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# **Migration to Austria**

A study on the cultural differentiation of immigrants and its effect  
on right-wing voting

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## Abstract

*Countries in which immigration has risen, experience increasing vote shares for anti-immigration parties. Researchers argue that the occurrence is attributable to the mere presence of immigrants in the municipalities whereas others put focus on the potential labor market effects of immigrants causing more support for anti-immigration parties. In the paper at hand, I investigate the effect of immigration on the vote share of the Austrian Freedom Party (FPÖ) in the general elections between 2002 and 2017 in Austria. The focus lies on the similarity of the cultural belief and value system between Austria and the immigrants' origin nations. I hypothesize that the influx of immigrants from culturally similar countries negatively affect the electoral outcome of the FPÖ while immigration from culturally different countries has a positive effect on it. I found evidence supporting the latter hypothesis, predicting a positive correlation between culturally different immigration and the success of the FPÖ. Nevertheless, no effects of culturally similar immigration are found. Nevertheless, a post-shock DiD analysis of the refugee crisis beginning in 2015 shows that the FPÖ vote share is increasing independently of the incoming migrants and the cultural similarity between Austria and the origin country. Therefore, I argue that the suggestive, preexisting correlation between immigration and voting outcome was potentially abolished by the immigration shock in the crisis periods. Finally, results suggest that the pro-immigration parties of Austria are significantly correlated in the reverse direction of the hypotheses regarding the FPÖ: positively by culturally similar immigration and negatively by culturally different immigration.*

**Keywords:** *immigration, culture, anti-immigration, Austrian Freedom Party*

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## 1. INTRODUCTION

In the last two decades the vote shares for radical right-wing parties in Western Europe are drastically increasing. For political but also economic researchers this leads to an extensive investigation on the driving factor of this occurrence. Austria is often part of the research related to anti-immigration voting due to the high relevance and currentness. Since, the influx of immigrants substantially increases, simultaneously as the Austrian Freedom Party (FPÖ) strongly gains the voters' support. The FPÖ is an Austrian right-wing populist and national-conservative political party which almost tripled its vote share between 2002 and 2017. In the general election of 2017, the FPÖ succeeded by reaching an average share of 26.5% of the total votes. This even resulted in taking the office alongside the conservative and center-right Austrian People's Party (ÖVP).

Previous literature is pointing to a relationship between anti-immigration voting behavior and actual immigration (Otto and Steinhardt, 2014; Steinmayr, 2016). In addition to that, Halla et al. (2017) find positive effects of migration on the vote share for the Austrian Freedom Party using Austrian general election data. The researchers' focus lies on economic motives for this support. However, economic factors, such as fears of wage dumping, affect preferences for anti-immigration less than the fear of cultural change (Oesch, 2008). A study in Switzerland explored the influence of cultural similarity of the immigrant to the natives. The results suggest that culturally different immigrants increase the vote share for anti-immigration parties while no effect of cultural similar immigrants occurs (Brunner and Kuhn, 2018). Therefore, I believe that the distinction between culturally similar and culturally different migrants affects the support for the Austrian FPÖ. As a result, I hypothesize that the former type of migrants affects the FPÖ vote share negatively and the latter positively. I further hypothesize that the Austrian Social Democratic Party (SPÖ) who campaigned pro-immigration policies suffers the main losses from the success of the FPÖ.

In this paper, I use an Austrian longitudinal dataset on municipality-level to investigate whether I can find support for the hypotheses. Based on the OLS and FE estimation, I find a significant and positive correlation between the share of culturally different immigrants and the vote share for the right-wing party. I find a no effect of culturally similar immigration on the support for the FPÖ. Furthermore, I exploit the shock of a sudden increase in the share of immigrants to Austrian municipalities during the refugee crisis starting in 2015. I perform a Difference-in-Differences (DiD) estimation which is based on the quasi-natural experiment

where one subsample was affected by the shock and one subsample was not. However, the DiD estimation of the years 2013 and 2017 yielded no significant differences. This suggests that in the pre-shock periods a relationship between the support for the FPÖ and the share of immigrants existed, but during the shock the support increased irrespectively of immigration and cultural similarity.

The contribution of this paper is twofold. First, I supplement the research of Halla et al. (2017), which investigates if immigration leads to more support for the Austrian Freedom Party by introducing a cultural aspect. This paper adds to the literature by differentiating between two culturally distinctive streams of immigration to Austria. While one stream is from culturally similar countries like Germany or Switzerland, the other consist of migrants from culturally distinctive countries, such as Syria or Afghanistan. Second, I am able to exploit the shock of a large influx of immigrants during the refugee crisis starting in 2015. Up to the present, there has not been done any research which covers all or the major share of Austrian municipalities with respect to right-wing voting.

The structure of this paper is organized as follows: I begin by summarizing previous literature of right-wing voting in Austria and closely related economic as well as cultural research in Section 2. Based on previous findings and knowledge of Austrian culture, I depict the hypotheses of the culture related immigration effects on the voting behavior in Section 3. Section 4 provides information on the institutional setting. Subsequently, Section 5 introduces the variables of primary interest plus controls. Then, the empirical strategy is presented in Section 6. Section 7 provides the results of the Ordinary Least Squares, Fixed Effects and Difference-in-Differences estimation. Following this, Section 8 discusses the results, presents the limits to this study and shows the implications of the political outcome. I conclude and give an outlook of possible further research in Section 9.

## 2. LITERATURE REVIEW

For political but also economic researchers the drastically increasing vote shares for radical right-wing parties in Western Europe led to an extensive investigation on which factors are driving this movement. Overall, the largest share finds that to a large part it is immigration that is leading to more support for right-wing parties. Particularly important for this paper are the preceding results of research in Austria suggesting that the support for right-wing parties can be explained by the

share of immigrants in Austrian municipalities (Halla et al., 2017). The data used for their research is Austrian census data of the years 1981 to 2013. Similar to this paper, is the study of Barone et al. (2016), linking the number of immigrants in each Italian municipality to the vote share for the center-right parties. The Fixed-Effects estimation in combination with an Instrumental Variable approach yielded a highly significant, positive and strong effect on the support of the center-right political parties (Barone et al., 2016). This finding is especially interesting with respect to this paper at hand since Italy experienced a to Austria comparable high inflow of foreigners in the past years. Besides that, Gerdes and Wadensjö (2008) found similar results in Denmark using OLS and fixed-effects models. According to their analysis of four general election outcomes, the influx of refugees is positively correlated with support for the two main anti-immigration parties.

Further research has been done on the expectations of the society connected to the mere presence of immigrants. One stream of literature explains the individual preferences on immigration by means of economic factors (Hainmueller and Hiscox, 2010) while the other stream focuses on non-economic factors, such as cultural impacts (Brunner and Kuhn, 2018) or a combination of both (Card et al., 2012).

## 2.1. Protection of cultural identity

This subsection covers the literature background of the paper's main question, namely the effect of the fear of cultural change due to immigrants.

Previous literature focusing on Austrian voting behavior finds that Austrian individuals are concerned about changes in the cultural and ethnic identity of the country through outsiders. As a consequence, this leads to higher a number of votes for the far-right party FPÖ (Halla et al., 2017). Potentially, the mere presence of immigrants is linked to expectations of alterations in the cultural identity in a society. Hofstede (1984) has defined the cultural identity as the collective mental programming which is equal among group or category members but differing from in- and outsiders of the named group or category. A further refinement is that culture is a collective, not individual, characteristic and must be applied to the main share but not the total population. The cultural identity within a country consists of cultural beliefs and values, which contain expressions, traditions, lifestyle and language (Hofstede and McCrae, 2004). A native inhabitant might fear that the current validation of principles in the country changes according to the immigrants' set of beliefs. Moreover, it is feared that traditional customs and beliefs could be challenged by outsiders.



The consequence of such a fear regarding the alteration of the cultural identity might be the failure of accepting immigration from culturally different countries.

On one hand, the presence is potentially linked to expectations about cultural changes in society. On the other hand, according to Contact Theory, the presence and the subsequent contact between in-group and out-group members reduces anxiety and prejudices as well as enhances intergroup relations. The potentially positive contact and connected experiences of natives and immigrants might enhance intergroup relations and lower fears of cultural changes (Voci and Hewstone, 2003).

In Switzerland, a study has been conducted with the results that the magnitude of rejection depends on the level of cultural differences between the destination and the country of origin (Brunner and Kuhn, 2018). The results suggest that the presence of culturally different immigrants has a strong positive and significant effect on anti-immigration policy voting. Moreover, they find inconclusive results for similar immigrants while the initial negative effect on anti-immigration policy support diminished using different specifications. To sum up, the effect for culturally different immigrants is positive while no stable and significant effects are found for culturally similar immigrants. The results suggest that the cultural differences between the immigrant's origin nation and the destination country influence voting behavior.

## 2.2. Economic impacts

In this subsection, I present previous findings on economic factors. I show that economic factors might be outweighed by fears of cultural change when individuals form their voting preferences with respect to pro- or anti-immigration parties.

Aside from the presence of immigrants and fears of cultural changes, literature discusses economic influences on anti-immigration preferences. Radical right-wing parties electioneer mainly by promoting anti-immigration policies and ethnonationalism. In addition to that, immigrants are framed for unemployment and to be a net-receiver of welfare benefits. In further consequence, this would reduce the remaining budget for the natives. Explained by the ethnic competition theory, these fears are boosting the support for right-wing parties. The theory constitutes that individuals tend to favor right-wing parties in order to decrease the competition from incoming foreigners to the labor and housing market. Consequently, the theory suggests that the vote share of right-wing parties are larger in migration destinations where uneducated and lower-skilled voters are resident

because of the likeliness of increases through the incoming, often low-skilled immigrants (Rydgren and Ruth, 2011). This is in line with the research of Hainmueller and Hiscox (2010), which finds that low-skilled natives are reluctant to immigration. Nevertheless, the results are questioning the theory since also high-skilled natives are associated with a rejection of low-skilled immigrants even though the high-skilled workers would not face direct competition through them in the labor market.

Research finds that the rivalry regarding other scarce resources, such as welfare benefits and taxes, have an effect on the right-wing voting. Fears of further fiscal burden on public services and expenditures influence natives' preferences on immigration to a more adverse attitude. Incoming immigrants induce a higher number of inhabitants which might be in need of public services. Public income might either need to be raised by extra taxes to cover all the expenses of the natives and new incoming migrants, or proportionally less money will be distributed. While taxes to richer individuals have an impact on preferences, the potentially lower share of public spending for poor individuals influence anti-immigration preferences to a greater extent (Hainmueller and Hiscox, 2010).

Notably, fear of cultural change can, and often does, outweigh the influence of economic factors on voting preferences. Card et al. (2012) use a model which discusses economic impacts and impacts of compositional amenities<sup>1</sup> on the neighborhoods, schools and workplaces and finds that all of them are affecting individuals preferences regarding migration policies. However, attitudes towards compositional impacts are two to five times more responsible for the variation in the migration policies than purely economic factors. Especially uneducated individuals fear a negative impact on compositional amenities. About two thirds of the difference between the highest and lowest educated individuals in their sample concerning migration is linked to stronger compositional amenity concerns of low-educated individuals. Differences of economic factors are attributable to only 10 to 15%. Moreover, age is a predictor of preferences on economic or compositional amenities. Economic factors are more irrelevant in a higher age since retired individuals as well as the older work force are not in direct competition in the labor market. Thus, preferences of older people, who are more reluctant towards immigration in general, are also attributable to a compositional influence (Card et al., 2012).

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<sup>1</sup>Compositional amenities are defined as the validation of the collectively shared religion and language, common traditions and belief sets.

In the case of Austria, a similar trend has been shown: Economic factors might be less important than anxiety of cultural change for Austrian workers. Male workers<sup>2</sup> fear a negative impact on their cultural identity within their country more than an impairment of economic indicators due to immigration. Austrian males are more likely to vote for the FPÖ when believing that immigrants undermine their culture compared to when fearing that immigration leads to wage dumping. Even though both fears have a positive effect on the probability of supporting a right wing party, the former has a stronger effect than the latter (Oesch, 2008). To sum up, economic factors influence right wing voters' preferences to a lesser extent than anticipated so far.

### 2.3. Opposing effects for migration approving and rejecting parties

In this subsection, I firstly show preceding results of adverse effects of migration on parties who have opposing views on immigration policies in other European countries, like Germany and Denmark. Next, I display which parties are most likely to be suffering from the electoral success of the right-wing party in Austria based on existing research.

While most studies discussed the effect of migration on center-right or right parties, adverse effects arose for the left parties, who promoted a liberal migration policy. As many studies show, migration affects the right-wing party's vote share positively. However, immigration can lead to opposing effects for contrary parties which stand for liberal immigration policies. In Germany, the Green Party was the sole party to unconditionally promote a welcoming culture towards immigrants in the 1990s. As opposed to the Greens, the other election rivals of the right-wing party had less strong opinions on immigration. While the Green Party suffered from a significant negative effect on the vote share, the extreme right-wing parties were affected positively in the elections held before 2000 (Otto and Steinhardt, 2014).

Moreover, Harmon (2017) finds that the sole presence of immigrants in Denmark and the following ethnic diversity in Danish municipalities had an effect on political outcomes in the years between 1981 and 2001. While an increase in ethnic diversity had significant negative effects on the vote shares of traditional left-wing parties, the right-wing party benefited significantly by increased vote shares.

The paper at hand focuses on the effect in Austria. In earlier times, Austrian party voters were divided in terms of socio-structural but also traditional ideological divisions. Overall, on

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<sup>2</sup>I assume that this preference is also valid for Austrian women. The study of Oesch (2008), however, only includes male workers.

a socio-demographic level, such as e.g. education, occupation, the intensity of denomination and the composition of inhabitants in urban or rural areas, the Austrian Freedom Party (FPÖ) voters are highly comparable to Social Democratic Party of Austria (SPÖ) supporters. Unlike the FPÖ supports, the Austrian People's Party (ÖVP) voters are more likely to be from rural areas in Austria. Moreover, as opposed to FPÖ voters, ÖVP supporters are more concerned about religion. While the conventional way of division included two streams, Aichholzer et al. (2014) add a third dimension, namely the new political conflicts: anti-immigration, euro-skepticism and political discontent. Even though the traditional individual characteristics of FPÖ voters are comparable to the SPÖ voters, the main difference emerges when comparing the positions on recent political issues. The right-wing voters are on average considerably more reluctant towards immigration and more likely to be dissatisfied with the political system. On these topics, however, the FPÖ and ÖVP share the same views. The authors stress that the SPÖ suffered the main losses in the latest elections due to the newly emerging focus on immigration. Voters' preferences on immigration leads to a shift from electing SPÖ to FPÖ candidates (Aichholzer et al., 2014). This causes me, in further consequence, to investigate the effects of immigration on the electoral success of the center-left party SPÖ.

### 3. HYPOTHESES

Especially in the last 20 years, there has emerged a wide range of literature on anti-immigration voting and preferences. Austria was often the center or part of the analysis due to the high and current relevance. While Austria faces a large influx of foreigners, the FPÖ gains strong electoral support, which ensued it to be a ruling party along with the center-right party, ÖVP, since the elections in 2017. Previous research by Halla et al. (2017) has shown that the immigrant share affects the vote share for the Austrian Freedom Party in the elections positively. However, the authors restrict their analysis to the impact of the immigrants' level of ability. Within the analysis in Switzerland by Brunner and Kuhn (2018), the authors found that the support for the anti-immigration party depends on the level of cultural differences between Swiss citizens and the incoming foreigners. The Swiss findings are highly relevant for Austria due to common features, like strong cultural identity and the fear of having the native culture undermined by immigrants (Oesch, 2008; Brunner and Kuhn, 2018). Nevertheless, there has not been conducted a comparable study in Austria. Based upon the findings of the literature review, I outline the believes with four

hypotheses.

Firstly, I hypothesize that the share of immigrants affects the vote share for the Austrian Freedom Party positively. This hypothesis is presented as Hypothesis (H1) in the list below.

Secondly, I believe that the magnitude of immigration aversion and, therefore, the support for the anti-immigration party depends on the level of cultural differences between Austria and the immigrant's country of origin. I expect differing effects on the support conditional on the categorization of culturally similar or different immigrants. This is in line with Brunner and Kuhn's (2018) findings in this respect. For the former group, I base my beliefs on the findings related to the Contact Theory, which shows that contact between in-group and out-group members reduces anxiety and prejudices as well as it enhances intergroup relations (Voci and Hewstone, 2003). Therefore, I believe that likely positive contact and connected experiences of natives and culturally similar immigrants are linked to a reduction of anti-immigration support. Consequently, the vote share for the FPÖ is affected negatively. This is summarized in Hypothesis (H2). For the latter group, I, however, expect strongly that the effect which was found by Halla et al. (2017) for Austria, was driven by immigrants from culturally different countries. Hence, an increase in culturally different foreigners affects the votes for the right-wing party, FPÖ, positively. This is summarized in Hypothesis (H3).

Thirdly, Hypothesis (H4) results from the predictions of Aichholzer et al. (2014) that the SPÖ suffers the main losses in the elections when FPÖ gains support. Therefore, I expect that while the FPÖ gains the SPÖ will lose as more immigrants migrate to a municipality. Furthermore, the expectation that the reversal of the effect occurs depending on cultural similarity stems from the same inference. While natives elect the FPÖ when cultural different foreigners migrate to a municipality, the SPÖ suffers from this shift. The opposite is true for culturally similar foreigners.<sup>3</sup>

As from now, the vote share is always the vote share of the Austrian Freedom Party (FPÖ) unless specified otherwise.

*A rise in immigration leads to an increased vote share for the Austrian Freedom Party.* (H1)

*The share of immigrants from culturally similar countries has a negative effect on the FPÖ vote share.* (H2)

*The share of immigrants from culturally different countries has a positive effect on the share of votes for the FPÖ.* (H3)

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<sup>3</sup>Since the Green Party follows also a pro-immigration policy, I believe that the same effects as for the SPÖ occur.

*The vote share for the SPÖ will be affected inversely to the effects of the FPÖ. In other words, the opposite of Hypotheses 1 to 3 will occur.* (H4)

#### 4. INSTITUTIONAL SETTING

In this section, I give a short geographic introduction which is followed by an overview of the political history and current setting of Austria.

Austria is located in Central Europe. The country consists of nine federal states which are divided into 102 political districts of which Vienna, the capital city, encompasses 23 political districts. These were further split into 2,123 municipalities throughout Austria in 2017. Vienna amounted to 1,867,582 inhabitants in 2017, which is the largest city in Austria. Gramais in Tyrol was the smallest community counting 47 inhabitants and 283,869 lived in the largest municipality, Graz. Excluding the Viennese communities each community's population was on average 3,210 in 2017.

After World War I, the SPÖ and the ÖVP were the main leading parties in Austria with each around 40 to 50% of the vote shares according to general election data of the Austrian Federal Ministry of Interior. They held that position until the 1990's when the FPÖ gained votes drastically. The FPÖ held vote shares of 5 to 10% from 1945 until the vote shares increased steadily in the 1990's. Thereafter, with one exception with the collapse in 1993, which was induced by the split of Alliance for the Future of Austria (BZÖ) and the FPÖ, they reached large and increasing vote shares. Moreover, there are among others two parties with relatively small vote shares in the history: the Green Party and NEOS – The New Austria and Liberal Forum and Communist Party of Austria.

The analysis of my paper covers five general elections in Austria: 2002, 2006, 2008, 2013 and 2017. Due to the focus on the cultural aspect of immigration on the political outcome of the FPÖ, I present the four variables of primary interest for each year of election in Table 1. The summary statistic indicates a steady positive trend in all of the variables: FPÖ vote share, number of total immigrants, culturally similar and different immigrants. Therefore, Austria offers a good basis for such an investigation. First and foremost, the right-wing party, FPÖ, gains strongly and steadily support by the citizens. The vote share of the FPÖ in the general elections almost tripled from the year 2002 until 2017. In 2017, the conservative and center-right Austrian People's Party gained the greatest share of votes followed by the Austrian Freedom Party. This resulted in taking the

office by the two parties. Secondly, Austria undergoes a particular large modification in the ethnic composition. In the same period as the success for the FPÖ, the share of immigrants went from 9.5 to 15.9%, whereas the fraction of foreigners from similar countries doubled. In the same period, the share of culturally different immigrants went up by 70%. Thirdly, immigration related topics are decided on state level by the National council. This offers a link between political outcome and the preferences since voters elect the members of the National Council in the general election.

The National Council constitutes the legislative authority and is next to the Federal Council one of the two houses of the Austrian Parliament. In the National Council, bills are presented to the members and passed as laws if agreed upon. In the general elections, the 183 members of National Council are elected by voters with the Austrian citizenship. The voter is required to be 16 years of age or older. When elected with a majority support, the party takes the office of the ruling party alone. If the majority is not reached, the party forms a coalition with another party to obtain a combined majority. Moreover, the other parties who reach more than 4% of the votes will be the opposition to the parties in charge. The law determines that general elections are held every five years. The legislature period can be shortened if valid reasons justify an acceleration of the election dates. Therefore, the time frames between included elections vary between 2 and 5 years.<sup>4</sup>

Apart from the election related setting, recent world events influence the content of this paper. Considering the immigration shares in 2013 and 2017, depicted in Column (4) and (5) in Table 1, suggest that a shock to the number of inhabitants occurred after 2013. The biggest growth of 33% in foreigner share of different immigrants happened between 2013 and 2017. This coincides with the European migrant crisis starting in 2015 where disproportionately many asylum seekers of countries, such as Syria, Afghanistan and the Iran migrated to Austria. This is based on the Statistical Yearbook of Migration and Immigration of 2017 created by Statistic Austria. In Section 7.3, I exploit this immigration shock to Austrian municipalities where I compare them to municipalities which experienced no immigration influx.

## 5. VARIABLE DESCRIPTION AND DATA

In this paper, I use an Austrian longitudinal data set on community-level to investigate whether I can find support for the hypotheses using the model specification.

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<sup>4</sup>I gathered this information from the Austrian Federal Ministry of the Interior.

Table 1: Descriptive statistic of the main variables per election year

Year of Election	(1) 2002	(2) 2006	(3) 2008	(4) 2013	(5) 2017
Share of FPÖ votes	10.1 (0.109)	11.2 (0.081)	17.7 (0.117)	20.7 (0.109)	26.5 (0.135)
Share of immigrants	9.5 (0.145)	10.1 (0.154)	10.5 (0.158)	12.5 (0.184)	15.9 (0.220)
Share of similar immigrants	1.62 (0.034)	2.01 (0.040)	2.28 (0.043)	2.99 (0.058)	3.33 (0.060)
Share of different immigrants	7.89 (0.134)	8.12 (0.140)	8.19 (0.142)	9.51 (0.165)	12.6 (0.198)

Notes: All means and standard deviations in brackets are population weighted and presented in percentage.

## 5.1. Main variables

For the main dependent variable, namely the proportion of votes for the FPÖ in federal elections, I use the data provided by the Austrian Federal Ministry of the Interior. These results are on state-level for each community because of the fact that immigration as well as other economic policies are defined and set at national level. The results might deviate from other official election outcomes. One reason is that voting cards are excluded from the sample due to potential missing contact with immigrants. When eligible voters are absent the day of the election, they have the right to use proxy cards to vote per mail. Since there is no information on the length of absence or the reason for requesting a voting card I eliminate these voters to reduce biasedness of the estimators due to potential lack of contact to immigrants. Another reason is that in 2015 the federal state Styria performed a structural reform merging 542 to 287 municipalities in total. Since election outcomes of the years before 2015 are based on the old municipality structure and the latest election in 2017 on the new structure I disregard all merged municipalities in the analysis. This reduces the sample by around 7% of the municipalities according to the community structure in 2017. Hence, deviations to official election results are likely to occur.

One of the main independent variables is the share of immigrants per municipality, which is calculated by dividing the number of foreigners by the total number of inhabitants. I extracted the data from Statistics Austria, which offers a listing of the natives' and immigrants' countries of origin. However, the main focus of this paper lies on the differentiation of immigrants. I



hypothesize that the effect on vote share differs according to the similarity of Austria and their origin country. I follow the approach of Brunner and Kuhn (2018) by applying a definition of cultural similarity and splitting immigrants into two groups: culturally similar and different immigrants. Cultural similarity grounds on two dimensions reflecting polarization between traditional and secular-rational orientations toward authority but also survival opposed to self-expression values. These factors are extracted from the World Value Survey where the traditional preferences are mirrored among others by the relevance of religion and approval of authorities as opposed to secular-rational preferences, which consist of values stressing issues as gender inequality and human diversity (Inglehart and Baker, 2000). Using the latest map of countries assigned to the dimensions by Inglehart and Welzel (2005), I divide countries according to the level of similarity to Austria into two different samples. One sample is formed by culturally similar countries, such as catholic and protestant European countries as well as all English-speaking countries. Uruguay is the only Southern American country which is in the group of similar countries. European Ex-communist countries are excluded from that list and belong among African, Asian and most South American countries to the sample of culturally different countries.

## 5.2. Control variables

In this part, I am listing the controls I introduce to the model which influence migration and the vote share. In further consequence, the omitted variable bias should be diminished. Socio-demographic factors influence the level of support for right-wing parties. Male individuals are on average much more likely to support right-wing populists (Arzheimer, 2009). This might be due to female natives being predicted to be less exposed to labor market competition with foreigners compared to men (Hjerm, 2009). For the aspect of age, Arzheimer (2009) finds evidence that it is a good predictor of the likelihood of right-wing voting. The strongest positive age effect is in the younger generation of 18 to 29-year-olds. The oldest generation of the age over 65 years is negatively correlated with extreme right support. Nevertheless, a meta-analysis of 2018 shows that the link between right-wing voting and age are inconclusive. The author finds a significant relation, but the sign and the magnitude of the effect are expected to be based on the respective environment (Stockemer et al., 2018). Moreover, there is evidence that a rise in unemployment rate increases the likelihood of supporting anti-immigration parties (Arzheimer, 2009). In this analysis, the control variables (age, gender, unemployment rates) are limited to voters having

the Austrian citizenship since voting on the federal level is restricted to Austrians. The Public Employment Service Austria (AMS) does not offer data of unemployment rates on municipality level. However, information on the number of unemployed individuals for each year prior to the election year exists. I calculated an approximation of the unemployment rate by dividing the unemployed individuals by the sum of the labor force. The labor force in this paper are all individuals excluding children under the age of 15 and individuals older than 60. I anticipate a retirement age of 60 based on information of the Chamber of Labor claiming the actual average pension age to be 60.25 even though the legal retirement age is 65.<sup>5</sup> Unfortunately, I cannot exclude groups who do not belong to the working force, as for instance students. Furthermore, Arzheimer (2009) found evidence suggesting that the average income in voting districts affect the support for the extreme-right wing party negatively. Hence, I include the average income as a control variable. I attained the data from the Statistic Austria Database. Eventually, I use the sum of the ordinary and extraordinary income of the preceding year for each municipality. This sum is then divided by the number of inhabitants in each community to obtain the average income. The voter turnout is added as a control variable since it affects voting outcome and also parties asymmetrically (Otto and Steinhardt, 2014). Moreover, increasing immigration is negatively correlated with the voter turnout (Barone et al., 2016). The Austrian Federal Ministry of the Interior provided the data. Finally, I further control for election year and federal state effects.

Unfortunately, Statistic Austria or other Austrian databases offer data on municipality level only to a very limited extent. Mainly, data is available for the NUTS-regions whilst the most detailed classification is on district level. This hindered me to include a set of control variables.

One might argue that the political context of each municipality causes biased estimators due to an omitted variable problem. Conceivably, migrants are more inclined to move to areas where the political climate is welcoming towards immigrants (Harmon, 2017). Moreover, it seems likely that the political climate of the previous years affects the current and later years. However, Hjerm (2009) finds evidence which disproves this assumption. The author states that the political context has no effect on anti-immigration attitudes if one controls for the economic environment. This means that whether the exclusion of political context as a control variable has potentially an effect is still questionable.

Many researchers assume that the industry structure influences the voting behavior as well as

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<sup>5</sup><https://www.arbeiterkammer.at/beratung/arbeitsrecht/pension/pensionssicherheit/Pensionsantrittsalter.html>, 2018-07-05

the location choice of immigrants (e.g. Halla et al., 2017; Steinmayr, 2016). However, this data is not available on municipality level, thus not included as a control variable. Furthermore, I would have hypothesized that the crime rate in a municipality affects the voting behavior towards a more security focused party (as e.g. the FPÖ). To the best of my knowledge, there is no paper which finds evidence that the location choice of immigrants is based on the crime rate of that area. Therefore, I expect no omitted variable bias and I disregard the crime rate as a control variable.

### 5.3. Descriptive statistic

In the following part, a summary of the descriptive statistics of the included data is given. After deduction of merged communities in Styria, I use a strongly balanced panel dataset which includes a total of 9,895 observations from five elections (2002, 2006, 2008, 2013, 2017) and 1,979 municipalities. In Table 7 in the Appendix, the descriptive statistics of the control variables are presented with exception of the election year and the federal state. The time frame is ranging from 2002 to 2017. From the election year 2002 until the year 2013 the average turnout share declined from 80.3% to 65.2%. In 2017, it increased again slightly to 67.0%. The average age resembled an opposite trend. While the average age was 27 years in 2002, it increased steadily until it reached a mean age of almost 30 years in 2017. The income level followed a similar pattern and has been on the rise since 2002, while at the same time the difference between the minimum and maximum values has been diverging more and more over the years. Remarkably, the male share varied notably across communities of around a third to about two thirds each election year.

## 6. EMPIRICAL STRATEGY

### 6.1. Ordinary Least Squares

In the following subsection, I explain the model of the relationship between the vote share and the share of immigrants. As my baseline I run the subsequent OLS regression equation:

$$FPOEshare_{gt} = \alpha + \beta Immigrants_{gt} + \delta X'_{gt} + \gamma ElectionYear_t + \epsilon_{gt} \quad (1)$$

where  $g$  refers to a municipality and  $t$  refers to the year of the general election. The dependent variable  $FPOEshare_{gt}$  is the percentage of votes for the Austrian Freedom Party per municipality and general election year. In Equation 1,  $\beta$  captures the partial effect of the share of immigrants

resident in a municipality on the share of votes for the right-wing party, FPÖ. Note that a positive sign of  $\beta$  implies that a larger share of immigrants is associated with a larger support for the FPÖ.

$$FPOEshare_{gt} = \alpha_1 + \beta_1 SimilarImmigrants_{gt} + \delta_1 X'_{gt} + \gamma_1 ElectionYear_t + \epsilon_{gt} \quad (2)$$

$$FPOEshare_{gt} = \alpha_2 + \beta_2 DifferentImmigrants_{gt} + \delta_2 X'_{gt} + \gamma_2 ElectionYear_t + \epsilon_{gt} \quad (3)$$

The focus of this paper lies on the values and culture the immigrants believe in. Based on the definition of cultural similarity to Austrian culture by Inglehart and Welzel (2005) I split the immigrants into two groups: immigrants from culturally similar origin countries and from culturally different origin countries. The partial effect of the share of the culturally similar immigrants on the vote share for the right-wing party is captured by  $\beta_1$  while  $\beta_2$  captures the partial effect of the latter group on the vote share for the FPÖ. To increase the efficiency of the results and to capture changes in the composition of voters and sociodemographic characteristics of municipalities, I control for a set of covariates,  $X'_{gt}$ . Included in the set is the average income as a proxy for economic status per municipality, the federal state and the voter turnout per national election. Furthermore, I control for the share of Austrian male residents per community, the unemployment rate and the community's average age of Austrian citizens. The effect on the vote share is depicted by  $\delta_1$  and  $\delta_2$  when regressing on the share of culturally similar and different foreigners, respectively.

However, to yield consistent and unbiased estimates, the OLS model relies on the following Gauss-Markov assumptions:

1. The regression model is linear in the coefficients and the error term. There are no solid arguments for the error term or any independent variables except for potentially the average age which objects this statement. The effect of the average age might be non-linear on the vote share since a younger generation affects the vote share positively whereas the older generation negatively (Arzheimer, 2009). However, the squared age coefficient presented in Subsection 7.1 Table 2 is insignificant, which contradicts this apprehension. So, this assumption is likely to hold.
2. The available data is a random sample from the population. I chose Austria as the country of interest. Then I excluded municipalities which were affected by the merging in Styria in 2015. The exclusion is unrelated to the voting outcomes and immigration. There is no

evidence that those municipalities had highly differing voting and immigration preferences. Hence, I do not believe that this causes any distortions in the estimation.

3. Sampling variation needs to be given in the explanatory variable. To be able to explain changes in the vote share, changes in immigration are needed. The data includes a wide range of municipalities with varying levels of immigration. This assumption is met.
4. The conditional variance of the error term needs to be homoscedastic, which means constant over observations and time. As part of the pre-analysis I performed a Breusch-Pagan test for each OLS regression (models including controls per type of immigrant and vote share of the FPÖ and SPÖ). The results suggest that the conditional variance is heteroscedastic. Therefore, I use robust standard errors in the analysis to obtain unbiased standard errors. The OLS estimator still delivers an unbiased and consistent coefficient.
5. The error term needs to be independently distributed and not serially correlated or autocorrelated. I assume that this assumption is met.
6. The zero conditional mean assumption needs to be met. The distribution of the error term given the independent variables has conditionally a zero mean. It is the most important assumption which is unlikely to hold with respect to the conditions of this analysis. As an example, the missing industry structure variable, which would be captured by  $\epsilon_{gt}$  is potentially linked to the FPÖ vote share and the choice of municipality. Furthermore, the assumption that the choice of municipality when migrating is exogenous will most likely not hold. There is evidence that migrants are reluctant to move to areas where the support for right-wing parties, e.g. the FPÖ, is high. The main concern is that immigrants relocate after elections to communities where immigration is not only tolerated but even welcome (Harmon, 2017). So, a variable capturing the previous political context is missing. If the exogeneity assumption does not hold, this would constitute a limitation to this specification due to potential reverse causality. Changes in the share of immigrants would be associated to the level of support for the FPÖ. This would further imply that the OLS and Fixed Effects are biased and inconsistent. Owing to the lack of data availability on community level, which affects the migration flow as well as the vote share for the right-wing party, I expect biased estimates of the OLS regression. Missing variables, like the industry structure, might be the main source of biasedness.

In addition to that, due to violations of the OLS assumptions, a causal interpretation of the results is problematic. Hence, two alternative strategies follow to overcome the drawback: a Fixed Effect and a Differences-in-Differences estimation.

## 6.2. Fixed Effects estimation

To overcome these pitfalls, I estimate the model using a Fixed Effects estimation where I exploit time-variation and community fixed effects. In this subsection, I present the Fixed Effects (FE) model specification which differs only slightly from the model of the Ordinary Least Squares. Afterwards, I discuss the assumptions needed with respect to this model.

In panel data models, it is assumed that the error term  $\epsilon_{gt}$  can be further divided into  $\eta_g + v_{gt}$ . The first part of the error term,  $\eta_g$ , does not vary over time while the second,  $v_{gt}$ , does. In regard of the changes, I run the following FE regressions:

$$FPOEshare_{gt} = \omega_1 + \theta_1 SimilarImmigrants_{gt} + \rho_1 X'_{gt} + \pi_1 ElectionYear_t + \eta_g + v_{gt} \quad (4)$$

$$FPOEshare_{gt} = \omega_2 + \theta_2 DifferentImmigrants_{gt} + \rho_2 X'_{gt} + \pi_2 ElectionYear_t + \eta_g + v_{gt} \quad (5)$$

where  $g$  refers to a municipality and  $t$  refers to the year of the general election. In Equation 4,  $\theta$  captures the partial effect of the share of immigrants resident in a municipality on the share of votes for the right-wing party, FPÖ.  $\omega_{1,2}$  presents the constant in the regression,  $\rho_{1,2}$  the effect of the control variables and  $\pi_{1,2}$  the year effect.

On the contrary to the OLS estimation, the fixed effects estimation removes the unobserved time-constant differences of voting preferences,  $\eta_g$ , across municipalities and therefore, a potentially large source of omitted variable bias.

The Fixed Effect estimation relies on less strict assumptions than the OLS model. Following Angrist et al. (2013), the assumptions stated below must be met to draw a causal inference:

1. The form of the function is linear and additive. With respect to the analysis, it is very likely that this assumption will be met. Halla et al. (2017) finds that a simple linear model depicts the relation between FPÖ vote share and immigration to a very good extent.
2. The similar but more relaxed zero conditional mean assumption needs to be met. It is allowed that unobserved time-constant factors are not independent of the explanatory variable for all included periods. This means that the expected value of  $\eta_g$  is not required to equal zero.

With respect to this analysis, it implies that the effect of missing control variables is captured by  $\eta_g$  and, consequently, reduces the bias which would be introduced otherwise. This only holds for variables which do not vary over time. As an example, the unobserved effect of industry structure does not pose a problem anymore.

3. As in the OLS estimation, the regressors must be strictly exogenous to provide consistent estimates. The strict exogeneity assumption defines that the part of the error term which does vary over time,  $\nu_{gt}$ , is not allowed to be related to the share of immigrants and other control variables in any election. It is possible that the assumption is violated even though the bias through the omitted industry structure variable is reduced. The missing variable capturing the effect of the political environment potentially violates the assumption. As a solution to this potential problem, I further analyze the data by use of a Difference-in-Differences approach relying on different and more attainable assumptions than the Fixed Effects estimation. The DiD approach is possible due to an immigration shock based on the refugee crisis starting in 2015.

### 6.3. Difference-in-Differences

As already shown in Table 1, a sudden increase in the share of immigrants occurred between the years 2013 and 2017. In this section, I want to exploit this shock to Austrian municipalities by use of a quasi-natural experiment where one subsample was affected by the shock and one subsample stayed stable between 2013 and 2017. Following the approach of Card and Krueger (1993), I apply the Difference-in-Differences strategy as an additional version of fixed effects estimation to extract a shock-based treatment effect. In line with the approach, I run the following equation:

$$FPOEshare_{igt} = \lambda ElectionYear_t + \delta Treatment_{gt} + \epsilon_{igt} \quad (6)$$

where  $g$  refers to a municipality and  $t$  refers to the year of the general election. This analysis considers solely the elections of 2013 and 2017.  $\lambda_t$  depicts the year effects that are assumed to be common across municipalities.  $i$  indicates whether a municipality was affected by a positive immigration shock prior to 2017. The dependent variable,  $FPOEshare_{igt}$  constitutes the vote share for the Austrian Freedom Party. In Equation 6,  $\delta$  captures the treatment effect on the share of votes for the right-wing party, FPÖ. Comparing differences of expected vote shares over time within

and across the samples of unaffected and affected municipalities yields the following equations:

$$\begin{aligned}
& \left( E[FPOEshare_{igt}|g = affected, t = 2017] - E[FPOEshare_{igt}|g = affected, t = 2013] \right) - \\
& \left( E[FPOEshare_{igt}|g = unaffected, t = 2017] - E[FPOEshare_{igt}|g = unaffected, t = 2013] \right) \quad (7) \\
& = (\lambda_{2017} + \delta - \lambda_{2013}) - (\lambda_{2017} - \lambda_{2013}) \\
& = \delta
\end{aligned}$$

In a nutshell, this treatment effect,  $\delta$ , is the difference in expected outcomes in the control sample subtracted from the difference in the treatment sample. It is also the sample analog of the population means with the same controls as in the OLS and FE estimation.

In all three analyses, I regard municipalities with an increase of 50% and higher from 2013 to 2017 as affected municipalities. The change is large enough that municipalities experience a change in ethnic composition. The range of change for unaffected municipalities lies between -5 to +5 percent.

Other than the OLS assumptions mentioned in Section 7.1, the DiD estimation relies on the parallel trend assumption. It is required that  $(\lambda_{2017} - \lambda_{2013})$  is identical for both unaffected and affected municipalities. If this is the case then the treatment effect is obtainable. By extension, it is needed that the share of FPÖ votes followed the same trend in the pre-treatment periods. I examine this assumption graphically for each shock: total, culturally similar and different immigration. In Figure 7 in the Appendix, it is visible that the vote share of treated municipalities (immigration shock) increased parallel to the vote share of untreated municipalities between 2002 and 2008. This parallel trend is also visible when splitting the immigrants into the two subgroups, depicted in Figure 8 and 9 in the Appendix. For both samples, the periods before 2013 increase to a similar extent at almost the same level. The analysis of the figures suggests that the parallel trend assumption is indeed fulfilled. Besides, the sample composition of treatment and control municipalities need to be constant over time. This is fulfilled since I use the same municipalities as treated or untreated when comparing the outcome of 2013 with the one of 2017. Moreover, I take advantage of the fact that this strategy does not require randomization of the treatment. This is particularly important due to potential endogeneity concerns in terms of location choices of immigrants.



### 6.3.1 Descriptive data related to the immigration shock

In this subsection, I show the variation of immigration to Austrian municipalities between the years 2013 and 2017.

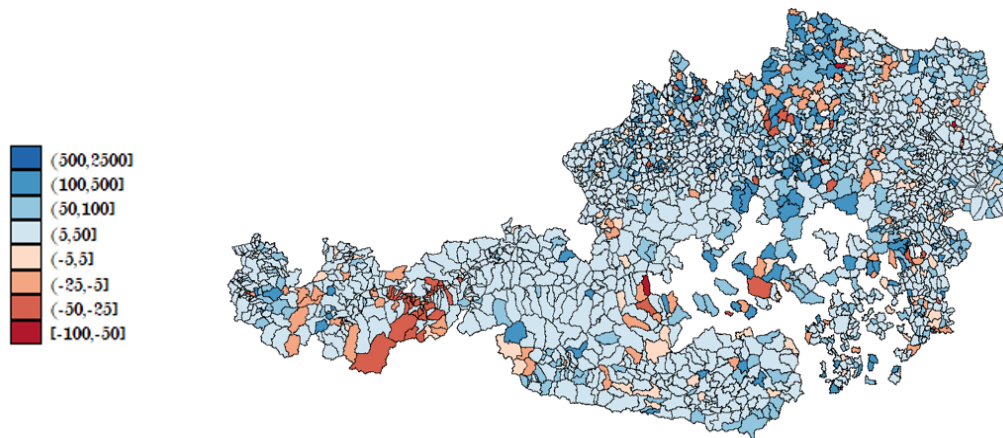


Figure 1: Change of immigrants from 2013 to 2017

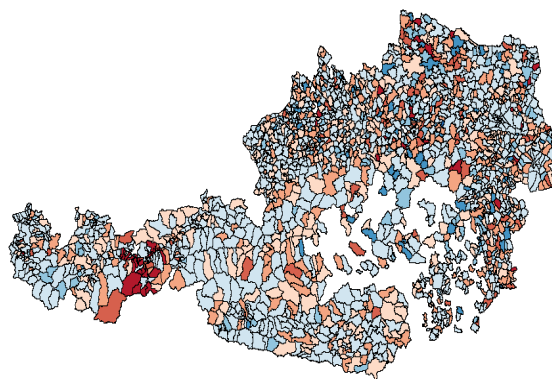


Figure 2: Change of similar immigrants

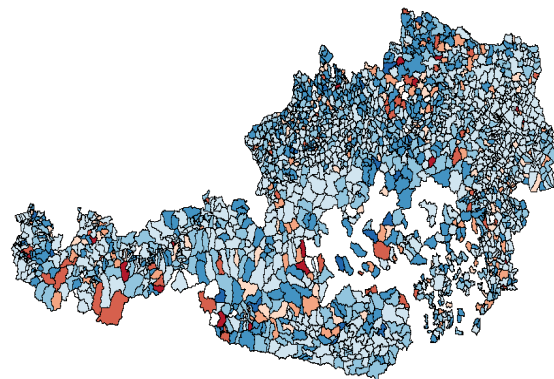


Figure 3: Change of different immigrants

In Figure 1, I present the percentage change of immigrant shares between the years 2013 and 2017 for each municipality. Blue indicates an increase of immigrants while red is used when the share of foreigners in the municipality decreased. In both cases, the darkness connotes the magnitude of the change with a darker color implying a stronger variation. Figure 1 is further split into the two cultural types of foreigners to find evidence for the main hypotheses (H2) and (H3) which is depicted in Figure 2 and 3, respectively. I can clearly conduct that some municipalities are affected by a large influx while some communities encounter no or only small changes. In the following analyses, I regard municipalities with an increase of 50% and higher from 2013 to

2017 as affected municipalities. This is mirrored by the three darkest shades of blue. The range of change for unaffected municipalities lies between -5 to +5 percent. These municipalities are colored in the lightest red.

To give a better overview of the magnitude of immigration changes, I present the distribution depending on the type of immigrants. Most municipalities faced a positive change of immigration between 2013 and 2017, visible in Figure 4. The largest share of municipalities faced an immigration change ranging between zero and additional 100%. A similar pattern for the immigration of culturally similar and different foreigners are depicted in Figure 5 and Figure 6, respectively. However, the major distinction between the two figures is that contrarily to different immigrants the change of similar immigrants is centered and almost normally distributed around zero change. Besides, for the sample of culturally different immigrants the maximum value of the outliers is 2,500, indicating that the municipality facing the largest increase had 25 times as many immigrants in 2017 compared to 2013. It is more than four times as large as the highest outliers for the similar immigrants, thus culturally different immigration varies more intensively than similar immigration across municipalities.

## 7. RESULTS

### 7.1. Ordinary Least Squares

In this subsection, due to the mentioned drawbacks of the OLS model, I focus on the first three main hypotheses and use this model as a benchmark estimation for the subsequent ones. The regression results from estimating Equation 1 are presented in Table 2. In regard to hypothesis (H1), the Ordinary Least Squares results are presented in Column (1) using the baseline specification without controls. In Column (2), the controls are added to the estimation. In both specifications, the coefficients are highly significant and positive. This suggests that an increase in immigration is linked to an increase of the vote share for the Austrian Freedom Party. It further indicates that I cannot reject hypothesis (H1). Yet, the suggested correlation effect is lower when adding controls but still positive. A percentage point increase of the immigrant share is associated with a rise of the FPÖ vote share by 0.0395 percentage points. In line with Hypotheses (H2) and (H3), I find evidence that an increase in culturally similar immigrants in a community is associated with a decrease of the support for the FPÖ while an increase in culturally different immigrants has a significant, positive effect on the vote share. This is visible in Column (4) and (6). Overall, the

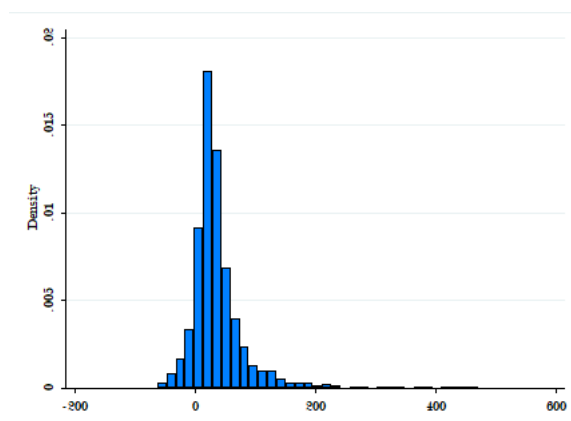


Figure 4: Percentage change of total immigration

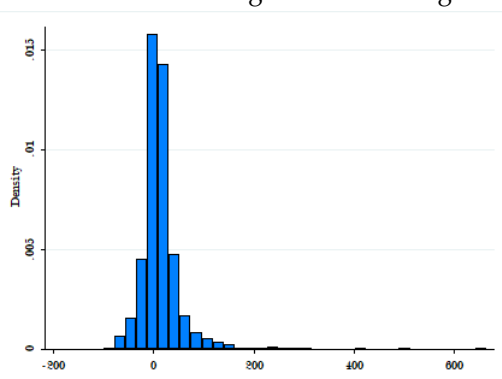


Figure 5: Percentage change of culturally similar immigration

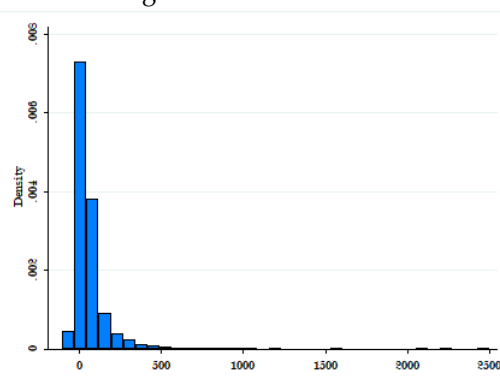


Figure 6: Percentage change of culturally different immigration

effects on the vote share through the immigrant share are all fairly small.

Control variables employed in the specifications with the exception of the voter turnout, behave contrarily to what literature has previously found (see Subsection 5.2). Across the regressions presented in Column (2), (4) and (6), all estimators with exception of the age variable are significant at the 1%-level and rather stable. First, the estimator of the age variable indicates that average age of a municipality has no significant effect on the vote share when only regressing on culturally different immigrants. The extent of the negative impact on the vote share of the average age specification (2) and (4) is very limited and almost not existent. Furthermore, the insignificance of the squared age variable indicates that there exists no non-linearities in the relation between vote share and age, thus not complying with the findings of Arzheimer (2009). Second, the sign of unemployment rate as well as the male share are negative and hence opposing to findings of Arzheimer (2009), stating that a larger number of men increase the right-wing

Table 2: OLS results: Regression of FPÖ vote share on immigrant share

VARIABLES	(1)	(2)	(3) FPÖ vote share		(4)	(5)	(6)
<b>Share of immigrants</b>	0.276*** (0.024)	0.039*** (0.015)					
<b>Share of similar immigrants</b>			0.309*** (0.053)	-0.272*** (0.027)			
<b>Share of different immigrants</b>					0.319*** (0.033)	0.153*** (0.021)	
Turnout share		-0.102*** (0.014)		-0.153*** (0.014)			-0.101*** (0.013)
Average age		-0.006* (0.003)		-0.006** (0.003)			-0.002 (0.004)
Average age (squared)		0.000 (0.000)		0.000 (0.000)			-0.000 (0.000)
Male share		-0.211*** (0.048)		-0.208*** (0.045)			-0.122** (0.049)
Election year		0.013*** (0.000)		0.013*** (0.000)			0.013*** (0.000)
Unemployment rate		-0.362*** (0.042)		-0.383*** (0.042)			-0.381*** (0.042)
Federal state		-0.003*** (0.001)		-0.003*** (0.001)			-0.003*** (0.001)
Average income in TEUR		-0.000*** (0.000)		-0.000*** (0.000)			-0.000*** (0.000)
Constant	0.153*** (0.002)	-26.14*** (0.372)	0.163*** (0.001)	-25.74*** (0.369)	0.157*** (0.002)	-25.99*** (0.371)	
Observations	9,893	9,771	9,893	9,771	9,893	9,771	
R-squared	0.028	0.600	0.008	0.604	0.024	0.604	

Robust standard errors in parentheses

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

support. The effect of both coefficients is strong with respect to other coefficients. Third, even though the effect is supposedly negative, the coefficient associated to the average income is almost zero across the regressions pointing to no impact on the vote share, thus not behaving in line with the claim that more income reduces the support for the right-wing party (Arzheimer, 2009). Fourth, the coefficient associated to the voter turnout is statistically significant and negative across the regressions, and therefore in line with the statement that voter turnout affects voting outcome (Otto and Steinhardt, 2014). Overall, the results are highly significant. However, the coefficients are likely to be inconsistent and downward biased due to violations of the model assumptions and a potential omitted variables problem.

## 7.2. Fixed Effects

To overcome the pitfalls of the OLS regression, I estimate the model using Fixed Effects estimation<sup>6</sup>. In all specifications in Table 3, I include municipality and yearly election fixed effects to control for time-invariant unobserved heterogeneity.

### 7.2.1 Effect on Austrian Freedom Party

In regard to Hypothesis (H1), the Fixed Effects results for the Austrian Freedom Party are presented in Column (1). The evidence at hand suggests that the share of immigrants has a strong and highly significant positive effect on the share of votes for the Austrian Freedom Party. An increase of one percentage point of foreigners in the community is associated with a rise of the far-right support by 0.561 percentage points, thus in line with the hypothesis. Indeed, the estimates of the benchmark OLS model are likely to be downward biased. Eliminating parts of the omitted variable bias by use of the FE model increases the estimate from 0.039 to 0.561 percentage points. Moreover, the coefficient linked to the share of similar immigrants is insignificant, hence neither complying with Hypothesis (H2) nor predicting an impact on the vote share at all. Yet, the coefficient associated with culturally different immigrants is positive and highly significant, thus suggesting that I cannot reject Hypothesis (H3). A one-percentage point increase of culturally different immigrants is linked to a rise in FPÖ vote share by 0.699 percentage points.

Furthermore, the control variables of the Fixed Effect regressions presented in Table 3 behave to a great extent, according to the research discussed in Subsection 5.2. First, in comparison to the OLS regression, the coefficient associated with the average age is positive and significant in regression (1) and (3). Next, the significant coefficient of the squared age variable suggests that there exists a non-linear relation between the vote share and age, thus the results are in line with the findings of Arzheimer (2009). Second, the bias removal induces a sign switch, such that an increase in males per municipality is linked to a higher vote share. Eventually, the FE estimate of gender control is in accordance with Arzheimer's claims (2009). Third, the coefficient associated to the average income is almost zero and statistically insignificant across the regressions, thus as in the OLS estimation not complying with the findings of (Arzheimer, 2009). Fourth, the coefficient associated with the voter turnout is statistically significant and negative across the regressions, and therefore in line with the statement that voter turnout affects voting outcome (Otto and Steinhardt,

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<sup>6</sup>A pre-analysis of the modified Wald test indicated that there exists heteroskedasticity. Therefore, I use robust standard errors in the following analysis.

2014). The effect increased in comparison to the OLS results. Finally, the estimators linked to unemployment rate are highly significant across regressions and negative, hence, not in line with previous literature.

Even though effects of unobserved variables which do not vary over time are eliminated, the estimator might be inconsistent if the strict exogeneity assumption of the explanatory variable is violated. To find out whether this assumption holds in the sample of this analysis, I perform a placebo-test. In order to do so, I regress the share of FPÖ votes of the previous election on the share of immigrants including the control variables. In Table 9 available in the Appendix, I find a highly significant correlation between the share of immigrants in the election years 2006, 2008 and 2013 and the latest election. There is no correlation between the election outcome in 2013 and the share of immigrants in 2017. However, the share of immigrants in 2017 is correlated at the 5%-significance level with the voting outcome 15 years earlier, in 2002. To put it in a nutshell, the analysis suggests a reverse causality problem which leads me to the conclusion that another model is needed to approximate a causal interpretation. Besides, possible time-varying unobserved heterogeneity additionally hinders the inference of a causal relationship. Nevertheless, the results of the FE model of Table 3 suggest a negative correlation of the voting outcome and the share of culturally different immigrants while it finds no evidence that the share of culturally similar immigrants affect the vote share.

### **7.2.2 Effect on opposing parties**

Previous literature has focused on how the success of far-right parties transformed the competition of political parties and consequently, threatens established parties. Aichholzer et al. (2014) suggest that due to the gains of Austrian Freedom Party voters, the center-left Social Democratic Party (SPÖ) consequently suffers the main losses. Column (4) to (6) of Table 3 show the Fixed Effect results of regressions according to various immigrant types.

Notably, the signs of the coefficients of the variables of primary interest are across regressions indeed reversed and significant at the 1%-level. Hence, Hypothesis (H4) cannot be rejected. Moreover, the effect of the control variables is analogous to the FPÖ voting outcome. But, the coefficient associated with gender is significant and positive, implying that more males reduce the support for the SPÖ. Another exception is the effect of the voter turnout which is significantly positive in the regressions (4) to (6).

In short, the findings are evidence for a threat for parties who actively campaign a liberal

Table 3: Fixed effects results

VARIABLES	(1)	(2)	(3)	(4)	(5)	(6)
	FPÖ vote share			SPÖ vote share		
Share of immigrants	0.561*** (0.054)			-0.132*** (0.039)		
Share of similar immigrants		-0.059 (0.072)			0.355*** (0.054)	
Share of different immigrants			0.699*** (0.081)			-0.237*** (0.066)
Turnout share	-0.277*** (0.015)	-0.305*** (0.021)	-0.297*** (0.016)	0.329*** (0.013)	0.348*** (0.013)	0.333*** (0.013)
Average age	0.046*** (0.006)	0.021 (0.016)	0.058*** (0.005)	0.025*** (0.009)	0.028*** (0.008)	0.019** (0.008)
Average age (squared)	-0.000** (0.000)	0.000 (0.000)	-0.000*** (0.000)	-0.001*** (0.000)	-0.001*** (0.000)	-0.001*** (0.000)
Male share	0.489*** (0.096)	0.572*** (0.115)	0.478*** (0.095)	-0.191** (0.085)	-0.215** (0.086)	-0.179** (0.083)
Unemployment rate	-0.214*** (0.066)	-0.204*** (0.069)	-0.217*** (0.065)	-0.111*** (0.043)	-0.113*** (0.043)	-0.109*** (0.042)
Average income in TEUR	0.000 (0.000)	0.001 (0.000)	0.000 (0.000)	0.000 (0.000)	-0.000 (0.000)	0.000 (0.000)
Constant	-0.951*** (0.110)	-0.625** (0.259)	-1.101*** (0.097)	-0.090 (0.145)	-0.132 (0.145)	-0.004 (0.140)
Election FE	YES	YES	YES	YES	YES	YES
Municipality FE	YES	YES	YES	YES	YES	YES
Observations	9,771	9,771	9,771	9,771	9,771	9,771
R-squared	0.643	0.625	0.647	0.521	0.521	0.525
Number of municipalities	1,957	1,957	1,957	1,957	1,957	1,957

Robust standard errors in parentheses

\*\*\* p&lt;0.01, \*\* p&lt;0.05, \* p&lt;0.1

immigration policy. In addition to that, the effects for the Green Party, who likewise supports an open immigration policy are presented in Table 8 in the Appendix. Since the Green Party is not the focus of this paper, I shortly summarize the main results. The total share and the share of different immigrants are negatively correlated with the voting for the Green Party at the 1%-significance level. No significant effects for similar immigrants are found.

### 7.3. Difference-in-Differences

In this subsection, I present the DiD results of the election years 2013 and 2017.

Using the data of the subsamples yielded the DiD estimation results depicted in Table 4 to 6. The results show insignificant estimators ranging between -0.001 and +0.001 across tables. Thus, there is no significant treatment effect of this shock to the municipalities. The results suggest that the increased support for the right-wing party between 2013 and 2017 emerged irrespectively of the immigrant shock. Communities where no change of immigrants occurred support the anti-immigration party almost to the same extent or even larger as where the share of immigrants increased by at least 50%. Yet, assuming that the parallel trend assumptions is met I deduct a causal inference of the results. Notably, in both periods the FPÖ vote share of the control group was larger than the vote share of municipalities treated with culturally different immigrants.

Table 4: DiD estimation results: Treated with total share of immigrants

Total number of observations in the DiD: 1146					
Control:	104	Treated:	469		
Outcome var.		FPOEshare	S.Err.	t	P> t
Before					
	Control	0.522			
	Treated	0.508			
	Diff (T-C)	-0.014	0.007	-2.12	0.035**
After					
	Control	0.609			
	Treated	0.597			
	Diff (T-C)	-0.012	0.007	1.85	0.065*
Diff-in-Diff		0.001	0.009	0.14	0.888

R-square: 0.41

\* Means and Standard Errors are estimated by linear regression

\*\*Robust Std. Errors

\*\*Inference: \*\*\* p<0.01; \*\* p<0.05; \* p<0.1



Table 5: DiD estimation results: Treated with culturally similar immigrants

Number of total observations in the DiD: 1144					
Control:		363	Treated:		209
Outcome var.		FPÖshare	S.Err.	t	P> t
Before					
	Control	0.449			
	Treated	0.455			
	Diff (T-C)	0.005	0.005	1.09	0.277
After					
	Control	0.535			
	Treated	0.539			
	Diff (T-C)	0.004	0.005	0.72	0.469
Diff-in-Diff		-0.001	0.007	0.21	0.833
R-square:		0.39			
* Means and Standard Errors are estimated by linear regression					
**Robust Std. Errors					
**Inference: *** p<0.01; ** p<0.05; * p<0.1					

Table 6: DiD estimation results: Treated with culturally different immigrants

Number of total observations in the DiD: 1840					
Control:		89	Treated:		831
Outcome var.		FPÖshare	S.Err.	t	P> t
Before					
	Control	0.405			
	Treated	0.394			
	Diff (T-C)	-0.011	0.007	-1.62	0.106
After					
	Control	0.490			
	Treated	0.480			
	Diff (T-C)	-0.010	0.008	1.30	0.193
Diff-in-Diff		0.001	0.010	0.14	0.892
R-square:		0.40			
* Means and Standard Errors are estimated by linear regression					
**Robust Std. Errors					
**Inference: *** p<0.01; ** p<0.05; * p<0.1					

#### 7.4. Robustness check

To check whether the preceding results are robust I perform an additional DiD estimation where I change the sample composition. In the original estimation, I use municipalities with a percentage change of immigrant share of 50% or higher as the treated municipalities. For the control group I use municipalities where almost no change occurred (-5% to +5%).

As a robustness check, I use municipalities with a 100% increase of immigrants as treated while municipalities which experienced no change or even emigration form the control group. In the Appendix in Tables 11 to 13, the results are presented. Using the different sample definition still yields no significant voting differences between municipalities that were affected and those who were not. The support for the FPÖ is almost identical in both the control and the treatment group. This is true for all three sub-analyses: total share of immigrants, culturally similar and different. This supports the results previously obtained. Nevertheless, the robustness check is exclusively valid if the main assumption of the DiD analysis holds: the parallel trend assumption. Figure 10 in the Appendix shows an almost parallel trend of untreated and treated municipalities between the years 2002 and 2008. Depicted in Figure 12 in the Appendix, the trend for municipalities treated with an immigration shock of culturally different foreigners is also very comparable to the untreated communities. The trend of vote share of municipalities treated with culturally similar immigrants are presented alongside untreated communities in Figure 11. The trend between 2006 and 2008 is almost parallel. Therefore, the parallel trend assumption is indeed fulfilled in all three specifications and the robustness checks confirm the results in Section 7.

## 8. DISCUSSION

The estimation of the elections between 2002 and 2017 suggests that an increase of culturally different immigrants is associated with a rise in the anti-immigration party. Thus, I argue that the fear of cultural change is indeed related to the voting behavior of Austrian citizens. In line with findings of Brunner and Kuhn (2018), culturally different immigrants affect the anti-immigration voting outcome positively, while culturally similar immigrants do not influence the outcome of the right-wing party. Potential explanations for the latter are that similar immigrants are less noticeable due to shared characteristics. Consequently, if individuals are not perceived as outsiders the contact theory mentioned in the literature review is not effective and, thus, does not affect the voting outcome.

Nevertheless, the analysis of the immigration shock beginning in 2015 reveals that the support for the FPÖ increased irrespectively of actual immigration between 2013 and 2017. In regard to the analysis, it bears mentioning that in many cases unaffected municipalities border on affect municipalities. This is particularly visible in Figure 1 but also for the treatment groups depending on the cultural similarity. In the following I offer a few explanations for the missing treatment effect:

First, cultural effects and consequent anti-immigration preferences might spill-over from an affected to a neighboring unaffected municipality. As an example, even though immigrants are located in the border municipality, the inhabitants of the unaffected municipality potentially fear cultural changes. The possibility of traveling for immigrants with different values and belief systems might have caused a greater anxiety that immigrants from another municipality influence the identity of the neighboring community. It might be particularly true for neighboring communities with a large increase of culturally different immigrants. These potential envisioned spill-overs might have led individuals to support the FPÖ to the same extent.

Second, in the shock periods the media intensely covered immigration- and crime-related news. Notably, the discussed topics were related to cultural changes due to immigration e.g. religion and the construction of mosques as well as the fear of native women being forced to wear burkas. The mere exposure to such news is positively correlated with the probability of electing a party campaigning anti-immigration policies (Burscher et al., 2015). Moreover, the media possibly influenced voters on state-level making inhabitants of unaffected municipalities feel that a large influx of immigrants is occurring geographically close proximity and to a larger extent than in actual fact. Thus, the media influence leads to a potentially larger support for the anti-immigration party in areas without immigration.

Third, the media might have another side effect. Native Austrians might fear economic effects on state-level instead of on community-level. Individuals are informed through media about the changes in ethnic composition of the state. Hence, knowing that in other areas the number of immigrants increased, natives fear that public spending will increase on state-level which in further consequence is associated to a proportionally lower budget for the natives.

Fourth, I believe that potential labor market spill-overs affect the voting outcome of untreated analogous to treated municipalities. The unemployment rate increased from 2013 to 2017 in both treated and untreated communities, visible in Table 10 in the Appendix. While the unemployment rate increased by 26.5% in the treated communities it increased even more in untreated communi-

ties (32.4%). Apart from general factors influencing the unemployment rate, migration is possibly linked to parts of the increase. Due to the close distance it is likely that natives and immigrants from the affected communities commute to work in the neighboring unaffected municipalities. This potentially increased the labor market competition and raised the unemployment rate, which in turn might have made them change their voting behavior accordingly. Economic spill-overs can be disregarded in my analysis since no specific incidents related to the average income is measured. In Table 10 in the Appendix, the average income is presented. The level of average income increased in both samples by 11.1% and 7.2% for treated and untreated communities, respectively.

### 8.1. Limits

On the downside, this paper might face added noise when using the vote share for the FPÖ as a proxy for anti-immigration preferences. First, I cannot guarantee that FPÖ supporters elected the party because of said preferences. Still, it is a useful means of measure since the party program focuses on immigration topics. Second, on the course of vote catching in the election campaign of 2017, the Austrian People's Party moved from a center to a center-right position, approaching the FPÖ's anti-immigration attitudes. This might downward bias the effect of immigrants on the vote share for the anti-immigration party since individuals with negative attitude towards incoming immigrants might vote for the ÖVP instead. In any case, the real effect of immigration on political consequences cannot be extracted without noise, especially because the ÖVP's party program is more diverse and less specialized on immigration.

### 8.2. Implications

The paper at hand shows inconclusive results. On one hand, the fixed effects model shows a correlation of the vote share for the right-wing party with migration. On the other hand, the DiD results suggest that the vote share for the FPÖ increases irrespective of the share of immigrants. In any case, the implications for the increasing support for right-wing parties are far reaching. While the support is mainly linked to anti-immigration policy and, therefore, being elected to the government as in Austria the FPÖ has legislative power in other issues as well. Since the FPÖ does not only stand for anti-immigration but also for other conservative and anti-feminist attitudes this has long-causing effects on public spending. The spending for anti-immigration policies are likely

to be augmented while topics, which are rather social as e.g. pension funds, funds for daycares will be cut. Apart from the composition of public spending, the level of redistribution might decrease. Besides, the social developments within a country might be dampened and the country takes a step backwards in its achievements. As an example, the introduction of the smoking ban which was planned to be enforced in 2018 by the previous ruling coalition, SPÖ and old ÖVP<sup>7</sup>, was canceled by the current coalition, FPÖ and the new ÖVP.

## 9. CONCLUSION AND OUTLOOK

In a nutshell, I cannot find a causal relationship between the vote share and immigration. Nevertheless, using the five elections between 2002 and 2017 I find evidence suggesting that an increase of immigrants with culturally different belief sets is linked to an increased support for the Austrian Freedom Party. Hence, natives anxiety of changes to their identity including traditions and believe sets is likely to affect the individual attitudes towards immigration. In further consequence, this strengthens previous literature arguing that non-economic determinants have an impact on voting behavior. Still, culturally similar immigrants seem to not influence the support for right-wing parties.

Yet, the comparative analysis of the years 2013 and 2017, of which the latter year was affected by a positive shock of inflowing immigrants, shows that the support for the FPÖ increased irrespectively of actual immigration and cultural differences. Therefore, I argue that a suggestive, preexisting trend was abolished by the shock beginning in 2015. A possible explanation might be the increased media presence of politics with respect to immigration during the shock periods, making a feeling of major influx of foreigners geographically close to unaffected municipalities. Another explanation is the potential cultural and labor market spill-overs from municipalities which experienced an immigration shock to municipalities where the ethnic composition was stable.

Furthermore, an important finding is that parties who actively campaign a pro-immigration policy (SPÖ and the Green Party) are suffering the greatest losses in the elections. Rising immigrant shares are associated with lower support for named parties, with the exception of culturally similar immigrants. Culturally similar immigrants are positively correlated with the voting outcome for these parties.

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<sup>7</sup>During the election of 2017 the ÖVP got restructured and its political position moved more towards the right to a center-right party.

Finally, I give two examples for further research. Firstly, integrating the aspect of media and in particular the influence of the social media on the relationship between immigration and fear of cultural changes might explain the anti-immigration voting in Austria. Yet, this would need extensive additional research, preferably resulting in data on municipality level. Secondly, I advise to integrate the ÖVP as a supplementary anti-immigration party for studies related to the refugee crisis starting in 2015. The new focus of anti-immigration politics of the ÖVP since the election of 2017 might have dampened the effect on the analysis of my paper.

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APPENDIX

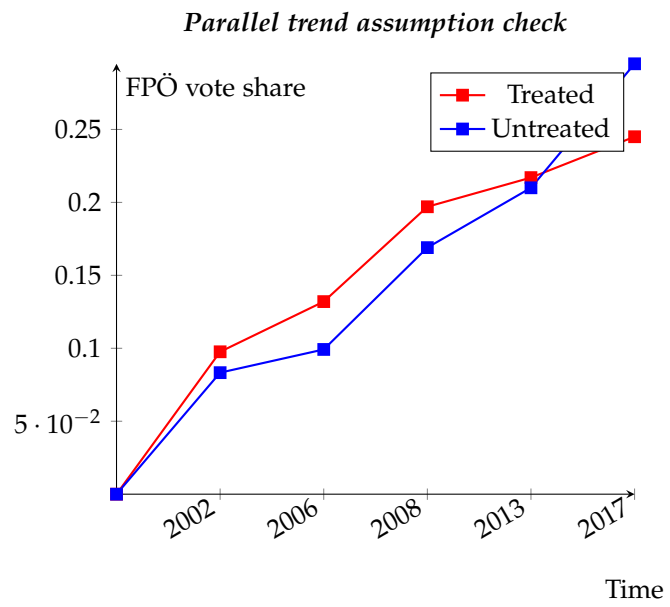


Figure 7: Check for shock of total immigration

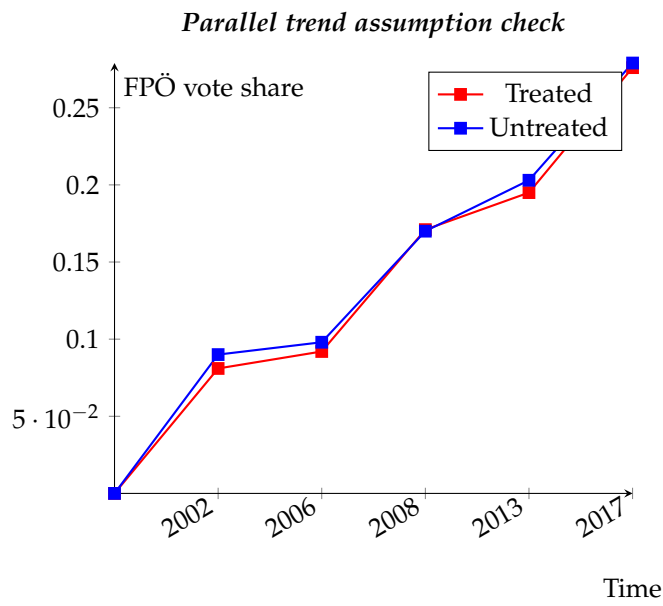


Figure 8: Check for shock of similar immigration

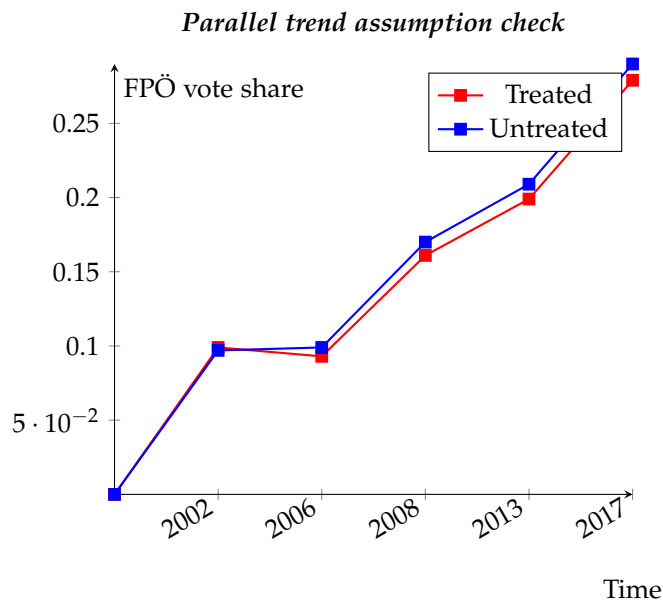


Figure 9: Check for shock of different immigration

Table 7: Descriptive statistics of control variables

Variable by election year	Obs	Mean	Std. Dev.	Min	Max
<b>2002</b>					
Turnout share	1,978	0.803	0.065	0.320	0.989
Average age	1,978	27.103	2.209	12.625	35.604
Average age (squared)	1,978	739.452	119.859	159.391	1,267.673
Male share	1,978	0.473	0.020	0.405	0.590
Unemployment rate	1,964	0.016	0.008	0.000	0.210
Average income in TEUR	1,956	3.786	31.069	0.795	570.373
<b>2006</b>					
Turnout share	1,978	0.736	0.077	0.511	0.929
Average age	1,978	27.543	1.939	14.040	40.403
Average age (squared)	1,978	762.363	107.255	197.114	1,632.414
Male share	1,978	0.476	0.018	0.333	0.634
Unemployment rate	1,978	0.046	0.021	0.000	0.106
Average income in TEUR	1,956	3.939	29.982	0.907	561.170
<b>2008</b>					
Turnout share	1,979	0.709	0.074	0.464	0.919
Average age	1,979	27.776	1.860	21.998	41.967
Average age (squared)	1,979	774.961	104.012	483.903	1,761.187
Male share	1,979	0.478	0.018	0.364	0.619
Unemployment rate	1,979	0.040	0.019	0.000	0.158
Average income in TEUR	1,957	4.183	32.707	0.972	619.575
<b>2013</b>					
Turnout share	1,979	0.652	0.077	0.444	0.931
Average age	1,979	28.504	1.662	22.718	43.832
Average age (squared)	1,979	815.259	96.299	516.122	1,921.281
Male share	1,979	0.480	0.016	0.390	0.604
Unemployment rate	1,979	0.046	0.020	0.000	0.117
Average income in TEUR	1,957	4.684	38.883	1.096	757.593
<b>2017</b>					
Turnout share	1,979	0.670	0.069	0.328	0.889
Average age	1,979	29.623	1.760	23.526	47.369
Average age (squared)	1,979	880.604	106.179	553.457	2,243.804
Male share	1,979	0.482	0.016	0.373	0.600
Unemployment rate	1,979	0.061	0.028	0.000	0.130
Average income in TEUR	1,957	5.096	4.135	1.253	812.725

Table 8: Fixed effects estimation for the Green Party

VARIABLES	(1)	(2)	(3)
	Vote share for the Green Party		
Share of immigrants	-0.297*** (0.038)		
Share of similar immigrants		-0.027 (0.042)	
Share of different immigrants			-0.357*** (0.058)
Turnout share	-0.234*** (0.009)	-0.222*** (0.010)	-0.224*** (0.010)
Average age	-0.018*** (0.003)	-0.005 (0.005)	-0.024*** (0.003)
Average age (squared)	0.000** (0.000)	-0.000 (0.000)	0.000*** (0.000)
Male share	-0.047 (0.041)	-0.090* (0.048)	-0.042 (0.041)
Unemployment rate	-0.092*** (0.022)	-0.097*** (0.024)	-0.091*** (0.022)
Average income in TEUR	-0.000*** (0.000)	-0.001*** (0.000)	-0.001*** (0.000)
Constant	0.689*** (0.056)	0.511*** (0.089)	0.760*** (0.054)
Observations	9,771	9,771	9,771
R-squared	0.280	0.234	0.289
Number of municipalities	1,957	1,957	1,957

Robust standard errors in parentheses

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

Table 9: Placebo test of correlation between election outcome and the share of immigrants in the following election year

VARIABLES	(1)	(2)	(3)	(4)	(5)
	2002	Share of FPÖ votes in			2002
		2006	2008	2013	
Share of immigrants in 2006	-0.136*** (0.037)				
Share of immigrants in 2008		0.135*** (0.030)			
Share of immigrants in 2013			0.122*** (0.036)		
Share of immigrants in 2017				-0.005 (0.027)	-0.045* (0.023)
Turnout share	-0.655*** (0.036)	0.006 (0.021)	0.120*** (0.029)	-0.142*** (0.029)	-0.508*** (0.038)
Average age	-0.002*** (0.001)	-0.005*** (0.001)	-0.005*** (0.001)	-0.006*** (0.001)	-0.004*** (0.001)
Male share	0.140* (0.080)	-0.389*** (0.079)	-0.502*** (0.097)	-0.250** (0.104)	0.124 (0.089)
Unemployment rate	-0.167** (0.072)	-0.341*** (0.077)	-0.438*** (0.091)	0.184** (0.077)	0.203*** (0.074)
Federal state	-0.014*** (0.001)	-0.001 (0.001)	0.001 (0.001)	0.001 (0.001)	-0.010*** (0.001)
Average income in TEUR	-0.000*** (0.000)	-0.000*** (0.000)	-0.000*** (0.000)	-0.000*** (0.000)	-0.000*** (0.000)
Constant	0.683*** (0.054)	0.418*** (0.046)	0.490*** (0.059)	0.585*** (0.057)	0.556*** (0.0552)
Observations	1,957	1,957	1,957	1,957	1,957
R-squared	0.311	0.119	0.103	0.090	0.205

Robust standard errors in parentheses

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

Table 10: Labor market and economic variable means

Mean of variable	(1)	(2)	(3)
	2013	2017	Change in %
<b>Treated</b>			
Unemployment rate	0.034	0.043	+26.5
Average Income in TEUR	2.281	2.534	+11.1
<b>Untreated</b>			
Unemployment rate	0.037	0.049	+32.4
Average Income in TEUR	2.283	2.454	+7.5

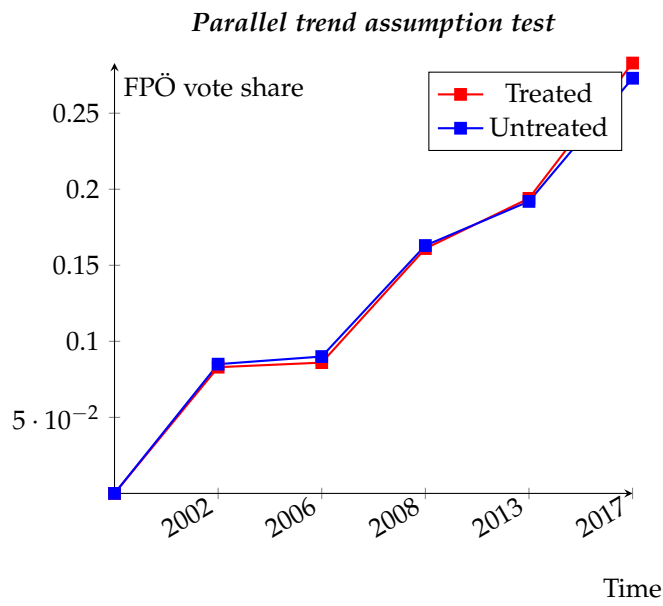


Figure 10: Robustness check for shock of total immigration

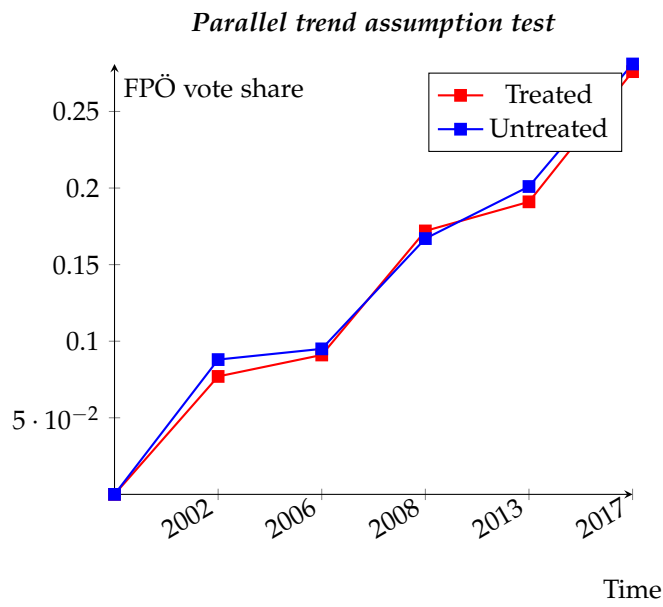


Figure 11: Robustness check for shock of similar immigration

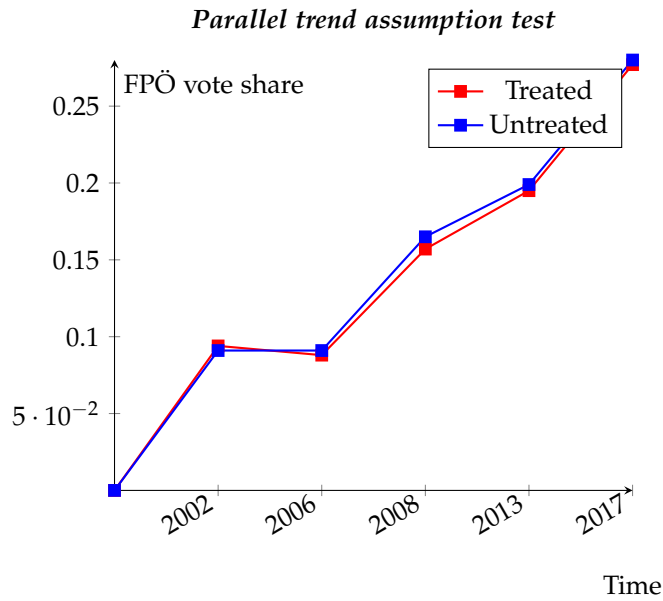


Figure 12: Robustness check for shock of different immigration

Table 11: Robustness check: Total share of immigrants

Total number of observations in the DiD: 668					
Control:		199	Treated:		135
Outcome var.		FPOEshare	S.Err.	t	P> t
Before					
	Control	0.408			
	Treated	0.414			
	Diff (T-C)	0.006	0.006	1.01	0.314
After					
	Control	0.498			
	Treated	0.507			
	Diff (T-C)	0.010	0.007	1.45	0.146
Diff-in-Diff		0.004	0.009	0.41	0.679

R-square: 0.40

\* Means and Standard Errors are estimated by linear regression

\*\*Robust Std. Errors

\*\*Inference: \*\*\* p<0.01; \*\* p<0.05; \* p<0.1

Table 12: Robustness check: Culturally similar immigrants

Total number of observations in the DiD: 1386					
Control:	618	Treated:	75		
Outcome var.	FPOEshare	S.Err.	t	P> t	
Before					
	Control	0.481			
	Treated	0.484			
	Diff (T-C)	0.003	0.007	0.51	0.612
After					
	Control	0.568			
	Treated	0.572			
	Diff (T-C)	0.004	0.007	0.60	0.551
Diff-in-Diff		0.001	0.010	0.09	0.929

R-square: 0.40

\* Means and Standard Errors are estimated by linear regression

\*\*Robust Std. Errors

\*\*Inference: \*\*\* p<0.01; \*\* p<0.05; \* p<0.1

Table 13: Robustness check: Culturally different immigrants

Total number of observations in the DiD: 1146					
Control:	200	Treated:	373		
Outcome var.	FPOEshare	S.Err.	t	P> t	
Before					
	Control	0.375			
	Treated	0.372			
	Diff (T-C)	-0.003	0.005	-0.65	0.515
After					
	Control	0.465			
	Treated	0.461			
	Diff (T-C)	-0.004	0.006	0.67	0.504
Diff-in-Diff		-0.001	0.007	0.08	0.933

R-square: 0.38

\* Means and Standard Errors are estimated by linear regression

\*\*Robust Std. Errors

\*\*Inference: \*\*\* p<0.01; \*\* p<0.05; \* p<0.1