inhabitants
- Between 2000 and 10000 inhabitants
- More than 10000 inhabitants

Q4 What is the highest degree you have obtained?

- No diploma
- Certificat d'Etudes Primaires
- Ancien brevet, B.E.P.C.
- Certificat d'Aptitude Professionnelle (CAP)
- Brevet d'Enseignement Professionnel (BEP)

- BAC d'enseignement technique ou professionnel
- BAC d'enseignement general
- BAC + 2 ou niveau Bac + 2 ans (DUT, BTS, Instituteurs, DEUG, diplomes paramedical ou social)
- Diplome de l'enseignement superieur (2eme ou 3eme cycles, grande ecole)

Q5 Gender

- Male
- Female

Q6 Place of birth

- France
- Abroad

Q7 Place of birth of your father

- France
- Abroad

Q8 Place of birth of your mother

- France
- Abroad

Q9 What is your marital status?

- Single
- Married
- In a relationship but not married
- Civil union
- Divorced
- Widowed

Q10 If you add up all the sources of income of your household, in what bracket would your income, net of social contributions, be?

- Less than 1000 euros per month
- Between 1001 and 1500 euros per month
- Between 1501 and 1750 euros per month
- Between 1751 and 2000 euros per month
- Between 2001 and 2500 euros per month
- Between 2501 and 3000 euros per month
- Between 3001 and 4000 euros per month
- Between 4001 and 5000 euros per month
- Between 5001 and 7000 euros per month
- More than 7001 euros per month

Q11 What is the highest degree obtained by your father?

- No diploma
- Certificat d'Etudes Primaires
- Ancien brevet, B.E.P.C.
- Certificat d'Aptitude Professionnelle (CAP)
- Brevet d'Enseignement Professionnel (BEP)
- BAC d'enseignement technique ou professionnel
- BAC d'enseignement general
- BAC + 2 ou niveau Bac + 2 ans (DUT, BTS, Instituteurs, DEUG, diplomes paramedical ou social)
- Diplome de l'enseignement superieur (2eme ou 3eme cycles, grande ecole)

Q12 What is the highest degree obtained by your mother?

- No diploma
- Certificat d'Etudes Primaires
- Ancien brevet, B.E.P.C.
- Certificat d'Aptitude Professionnelle (CAP)
- Brevet d'Enseignement Professionnel (BEP)
- BAC d'enseignement technique ou professionnel
- BAC d'enseignement general
- BAC + 2 ou niveau Bac + 2 ans (DUT, BTS, Instituteurs, DEUG, diplomes paramedical ou social)
- Diplome de l'enseignement superieur (2eme ou 3eme cycles, grande ecole)

Q13 Do you have children?

- Yes
- No

Q14 How many?

- 1
- 2
- 3
- 4
- 5 or more

Q15 Regarding your lodging, are you

- Homeowner
- Currently buying
- Renter
- Housing for free (family, work accommodation...)

Q16 Among the following categories, which one corresponds best to the occupation you have held over the last 7 days?

- Full time paid work
- Part time paid work
- Paid work for less than 15 hours per week
- Employed in family firm
- Studying
- Unemployed
- Retired
- At home
- Sick or handicapped

Q17 Taking into account all the sources of income in your household, what would you say is the primary source?

- Wages
- Income from nonwage work (not including farm work)
- Income from farm work
- Pensions
- Unemployment benefits or severance package
- Social benefits
- Income from savings, insurance, rent
- Other

Q18 To obtain political information, what media do you use most often?

- Television
- Radio
- Internet
- National newspapers
- Local newspapers

– Free newspapers
– Other (specify)
– None

Q19 In your opinion, what was the unemployment rate among immigrants in 2015 in France?

– Between 0% and 10%
– Between 11% and 20%
– Between 21% and 30%
– Between 31% and 40%
– Between 41% and 50%
– Between 51% and 60%
– Between 61% and 70%
– Between 71% and 80%
– Between 81% and 90%
– Between 91% and 100%

Q20 What is your religion if you have one?

– Catholic
– Protestant
– Jewish
– Muslim
– Buddhist
– No religion

Q21 How often do you visit religious institutions

– Several time per week
– Once per week
– Once or twice per month
– From time to time
– Only for celebrations, such as weddings
– Never

Q22 Are you registered to vote?

- Yes
- No
- Soon

TREATMENTS:

- 25% chance: Control, which goes directly to Q23
- 25% chance: Alt-Facts
- 25% chance: Fact-Check
- 25% chance: Facts

Q23 Among the following candidates how many have programs you overall agree with:

50% chance of getting the following list (with names in random order):

Francois FILLON
Benoit HAMON
Emmanuel MACRON
Jean-Luc MELENCHON

50% chance of getting the following list (with names in random order):

Francois FILLON
Benoit HAMON
Emmanuel MACRON
Jean-Luc MELENCHON
Marine LE PEN

Q24 Did you vote for the National Front in the past?

- Yes
- No

Q25 Are you going to vote for Marine Le Pen in the next presidential election?

- Very unlikely
- Unlikely
- Likely
- Very likely

Q26 Do your agree with Marine Le Pen's proposed policies on immigration?

- Totally agree
- Agree
- Disagree
- Totally disagree

Q27 You are going to have one chance out of ten to win 2500 Maximille points. The result of the lottery will be announced at the end of the survey. If you do obtain the 2500 Maximille points, you have to decide whether you want to transfer part of the amount to a random participant in this survey. You can give all, nothing, or part of the 2500 points. You will never find out the identity of the other participant and she/he will never discover yours.

How much do you want to transfer?

Q28 Again, you are going to have another one chance out of ten to win 2500 Maximille points. The result of the lottery will be announced at the end of the survey. If you do obtain the 2500 Maximille points, you have to decide whether you want to transfer part of the amount to a participant in this survey who answered likely or very likely to the question "Are you going to vote for Marine Le Pen in the next presidential election?." You can give all, nothing, or part of the 2500 points. You will never find out the identity of the other participant and she/he will never discover yours.

How much do you want to transfer?

Q29 The political beliefs of French voters are usually measured on a left-right scale. Personally how would you place yourself on such a scale?

from -5 (extreme left) to 5 (extreme right)

Q30 Who did you vote for in the first round of the presidential election of 2012?

- Hollande
- Sarkozy
- Melenchon
- Le Pen
- Blank vote
- Did not vote
- Another candidate
- Not registered to vote

Q31 In your opinion, what reasons drive migrants to Europe in the last two years?

- Mostly economic reasons
- Mostly security reasons
- Other reasons

Q32 We are going to present you with a list of institutions. For each of them, please indicate the level of confidence you have in them: a lot, some, not a lot, not at all.

(a) INSEE (French Statistical Agency)

(b) United Nations

(c) Ministry of economy

(d) OECD

Q33 What is the proportion of men among refugees who crossed the Mediterranean in 2015?

- Between 0% and 10%
- Between 11% and 20%
- Between 21% and 30%
- Between 31% and 40%
- Between 41% and 50%
- Between 51% and 60%
- Between 61% and 70%
- Between 71% and 80%
- Between 81% and 90%
- Between 91% and 100%

Q34 What proportion of the French population fled from the North to the South of France in the spring of 1940?

- Between 0% and 10%
- Between 11% and 20%
- Between 21% and 30%
- Between 31% and 40%
- Between 41% and 50%
- Between 51% and 60%
- Between 61% and 70%
- Between 71% and 80%
- Between 81% and 90%
- Between 91% and 100%

Q35 In 2015 what proportion of the French immigrant population was working?

- Between 0% and 10%
- Between 11% and 20%
- Between 21% and 30%
- Between 31% and 40%
- Between 41% and 50%
- Between 51% and 60%
- Between 61% and 70%
- Between 71% and 80%
- Between 81% and 90%
- Between 91% and 100%

Q36 In the first game you played, what were your chances of getting 2500 Maximille points (before your transfer decision)?

- 0 chances out of 10
- 1 chances out of 10
- 2 chances out of 10
- 3 chances out of 10
- 4 chances out of 10
- 5 chances out of 10
- 6 chances out of 10
- 7 chances out of 10
- 8 chances out of 10
- 9 chances out of 10
- 10 chances out of 10

Sources for Alt-Facts and Facts

Sources for Alt-Facts

8/9/2015: "A very small minority of them are really political refugees (...) I have seen the pictures of illegal immigrants coming down, who were brought to Germany, to Hungary, etc... Well, on these pictures there are 99% of men (...). Men who leave their country leaving their families behind, it is not to flee persecution but of course for financial reasons. Let's stop telling stories. We are facing an economic migration, these migrants will settle."

- Source: http://lelab.europe1.fr/marine-le-pen-affirme-a-tort-que-les-refugies-sont-tres-majoritairement-des-migrants-economiques-debarquant-sans-leur-famille-2511737 (accessed on October 12, 2017).

15/09/2015: "Everyone of us has good reasons to flee the war, but there are also some who fight. Imagine during the Second World War, there were surely many French, believe me, who had good reasons to flee the Germans; and yet, they went to fight against the Germans."

- Source: http://lelab.europe1.fr/refugies-comme-nadine-morano-marine-le-pen-prend-lexemple-des-francais-qui-sont-alles-se-battre-contre-les-allemands-pendant-la-seconde-guerre-mondiale-2515045 (accessed on October 12, 2017).

8/12/2016: "Without mentioning the policies that allow people to obtain a minimum pension under the single condition of coming to France and being above 65, i.e., without having ever worked or paid social contributions in France; and we hand out 750 euros per person, 1500 euros for a couple (...) close to you there are farmers who live with 300 or 400 euros."

- Source: http://www.lemonde.fr/les-decodeurs/article/2016/12/09/scolarisation-retraites-emploi-les-intox-de-marine-le-pen-sur-l-immigration_5046118_4355770.html (accessed on October 12, 2017).

27/11/2013: "5% of the foreigners who come to France have a work contract. This means that there is 95% who come to France who are taken care of by our nation (...). There are 95% of people who settle in France who don't work, either because of their age, either because they cannot as there is no work in France."

- Source: http://www.liberation.fr/france/2013/12/09/le-pen-met-les-immigres-au-chomage-force_965300 (accessed on October 12, 2017).

08/12/2016: "But they [the immigrant population] do not work. They do not work. There are seven million unemployed in our country. How could they work? They do not work, these lies have to stop."

- Source: http://lelab.europe1.fr/categorique-marine-le-pen-affirme-que-la-population-immigree-en-france-ne-travaille-pas-2922071 (accessed on October 12, 2017).

Sources for Facts

According to the UNHCR, among the migrants crossing the Mediterranean in 2015, the vast majority was coming from countries at war or in conflict, 50% were Syrians, 21% Afghans, 9% Iraqis and 4% Eritreans.

- Source: http://www.unhcr.org/576408cd7.pdf p.34 (accessed on October 12, 2017).

The UNHCR estimates that among the migrants crossing the Mediterranean in 2015, 17% are women, 25% are children and 58% are men.

- Source: http://www.unhcr.org/576408cd7.pdf p.33 (accessed on October 12, 2017).

During the First and Second World Wars, the French fled war zones in much larger numbers than the current refugees. After the defeat of the French army in the North of France in the Spring 1940, 8 million civilians, that is one quarter (25%) of the population of the time, took the road to go to the South of the country that was not occupied (according to Jean-Pierre Azema, a renowned French historian).

- Source: http://www.france3.fr/emissions/un-village-francais/un-village-francais-ils-y-etaient_433728 (accessed on October 12, 2017).

The "old age minimum" guarantees elderly people a minimum of 801 euros for people above 65. This social benefit is available to all French nationals, under the condition of being below a certain level of income. It is also available to foreigners, under the condition of meeting at least one of the following requirements: have a work visa for the past 10 years. Have the refugee status or benefit from French protection for having fought under the French flag. Be a national from a EU state or from Switzerland.

- Source: https://www.service-public.fr/particuliers/vosdroits/F16871 (accessed on October 12, 2017).

According to the National Statistics Institute (INSEE) in 2015, 54.8% of the immigrant population were in the labor force (working or looking for a job) versus 56.3% for the rest of the French population. The rate of unemployment for the immigrant population is 18.1% against 9.1% for the rest of the population. There is therefore 44.9% of the immigrant population that works (51.1% for the rest of the population).

- Source: INSEE https://www.insee.fr/ (accessed on October 12, 2017).