I Z A Institute
of Labor Economics
Initiated by Deutsche Post Foundation

DISCUSSION PAPER SERIES

IZA DP No. 17343

Immigration Shocks and Shifting Social Group Boundaries

Zohal Hessami
Sebastian Schirner

OCTOBER 2024

I Z A Institute
of Labor Economics

Initiated by Deutsche Post Foundation

DISCUSSION PAPER SERIES

IZA DP No. 17343

Immigration Shocks and Shifting Social Group Boundaries

Zohal Hessami
Ruhr University Bochum, CESifo and IZA

Sebastian Schirner
Ruhr University Bochum

OCTOBER 2024

ISSN: 2365-9793

IZA – Institute of Labor Economics

Schaumburg-Lippe-Straße 5–9
53113 Bonn, Germany

Phone: +49-228-3894-0
Email: publications@iza.org

www.iza.org

ABSTRACT

Immigration Shocks and Shifting Social Group Boundaries*

We study whether the arrival of a new immigrant wave changes natives' acceptance of former immigrants and their descendants. We exploit the 2015 European refugee crisis and the context of German open-list local council elections where voting for immigrant-origin candidates represents a consequential revealed preference. We combine hand-collected candidate-level election data with administrative asylum seeker data. Continuous difference-in-differences estimations (based on municipal %Δ in asylum seekers) reveal that immigrant-origin candidates receive more votes the more asylum seekers arrived locally. This shift in social group boundaries is driven by candidates with a Southern/Eastern European origin being culturally similar to Germans.

JEL Classification: D72, F22, J11, J15, N34

Keywords: immigration, immigrant-origin candidates, local elections, social acceptance, cultural similarity

Corresponding author:
Sebastian Schirner
Ruhr University Bochum
Faculty of Social Science
Chair for Social Policy and Public Economics
Universitätsstr. 150
44801 Bochum
Germany

E-mail: sebastian.schirner@rub.de

* We acknowledge funding from the German Research Foundation (DFG) for the project "Elections and Public Policy in Times of Crisis" (Grant no. DFG-506165485). Toke Aidt, Sigurd Arntzen, Jon Fiva, Kai Gehring, Ben Geys, Nathan Hendren, Vincent Pons, Panu Poutvaara, Jesse Shapiro, Dan Smith, Marco Tabellini, Marko Klašnja, Tobias Korn, Matthias Quinckhardt, Lukas Wellner and participants at the 2023 EPCS conference in Hannover, the 2023 RGS Doctoral Workshop in Bochum, the 2023 VfS conference in Regensburg, a 2023 Political Economy Workshop at BI Norwegian School Oslo, the 2024 1st NEAR Conference in Bochum, the 2024 IIPF conference in Prague, and seminars in Linz and Duisburg/Essen provided helpful comments/suggestions. We thank Harvard University and the BI Norwegian Business School Oslo for the hospitality that was extended to us during research visits in spring 2023 where parts of this paper were revised. Tom Berwe, Kristin Binner, and Matthias Gähl provided excellent research assistance.

1 Introduction

Conflicts, economic hardships, and climate change across the world continue to drive large numbers of refugees to Western countries. These Western countries have witnessed several immigration waves in the past and are nowadays characterized by culturally and ethnically mixed societies. A case in point is Germany, which has accepted many immigrants from Western, Southern and Eastern Europe for various historical reasons and which has been a frequent destination for non-European immigrants in recent decades.

Every immigration wave changes the composition of a society and potentially gives rise to shifts as to which immigrant groups are more accepted by the native population than others. A traditional social science literature studies factors driving outgroup prejudice (Allport, 1954; Blumer, 1958) and shifting social group boundaries (Barth, 1969), focusing on two-group settings. There is only a recent and small literature that studies multigroup settings as we observe them in modern societies (Fouka and Tabellini, 2022; Fouka *et al.*, 2022). This literature, in turn, is limited to the US characterized by deep racial divisions and considerable illegal immigration (from Mexico) which are features that are less relevant in other parts of the world.

In this paper, we shift the focus to Germany as a European country which played a key role in the refugee crisis by taking in more asylum seekers in 2015/16 than any other country.[1] We exploit the large and sudden intake of asylum seekers by German municipalities in 2015/16 as an exogenous shock. A key innovation of our paper is that we use the electoral context to put forward a novel measure of social acceptance for extant outgroups. Hereby, we benefit from the fact that members of minority groups (former immigrants and their descendants) run as candidates in local council elections.

The theoretical background of our paper is built on self-categorization theory from social psychology (Turner *et al.*, 1987, 1994) and related work in economics and political science (Shayo, 2009). Social group boundaries are defined by the perception of a majority ingroup

[1] German took in more than 1.1 million asylum seekers in 2015 and 2016 combined, the largest absolute number among European countries. For 2016, this amounts to 60% of all EU asylum seekers and about 8.8 asylum seekers per 1,000 inhabitants of Germany (Eurostat, 2017).

(i.e. the native population) and have important consequences for the upward social mobility of outgroups (i.e. immigrants and their descendants). The ingroup controls the resources and holds powerful positions that determine the fate of outgroups. Belonging to the ingroup or not is based on e.g. ethnicity, race, or religion being immediately verifiable. Social (re)categorization has been argued to be *context-dependent*, i.e. the categorization of a minority group depends on who one is compared to (see also *comparative fit* by McGarty (1999)). Thus, when a relatively distant new outgroup arrives, existing outgroups may seem closer.[2] Given the economic and social consequences of group boundaries, the following questions are of interest: what happens to previous outgroups when a new outgroup arrives? Under which circumstances does the acceptance of previous outgroups change and how does this vary across diverse outgroups?

To study these questions, we use the electoral performance of immigrant-origin local council candidates as a proxy for social acceptance.[3] The German state of Hesse is an ideal setting to study shifts in social group boundaries. First, we observe large variation in treatment intensity, i.e. asylum seekers were distributed unevenly across Hesse. Second, given the long and eventful history of immigration to Germany, we have multiple prior outgroups, i.e. immigrants with diverse origins that have arrived over time.[4] Third, the newly arriving immigrants in our setting (asylum seekers) stem from non-EU countries, i.e. they are not eligible to vote and do

[2]According to Turner *et al.* (1987, 1994), context-dependent categorization is based on the *meta contrast* principle, minimizing within-group differences while maximizing between-group differences. Experimental evidence confirms that humans do apply this principle (Tajfel and Wilkes, 1963).

[3]While some of the literature discusses shifts in social group boundaries as a dichotomous outcome (outgroup becomes part of ingroup or not), it is empirically more reasonable to use a continuous social acceptance measure.

[4]Before Germany was founded in 1871, its predecessor states (e.g. Holy Roman Empire, German Confederation) were typical destinations for migrant workers or the persecuted: Protestants seeking religious freedom and refugees from partitions of Poland, English/Scottish Presbyterians escaping the violent reign of Mary Tudor (many settling in Frankfurt) and Dutch Calvinists moving to northwestern Germany after the Dutch Revolt. The 1950s/60s guest worker program involved recruitment agreements with Italy (1955), Greece (1960), Turkey (1961), Morocco (1963), Portugal (1964), Tunisia (1965), and Yugoslavia (1968). As Eastern bloc countries gradually opened their borders in the 1980s, large numbers of ethnic Germans from e.g. the Soviet Union, Poland, and Romania moved to Germany. At the time, German law offered an almost unlimited right of return for people of German descent. An additional immigration wave starting in the mid-1980s consisted of war refugees, of which West Germany accepted more than any other Western European country owing to an almost unqualified right to asylum. Between 1979 and 1986 around 300,000 Iranians fled from persecution in the wake of the Iranian Revolution alone. Further notable numbers of asylum seekers fled Turkey after a military coup in 1980 and due to ongoing persecution of Kurds. Several thousand people also sought shelter in Germany from the Lebanese Civil War. Following the outbreak of the Yugoslav Wars in 1991, about 900,000 refugees headed to unified Germany.

not directly affect our electoral outcome variables. Fourth, the timing of the Hessian council elections in early March 2016 and 2021 allows us to test short- as well as medium-run effects.[5]

From a theoretical perspective, it is not clear how the arrival of asylum seekers affects voters' evaluation of immigrant-origin candidates. First, more (positive) contact with and exposure to immigrants and their personal stories of how and why they left their home countries may reduce prejudice and aversion to foreigners (Allport, 1954).[6] Second, the arrival of many asylum seekers at once can create a perceived group threat that amplifies aversion against outgroup members (Sidanius and Pratto, 1999). Third, the ingroup may change its perception of an existing outgroup when a new outgroup arrives (Fouka and Tabellini, 2022).

Our paper contributes to three strands of the literature. First and most broadly, we contribute to the literature on the electoral consequences of (refugee) immigration. Immigration leads to more votes for right-wing parties across Europe (Mendez and Cutillas, 2014; Barone *et al.*, 2016; Halla *et al.*, 2017; Edo *et al.*, 2019). More recent papers focus on local refugee presence and show that it increases support for right-wing parties in Denmark (Dustmann *et al.*, 2019), on the Greek islands (Dinas *et al.*, 2019), and in German state and federal elections (Bredtmann, 2022; Kellermann and Winter, 2021; Tomberg *et al.*, 2021). In contrast, Lonsky (2021) finds that immigration reduces right-wing votes in Finland likely due to increased contact with immigrants. Other recent studies also underline the importance of contact: in Austria, the increase in right-wing voting is only observed where refugees pass by on their way to Germany, not where they are hosted (Steinmayr, 2021). Similarly, Gamalerio *et al.* (2023),

[5]Beyond the convenient timing of the elections, there are other reasons why we focus on Hesse. First, there is considerable institutional variation across the sixteen German states in terms of electoral rules and systems. Hesse is among the few states that use open-list instead of closed-list elections, which is a key ingredient of our social acceptance measures. Second, asylum seeker allocation rules and practices differ across German states. Third, our empirical analysis overall benefits from a relatively homogeneous context that is representative for Germany in terms of e.g. economic prosperity, population density, and the size of municipalities.

[6]Dinas *et al.* (2021) show that people whose ancestors were displaced or who live in an area where many displaced have settled in the past more likely show empathy towards refugees. Bursztyn *et al.* (2024) show that decades-long exposure to people of foreign descent increases donations for and attitudes towards them.

Schneider-Strawczynski (2021), and Vertier *et al.* (2023) find that the local presence of refugee centers lowers right-wing vote shares in Italian and French municipalities.[7]

Second, we contribute to the literature on relationships between immigrant and non-immigrant groups or among different immigrant groups.[8] Many of these studies rely on lab or survey experiments and focus on race relations in the US. Gay (2006) shows that perceived incompatibilities between immigrant groups increase if one group is economically better off than the other. Sirin *et al.* (2016) show that members of minorities in the US are more likely to show empathy towards new immigrants in experimental settings. Alesina *et al.* (2023) document that misperceptions about immigrants are widespread and that priming individuals about immigration reduces their support for redistribution. Similarly, Abascal (2015) finds that priming white participants with the growth of the Hispanic population reduces their willingness to provide money to Black Americans in dictator games.[9]

Finally, our paper is most closely related to a recent literature on what happens to existing minority groups when new immigrants arrive. Fouka and Tabellini (2022) provide a rich conceptual framework on context dependency in social group boundary shifts and show that the arrival of illegal immigrants from Mexico improves White Americans' attitudes towards Blacks, reduces hate crimes against Blacks, and shifts policymaking towards policies from which Blacks benefit. Fouka *et al.* (2022) study the Great Migration in the early 20th century which led to a large influx of Black Americans in northern US states. The authors exploit the fact that various European immigrants had previously settled in the northern states and find that they benefited from the Great Migration as ethnicity became less salient than race in defining group boundaries. In particular, they had more success in assimilating to the native population as evidenced by more intermarriages and higher naturalization rates. Note that these two out-

[7]Our paper also links up with a literature that measures the effect of the European refugee crisis on survey-based outcomes such as social cohesion, hostility or anti-immigration attitudes (Albarosa and Elsner, 2023; Hangartner *et al.*, 2019; Schneider-Strawczynski and Valette, 2024).

[8]Our paper is loosely connected to field experiments on labor market discrimination which show that job applications only differing in the name origin of applicants give rise to different callback rates (Bertrand and Mullainathan, 2004; Kaas and Manger, 2012).

[9]Relationships between immigrant groups are also studied in sociology examining ethnic boundaries and their volatility with a focus on the US (Blalock, 1967; Frank *et al.*, 2010; Waters *et al.*, 2014).

comes, however, are not exclusively measures for social acceptance by the native population but also a result of the assimilation effort by the European immigrants.

We make three substantial contributions to the literature. First, we exploit local elections to derive a novel measure for the social acceptance of extant outgroups, i.e. we study the effect of asylum seeker intake on the electoral performance of immigrant-origin candidates for council seats in a preferential voting system.[10] Previous literature focuses on stated preferences (e.g. attitudinal survey questions), extreme negative revealed preferences (e.g. hate crimes) or indirect policy outcomes. We study a consequential (positive) revealed preference, i.e. whether someone is willing to be politically represented by a person with an immigrant origin.[11] Second, focusing on council candidates with a family history of migration, we are the first to apply machine learning to classify immigrant origins for, in our case, more than 90,000 candidates.[12] Given their diversity, we can study how effects on social group boundaries differ across outgroups with varying similarity to native Germans (using cultural distance measures by Hofstede (2001)). Finally, we conduct our analysis in a setting that is markedly different from the US. On the one hand, the US faces a permanent debate about illegal immigration (from Mexico) and lasting racial divisions that echo its history of slavery and segregation. On the other hand, the US describes itself as an immigration country that welcomes the most talented people. In contrast, asylum seekers arrive (mostly) legally in European countries that tend not to consider themselves as immigration countries. It is thus by no means clear that immigration shocks can improve the acceptance of extant immigrant groups in Europe in the same way as in the US.

We use hand-collected data on council elections at the candidate level in the German state of Hesse in 2001, 2006, 2011, 2016, and 2021 allowing us to trace candidates' electoral

[10]Our focus on individual candidates also means that we move beyond aggregate party vote shares that are typically studied in the literature on electoral consequences of immigration.

[11]Note that the electoral setting may make it less likely that we find significant (positive) effects on social acceptance. Immigrant-origin candidates have a German/EU passport and must have previously convinced the party (leadership) to be fielded as a candidate. Thus, it may very well be that there is little room for immigrant-origin political candidates to become even more accepted by natives.

[12]The electoral performance of immigrant-origin candidates has not yet been analyzed in the context of German local elections. Street (2014) focuses on German federal elections and descriptively documents an electoral disadvantage for immigrant-origin candidates.

performance in up to five subsequent elections across 426 municipalities.[13] Local councilors in Hesse are elected via an open-list system (preferential voting). Voters can allocate their votes to specific candidates fielded on party lists. We use the difference between initial and final list ranks and a dummy for entering the council as outcome variables. We combine this unique candidate-level electoral data with data on local asylum seekers which we obtain via exclusive access to data on recipients of asylum seeker benefits by the Hessian Statistical Office.

Since information on candidates' immigrant origin is not available, we rely on information that every voter comes across: candidates' names as they appear on the ballot. We feed them into machine-learning classification tools powered by large training datasets – *Ethnea* and *NamePrism*.[14] We validate the precision of the tools by comparing their classification outcomes with human coding (by our RAs) as well as an application to current German MPs (official origin from Mediendienst Integration (2021)) and find strong overlap in both cases.

To estimate the effect of asylum seeker intake on immigrant-origin candidates' electoral performance, we use a continuous difference-in-differences strategy. Our estimations compare the performance of immigrant-origin candidates running in municipalities with varying levels of asylum seeker intake. Callaway *et al.* (2024) show that identifying causal effects with a continuous treatment difference-in-differences strategy requires a number of strong assumptions to be fulfilled. Beyond the absence of pre-trends in our electoral outcome variables, we show that our treatment variable (the change in the municipal population share of asylum seekers) is not correlated with municipalities' pre-treatment characteristics.

We find that in municipalities with higher asylum seeker intake, immigrant-origin candidates experience larger rank improvements and are more likely to enter a council. A one SD larger intake causes immigrant-origin candidates to move up about half a rank in a median-sized council with 31 seats and a 4.4 ppt (2016) and a 5.6 ppt (2021) higher share of immigrant-origin

[13] Due to municipal mergers the number of municipalities decreased to 422 between 2016 and 2021.

[14] Both tools are publicly available free of charge via `abel.lis.illinois.edu/cgi-bin/ethnea/search.py` and `www.name-prism.com`.

candidates to enter the council.[15] With 27% of immigrant-origin candidates getting elected on average, this is an increase by 16-21%. This effect exclusively applies to candidates whose origins are in relative terms culturally similar to Germany (Southern/Eastern European). Finally, there is no backlash, i.e. the performance of candidates with an origin that is similar to that of the asylum seekers (Middle Eastern/Arab, Asian) is not affected by asylum seeker intake.[16]

We conduct a battery of robustness tests. Our findings are robust to excluding candidates with combinations of German and non-German names, limiting the sample only to the immediate pre- and post-treatment election and using a balanced panel of municipalities and years. We also conduct robustness tests that substantiate our identification strategy: we include fixed effects for treatment quartiles, use different definitions for treatment and outcomes, and exclude municipalities with extreme values for asylum seeker intake. Finally, we run candidate-level estimations where we only include immigrant-origin candidates that competed at least once before and once after the immigration shock and find results similar to the baseline.

To understand why immigrant-origin candidates benefit from asylum seeker intake, we study different mechanisms. First, we show that parties do not strategically adjust their lists (e.g. by placing immigrant-origin candidates on different ranks). Second, there is no shift in voter preferences towards parties that have more immigrant-origin candidates. Third, perceived candidate competence in dealing with immigration is an unlikely channel as candidates with an origin that is similar to that of asylum seekers (mostly Arab/Asian/African countries) do not receive more votes. Fourth, overall turnout is hardly affected by asylum seeker intake and survey data on turnout by native and immigrant-origin respondents shows that higher asylum seeker intake did not have systematic mobilization effects on any of the two groups.

[15] An increase by one SD is approximately equivalent to the average asylum seeker intake between 2014 and 2015. 149 out of 352 municipalities in the sample witnessed a treatment of one SD or more. An increase in the treatment by one SD corresponds to 6.4 additional asylum seekers per 1,000 inhabitants. Thus, median-sized Hessian municipalities with 9,000 inhabitants took in about 60 asylum seekers.

[16] The suggestive relevance of cultural similarity for shifts in social group boundaries does not preclude that other measures of similarity, e.g. racial or genetic similarity, may be equally important. However, to measure the latter, an analysis of candidate photographs may be necessary but is not well-suited to our local context as, if anything, only photographs of top-ranked candidates may be printed on billboards and in newspapers and as most voters may not be aware of them especially since they do not appear on the ballot. This approach appears more promising for the context of state or federal elections.

The most plausible mechanism is that individuals change their perceptions of prior immigrants. Thus, the effect that we observe is likely not limited to electoral outcomes but generalizes to shifts in more general perceptions. We analyze this using survey data from the German General Social Survey (ALLBUS). This representative survey takes place every two years and includes several questions on attitudes towards immigrants. Our results show that the intake of asylum seekers is indeed associated with a positive shift in attitudes towards specific existing immigrant groups that are culturally similar to native Germans. In particular, we find that respondents that live in municipalities with a higher asylum seeker intake are more willing to for instance accept Italians or ethnic Germans from Eastern Europe as neighbors.

Our results have implications for a broader evaluation of the consequences of immigration. Economic literature typically focuses on immediate economic outcomes such as fiscal effects via tax-transfer systems and employment (see for instance Colas and Sachs (2024); Dustmann and Frattini (2014)). Our paper takes a broader perspective and highlights social acceptance by the native population which is an important precondition for successfully entering and remaining in the labor market as well as moving up the social ladder. We show that subsequent immigration waves can improve the acceptance of previous immigrants by the native population. While this may not immediately translate into success in economic and fiscal terms, this likely has long-lasting effects on economic opportunities and prosperity for the entire society.

2 Background

2.1 Local governments in Hesse

Council elections take place every five years in March. Candidates need to be at least 18 years old and need to have resided in the municipality for at least three months. While candidates must be either German or EU citizens, information on candidates' origin is not available. Councilors are elected via open lists (preferential voting). Voters have as many votes as the council has seats. Votes can be allocated across lists (*Panaschieren*) and up to three votes can be cast for

one candidate (*Kumulieren*).[17] The total share of votes per list determines the seat allocation.[18] Candidates are ranked based on their individual votes. Candidates with a rank smaller or equal to the number of seats their list received enter the council. Councils vary in size, ranging from 11 seats in the village of Cornberg to 93 seats in Frankfurt, while the median is 31 seats.[19] The conservative CDU and the center-left SPD compete in almost all municipalities (Figure A.4). In most municipalities, there is also at least one local list.[20]

Hessian municipalities are in charge of providing various public goods such as child care, civil protection, infrastructure, or social services. They collect revenues from business and property taxes and receive transfers from other tiers of government. Municipalities enjoy a relatively high level of autonomy with councils being in charge of political decisions. The mayor is the head of administration but does not have a vote in the council (Hessami, 2018). Thus, local councils are the most important political institution at the municipal level.

2.2 Asylum seeker allocation

Asylum seeker allocation across Germany is partly rule-based. Asylum seekers are allocated to the sixteen federal states via the *Königsteiner Schlüssel*. This allocation scheme is based on tax revenues (two thirds) and population (one third). As of 2015, Hesse was obliged to host 7.4% of all asylum seekers in Germany. Within Hesse, allocation to its twenty-one counties and five large county-free cities follows a similar rule-based approach. For instance, counties with more than 400,000 inhabitants have to host 8.5% of all asylum seekers allocated to Hesse and counties with less than 100,000 inhabitants have to host 1%. There are deductions for counties

[17]It is also possible to allocate all votes to a list instead of individual candidates. However, there is descriptive evidence that most voters do cast candidate-specific votes (Tiefenbach, 2012).

[18]More specifically, the allocation of seats follows the Hare-Niemeyer approach. Total seats in the council are multiplied by the number of votes for each list and divided by the total number of votes.

[19]The distribution of council sizes is illustrated in Figure A.1 in the online appendix.

[20]Right-wing parties, such as the AfD, compete only in few municipalities: in 2016 and 2021 the AfD was on the ballot in 4.6% and 13% of municipalities, respectively. As a consequence, voters who are discontent with immigration are often not able to express their opinion by voting for a right-wing party.

that already have a high share of non-Germans and for counties which host one of the central asylum seeker facilities (see *Verteilungs- und Unterbringungsgebührenverordnung*).[21]

Counties allocate asylum seekers to municipalities within their borders, both to large facilities with shared rooms as well as regular flats. This is done in a non-systematic way not defined in legislation. Counties handle the allocation to municipalities differently, creating room for arbitrary choices.[22] On the other hand, asylum seekers have little say in where they live, at least during the first months. Thus, immediate self-selection into municipalities is likely not an issue. The large and unexpected intake of asylum seekers in 2015 resulted in partially exogenous allocation (Bredtmann, 2022; Gehrsitz and Ungerer, 2022). The situation in 2015 was chaotic and required ad-hoc decisions at virtually all levels of government. Schaub *et al.* (2020) report anecdotal evidence on mayors who did not know how many asylum seekers would arrive on the next day. Asylum seekers who had been announced did not arrive after all. Thus, there was little leeway for municipalities to directly influence the arriving number of asylum seekers.[23]

3 Data

3.1 Municipality-level data

3.1.1 Asylum seekers and the 2015 immigration shock

We derive the number of asylum seekers at the municipality level from administrative data on recipients of asylum seeker benefits. Data at the individual level is aggregated at the municipality level via the address of recipients.[24] Figure 1 provides first insights into the data.

[21]Table A.18 provides details on all population thresholds. Central asylum seeker facilities (typically former military/police bases) are located in Gießen, Neustadt/Hessen, Bad Arolsen, Büdingen, Kassel, and Darmstadt.

[22]E.g. there is anecdotal evidence on asylum seeker allocation in Gießen. The county's administration suggests that local conditions (child care facilities, schools, medical support, and public transportation) should be taken into account when allocating asylum seekers (Landkreis Gießen, 2015).

[23]To substantiate this, we conduct balance tests on observable municipality characteristics (Section 4.2). We find that asylum seeker intake is for instance unrelated to housing availability or municipalities' political leaning.

[24]Due to privacy protection, the data is available only via the research data center (FDZ) of the German Statistical Office. Access is subject to a fee. The Hessian Statistical Office provides the specific dataset for our analysis. Data is available from 2005 until 2020. Asylum seeker numbers below three and above zero, as well as other

[Figure 1 goes here]

Subfigure (a) illustrates that asylum seeker intake increased considerably in 2015 and declined thereafter. Subfigure (b) shows asylum seeker shares by country of origin with Syria (27.5%), Afghanistan (18.2%), and Eritrea (7.6%) at the top. Subfigure (c) depicts the large municipal variation in the change of the population share of asylum seekers from 2014 to 2015.

3.1.2 Other municipality-level data

We also obtain data on population, area, employment, number of non-German citizens, and various fiscal variables from the Hessian Statistical Office. Data on buildings and empty flats stem from the 2011 German census available from Federal and State Statistical Offices. Descriptive statistics for all municipality-level data are collected in Table A.14 in the online appendix.

3.2 Candidate-level data

3.2.1 Council election data

Election results at the candidate level for a series of subsequent elections are not available from a centralized official source. Thus, we hand-collect information on candidates by gathering files from municipalities' websites and bulletins. We use the Baskaran and Hessami (2018) dataset and extend it with the 2021 elections (see online appendix for details).[25] We have information on candidates' name, gender, list, initial list rank, final list rank, and votes. For a subset, we have information on age, education, and occupation. The data covers the 2001, 2006, 2011, 2016, and 2021 elections, i.e. all elections since the introduction of open lists in Hesse. Figure 2 shows our data coverage in terms of municipalities and candidates across election years.

[Figure 2 goes here]

values that allow conclusions to individuals are censored until 2019. Since 2020, all asylum seeker numbers are rounded up or down to the nearest value divisible by five. Figure A.10 shows the extent of censoring across years.

[25]Baskaran and Hessami (2018) use data on the 2001-2016 Hessian local council elections to study the role of gender in elections. They find that voter bias against female council candidates can partially be overcome by exposure to female mayors based on a mixed-gender race RD approach.

For 2016 and 2021, we have full coverage. Coverage is lower for elections further in the past. In total, our sample includes 159,626 candidates. About 31% of all candidates are elected into a council. Table A.15 in the online appendix reports summary statistics on candidate characteristics: for example, about 27% of the candidates are female, candidates are on average 52 years old, and about 31% of the candidates have a university degree.

3.2.2 Candidate performance

We measure electoral performance in two ways. First, we use a dummy that captures whether a candidate entered the council or not. Second, we use a more sensitive measure on candidates' performance: rank improvements, reflecting how voters perceive candidates relative to the party leadership.[26] We define rank improvements in line with Baskaran and Hessami (2018):

$$\text{Rank improvement} = \left(\frac{\text{initial rank} - \text{final rank}}{\text{council size}} \right) \times 100 \tag{1}$$

Final list ranks determine whether a candidate enters the council: the smaller the final list rank, the more personal votes she received and the higher the chance of entering the council. Conversely, if a candidate's final list rank is larger than the initial list rank (i.e. a negative rank improvement), she is demoted by voters. For comparability, we normalize the rank improvement dividing it by council size. Figure A.8 shows that a considerable share of candidates move up or down on the list. 45% of candidates move by three or more ranks.

3.2.3 ML classification of candidates' immigrant origin

Information on the nationality or immigrant origin of candidates is not provided on the ballot. We use candidates' first and second name to measure their perceived immigrant origin.[27]

[26] Note that using the final list rank alone is not a good performance measure since it is likely affected by the initial list rank, e.g. due to higher visibility on the list.

[27] To identify candidates' origin from their name, one must assume that both first and second names reflect the origin even generations later. Naturally, marriage and assimilation to German naming conventions casts doubt on this assumption. Gerhards and Hans (2008) provide evidence that in Germany children of immigrants frequently receive first names from their parents origin, however. Beside this, for our analysis the perceived immigrant origin is more relevant than the true immigrant origin.

We classify 93,032 unique candidate names by applying a webscraping procedure to the two publicly available classification tools Ethnea and NamePrism. Both tools use machine learning algorithms to classify names by broad linguistic regions. Ethnea uses a training dataset of author names in bio-medicine journals and provides probabilities for first and last names separately, as well as the joint probability (Torvik and Agarwal, 2016). NamePrism is trained on a large dataset of names covering e-mail contacts and Twitter users from 118 countries (Ye *et al.*, 2017). For further details on our approach, see Section A.2 in the online appendix.

Ethnea is more conservative as the number of candidates identified with an immigrant origin is lower. Therefore, we use Ethnea in our baseline and NamePrism in a robustness test.[28] We provide a list of the most frequent German and non-German surnames (e.g. Yilmaz, Sahin, Dogan vs. Müller, Schmidt, Schneider) in Tables A.1 and A.2. Ethnea provides a classification for 22 non-German origins (see most common surnames for each origin in Table A.3).

We validate the automated classification in two ways. First, we compare it with human classification by randomly drawing a sample of about 400 candidates ($\approx$ 0.25% of all candidates) and asking our research assistants classify them manually. This classification based on intuition regarding German and non-German names resembles voters' reading names on the ballot. The overlap is almost complete. Second, we examine the 735 members of parliament in the 20$^{\text{th}}$ German Bundestag for which we have information on their origin (via Mediendienst Integration (2021)). The automated classification is correct for about 90% of the sample.

3.2.4 Immigrant-origin candidates

The share of immigrant-origin candidates is higher in urban areas such as Frankfurt, Kassel, or Fulda and in a cluster of municipalities surrounding Frankfurt, the economic center of Hesse (see Figure A.2 in the online appendix). Averaged over the five elections, about 6% of candidates have an immigrant origin.[29] Subfigure (a) in Figure 3 shows that the share of immigrant-

[28] We pre-process candidate names by removing all special characters, accent marks, and umlauts. In addition, we strip names from titles such as *Dr.* or *Prof.*, the German equivalents of PhD and professor. Both tools were accessed in an automated way applying webscraping in late 2021 and early 2022.

[29] This is a large underrepresentation given 27% of German citizens with immigrant origin (Statistisches Bundesamt, 2022). In comparison, 11% of federal MPs have an immigrant origin (Mediendienst Integration, 2021).

origin candidates has steadily increased from 3.9% in 2001 to 8.1% in 2021. These numbers are higher if we use NamePrism instead of Ethnea: 6.3% in 2001 and 10.4% in 2021.

[Figure 3 goes here]

Subfigure (b) is a heatmap that shows the share of candidates per origin for each major party. Immigrant-origin candidates in Hesse typically have a Turkish, Slavic, French, English, Italian, or Hispanic origin. The left-wing parties Linke and Gruene have a relatively high share of immigrant-origin candidates, mostly with a Turkish, Slavic, or Arab origin. The conservative CDU and the liberal FDP have a lower share of immigrant-origin candidates. The right-wing AfD has a relatively high share of immigrant-origin candidates, typically candidates with a Slavic origin but almost no candidates with a Turkish, Arab, African, or Asian origin.[30]

4 Empirical strategy

4.1 DiD with a continuous treatment

We examine how local asylum seeker intake affects the electoral performance of immigrant-origin council candidates based on a continuous difference-in-differences strategy.[31] We limit the sample to municipality-election pairs (which are our observation units) in which at least one immigrant-origin candidate competed and asylum seeker data is available ($\approx$ 81% of all

[30]Immigrant-origin candidates do not seem to benefit from preferential treatment in list placements or voter evaluation. Figure A.3(a) shows that immigrant-origin candidates on average end up on worse ranks than they started from. In contrast, rank improvement of candidates without an immigrant origin is close to zero. Figure A.3(b) shows that immigrant-origin candidates have slightly worse list placements. Note that across all candidates on a list the individual rank improvements add up to zero as the number of ranks is fixed. In practice, occasional missing information on initial or final ranks explains small deviations (see Table A.15). Comparing subsamples of candidates, their respective average rank improvements must not necessarily add up to zero. This is due to differences in the magnitude of the rank improvements as well as in the number of candidates per subsample.

[31]Our specification is inspired by Lindo *et al.* (2019). A similar approach is used by Duflo (2001). Recent advances in the literature on continuous difference-in-differences are also applied by Borg *et al.* (2022).

pairs). Details on why municipality-election pairs are missing is provided in Table A.19. We estimate the following two-way fixed effects (TWFE) model:

$$y_{m,t} = \alpha + \sum_{t=2006}^{2021} \beta(\Delta\, Asylum\ seekers_{m,2015} \times T_t) + Z1_{m,t} + Z2_{m,t-1} + \gamma_m + \zeta_t + \varepsilon_{m,t}. \quad (2)$$

$y_{m,t}$ are electoral outcomes of immigrant-origin candidates in municipality m in election year t: (i) average normalized rank improvements and (ii) the share of immigrant-origin candidates elected.[32] $\Delta\, Asylum\ seekers_{m,2015}$ is the change in the population share of asylum seekers from 2014 to 2015 in municipality m.[33] We interact $\Delta\, Asylum\ seekers_{m,2015}$ with dummies for the 2001, 2006, 2016, and 2021 elections using 2011 as the base year. That is, we compare electoral outcomes in municipalities that were exposed differently to asylum seeker intake in 2015 separately by election year. γ_m and ζ_t control for time-invariant municipality characteristics and time-varying shocks to all municipalities. $Z1_{m,t}$ controls for shares of non-German citizens, women, elderly (65<) and children (<14), population density, tax revenues per capita, transfers per capita, debt per capita. $Z2_{m,t-1}$ controls for seat shares of SPD, CDU, Gruene, and FDP in the previous election. Standard errors are clustered at the municipality level.

4.2 Identifying assumptions

The key identifying assumption is that electoral outcomes of immigrant-origin candidates would have evolved similarly in municipalities with higher and lower intake of asylum seekers – in

[32] We aggregate candidates' electoral outcomes at the municipality level. If we were to run estimations at the candidate level, the sample would be limited to candidates that run at least once before and after the intake of asylum seekers in 2015. This would shrink our sample considerably. However, in a robustness test in Section 5.2.5 we show that results are similar when we run candidate-level estimations.

[33] The treatment is calculated as $\Delta\, Asylum\ seekers_{m,2015} = \frac{Asylum_{m,2015} - Asylum_{m;2014}}{Pop_{m,2014}}$. We multiply this by 100, such that it can be interpreted per 100 inhabitants in line with Bredtmann (2022). Gießen is home to the central reception facility for asylum seekers in Hesse and thus had by far the largest intake of asylum seekers. We therefore exclude this outlier from our sample. Figure A.11 of the online appendix shows the distribution of the treatment. We decide not to use yearly changes. As data on asylum seekers is only available from 2005 onwards, we would need to omit the 2001 election. Elections already take place in March. Thus, using the change from 2005 to 2006 and the election of 2006 would also not be feasible. Taken together, omitting the elections of 2001 and 2006 would significantly reduce our sample and would also not allow us to show the absence of pre-trends.

the absence of the treatment. We can corroborate the validity of this common trend assumption through the absence of pre-trends (see Table 1 baseline results in Section 5.1).

Callaway *et al.* (2024) show that to estimate the average causal response to the treatment – i.e. the causal effect of a marginal increase in the treatment – strong assumptions need to hold. If there is treatment heterogeneity across doses, i.e. the reaction to a marginal increase differs across municipalities, there is selection bias in addition to the actual effect. Put differently, municipalities face an incentive to self-select into a low/high treatment based on expected costs or benefits from hosting asylum seekers. This bias does not disappear through standard common trends. Instead, municipalities with different treatment doses also need to be suitable counterfactuals. We can show this with balance tests for observable municipality characteristics, following Cook *et al.* (2022). If municipality characteristics are uncorrelated with the change in the population share of asylum seekers, this lends credibility to having suitable counterfactuals. We therefore regress our treatment on pre-treatment municipality characteristics. As asylum seeker allocation follows rule-based approaches up to the county level, we include county fixed effects. Results are collected in Figure 4.

[Figure 4 goes here]

Most coefficients are close to zero. Importantly, the change in the number of residential buildings is uncorrelated with the intake of asylum seekers, even though the availability of housing is a potential confounder that reportedly mattered for asylum seeker allocation (Bredtmann, 2022; Berbée *et al.*, 2022). Some variables just fall short of significance. When we control for these variables in our main estimations, we obtain similar results (see Section 5.1).

5 Results

5.1 Baseline

Table 1 collects the baseline results. We first examine average rank improvements of immigrant-origin candidates in Models (1)-(3). Model (1) interacts the treatment with a dummy for each

election year (with 2011 as base level), Model (2) adds controls, and Model (3) pools pre- and post-election years.[34] In all three models, a larger change in the population share of asylum seekers results in a significantly higher average rank improvement of immigrant-origin candidates. In Model (3), the relevant coefficient is significant at the 1% level.

[Table 1 goes here]

An increase by one standard deviation in the treatment in Model (2) is associated with an improvement by 1.3 (2016) and 1.4 ranks (2021) in a hypothetical council with 100 seats. This corresponds to a move up by about half a rank in a median-sized council with 31 seats.[35] The coefficient is insignificant and close to zero for 2001 and 2006, i.e. before the shock. This absence of pre-trends supports the common trend assumption.

Models (4)-(6) show the results for our second outcome (share of immigrant-origin candidates elected) using the same model structure as above. The relevant coefficients are significantly positive in all models at the 1% or 5% level. In Model (5), a one SD increase in the asylum seeker share raises the share of elected immigrant-origin candidates by 4.4 ppts in 2016 and by 5.6 ppts in 2021. With 27% of immigrant-origin candidates getting elected on average, this is an increase by 16-21%. Again, there is no evidence for different pre-trends.[36]

5.2 Robustness

5.2.1 Alternative ML classification of origins

We test whether our specific approach to classifying immigrant origins drives our results. Therefore, we implement three alternative approaches (see Table A.9). First, we exclude all candidates whose names are not clearly non-German (16% of immigrant-origin candidates,

[34] In Model (3), the treatment is zero before 2016 and equals the change in the asylum seeker share thereafter.

[35] The effect size is calculated as follows: $\frac{SD \times Coefficient}{100} \times MedianCouncilSize = \frac{0.64 \times 2.20}{100} \times 31$.

[36] The improvement in electoral performance for immigrant-origin candidates comes at the expense of German-origin candidates. We show in Table A.20 in the online appendix that the intake of asylum seekers reduces the share of German-origin candidates getting elected into the council. We also find that this effect does not differ between male and female councilors or between incumbents and non-incumbents of German origin.

e.g. *Rajeena Stahl*) by separately classifying candidates according to first and second names instead of the joint classification conducted for the baseline. The results are qualitatively the same and for both outcomes the coefficients are slightly larger than in the baseline.[37] Second, we include only immigrant-origin candidates with a less than 10% probability of a German name. In the baseline, we were less strict and only excluded candidates with a more than 25% probability of being German (see Section A.2). Third, we determine immigrant origins by using NamePrism instead of Ethnea. This more lenient classification produces a larger number of immigrant-origin candidates. The effect is almost identical in size and significant for the share of elected candidates, while the effect is insignificant for average rank improvements.

5.2.2 Alternative sample definitions

We also assess the robustness of our findings with respect to sample choices (see Table A.10). First, the effect also extends to models limited to 2011 and 2016 – the elections directly before and after the arrival of asylum seekers as of 2015. The coefficients are significant and slightly larger in size both for average rank improvements as well as the share of immigrant-origin candidates getting elected into the council. Second, as we hand-collect data on local elections, coverage is incomplete for elections before 2016. To make sure that this imbalance in municipal coverage does not drive our results, we rerun the baseline regression using only municipalities for which we have data on all five elections. The results are again similar to the baseline.

5.2.3 Alternative identifying variation and treated sample

We examine the robustness of our baseline findings to the treatment definition and the treated sample of immigrant-origin candidates. First, we include fixed effects for treatment quartiles which we interact with an indicator for elections after 2015. That is, we use only within-quartile variation to identify the effect of asylum seeker intake. Results are similar to the baseline. Second, we exclude candidates on the first and last three ranks of lists. These candidates

[37] Mixed names are most prevalent for origins that are relatively similar to German (e.g. English, French, Dutch, Slavic, Nordic). Also, the share of female candidates among mixed-name candidates is significantly higher than among all immigrant-origin candidates. This indicates that mixed names may be due to marriages.

are limited in how much they can move up or down. The results are virtually identical to the baseline. Third, we address potential bias due to self-selection into treatment. As the allocation of asylum seekers is rule-based only up to the county level, municipalities may after all influence their asylum seeker intake. To ensure that our results are not driven by self-selection on expected gains/losses from asylum seekers, we exclude municipalities at the tails of the treatment distribution (top and bottom 5%) similar to Arold (2024). In these additional estimations, the coefficients are about 50% larger for rank improvements and double as large for the share of elected immigrant-origin candidates.

5.2.4 Alternative treatment scalings and sources

We test whether our results are robust to changes in the scaling or the source of the treatment (see Table A.12). First, we find similar results, albeit less significant, when using the population share of asylum seekers in 2015 (instead of the change) as treatment. Second, results are similar when we transform the treatment with the inverse hyperbolic sine reducing the influence of outliers. Third, we examine a subset of municipalities that were likely to host more asylum seekers. To accommodate asylum seekers, often former military bases were transformed into shelters (Berbée *et al.*, 2022). The locations of these bases were determined by strategic considerations and are unrelated to contemporary municipal characteristics. Due to the low number of bases we cannot use the bases to instrument asylum seeker intake.[38] Instead, we limit the sample to municipalities with an empty base as of 2015. The effect is similar in size but insignificant for rank improvements, while considerably larger for the share of elected candidates.

5.2.5 Identification at the candidate level

Our baseline estimations are based on municipality-election pairs as observation units. Instead, one could run the estimations at the candidate level, holding the characteristics of candidates constant. As an additional robustness test, we therefore limit the sample to immigrant-origin

[38]We identify 39 former military bases using an extensive overview on military installations during the cold war compiled by Mechtersheimer *et al.* (1988). We confirm that the bases are decommissioned using local news coverage and other online sources.

candidates that participated in at least one election before and after the intake of asylum seekers in 2015 (see Table A.13). This shrinks our sample size (e.g. in terms of Model (1) from 358 to 203 municipalities) but allows us to focus on within-candidate variation in electoral performance by including individual fixed effects. We also control for incumbency, the only available time-varying personal characteristic. This approach excludes that in post-2015 elections more qualified immigrant-origin candidates were fielded. The results are similar to the baseline for both outcome variables and only slightly different when controlling for incumbency.

5.3 Effect heterogeneity: diverse immigrant origins and cultural distance

We next examine effect heterogeneity across specific immigrant origins. The classification tools provide information on the likely origin of candidate names by broad linguistic regions. While so far we only exploited information on native vs. non-native origins, we now study whether the change in perception depends on the relative similarity of the new outgroup and existing outgroups. Most asylum seekers stem from countries in Middle East, Africa, and Asia (see Figure 1). There is variation in how culturally similar immigrant-origin candidates are to asylum seekers. Based on Fouka and Tabellini (2022), immigrant-origin candidates from European countries are expected to improve their electoral performance, while a negative effect may emerge for candidates with a similar background to that of the asylum seekers.

Figure 5 shows the effect of asylum seeker intake on candidate performance for broad regions of origin (Subfigures (a) and (b)) as well as for the six most frequent individual origins in our sample (Subfigures (c) and (d)).[39] We apply regional aggregation to obtain sufficiently large numbers of candidates and more precise estimates. *Western Europe* includes Nordic, French, Dutch, Baltic, English origins. *Eastern Europe* includes Hungarian, Romanian, Slavic origins. *Southern Europe* includes Italian, Hispanic, Greek origins. *Middle East and Africa* includes Turkish, Arab, Israeli, African origins. *South/East Asia* includes Vietnamese, Indonesian, Thai,

[39] Table A.17 in the online appendix shows the corresponding regression results.

Korean, Indian, Chinese, Mongolian, Japanese origins.[40] Regional origins are ordered by cultural similarity with *Middle East and Africa* at the bottom and *Western Europe* at the top. For this, we use the six-dimensional model of national culture by Hofstede (2001) and Hofstede *et al.* (2010) and calculate how culturally similar candidates' origins are to Germany.[41]

[Figure 5 goes here]

The effect on the share of immigrant-origin candidates getting elected is significantly positive for candidates from Southern and Eastern Europe (24.2% and 15.2% of all immigrant-origin candidates).[42] The effect is positive but insignificant for candidates from Western Europe.[43] The intake of asylum seekers does not affect the electoral performance of candidates from the Middle East, Africa, and South/East Asia: coefficients are close to zero. Results are similar when examining the six numerically most prevalent origins without aggregation (see Subfigures (c) and (d)). The effect is significantly positive for Slavic, Italian, and French candidates, while insignificant for Turkish, English, and Hispanic candidates.[44]

At first glance, our baseline results suggest that we should interpret our findings as a confirmation of the positive contact hypothesis (Allport, 1954). The intake of and the subsequent positive contact with asylum seekers results in an electoral benefit of immigrant-origin candidates. The heterogeneous effects documented above are, however, not consistent with this interpretation. Instead, the arrival of a new outgroup results in a positive effect only for a sub-

[40]To illustrate candidates' surnames, we provide extensive lists of the most frequent surnames by broad regions of origin in Tables A.4 to A.8 in the online appendix.

[41]The six dimensions are *Individualism vs. Collectivism*, *Power Distance*, *Masculinity vs. Femininity*, *Uncertainty Avoidance*, *Long Term Orientation*, and *Indulgence vs. Restraint*. We use data at the country level collected in 2013 and available at `http://www.geerthofstede.com/`. We compare Germany to origin countries by calculating cosine similarity and euclidean distance using all six dimensions. Switzerland is most similar, while West African countries are most distant to Germany (see Table A.16 and Figure A.9 for a complete list).

[42]For most origins, results for the two outcomes align. However, a higher share of Southern European candidates gets elected while there is no effect on average rank changes. Candidate-level regressions confirm that Southern European candidates end up closer to marginal seats, i.e. small rank changes get them elected.

[43]French and English names are common in Germany and often hard to distinguish from German names. Thus, the Western European origin is measured noisily (see also Figure A.7). We limit the sample to more precisely identified Western European names following the robustness check in Section 5.2. Results remain unchanged.

[44]This distribution of effects across origins resembles an inverse U-shape in line with Fouka *et al.* (2022), i.e. candidates with origins that have a medium distance to natives improve their social acceptance the most.

set of immigrant-origin candidates. The candidates that benefit the most are the ones that are culturally and ethnically similar to Germans, while those that are similar (but not exactly from the same origin) to the arriving asylum seekers are not affected.[45]

While Fouka and Tabellini (2022) find that the Hispanic population is evaluated less disfavorably in surveys following the influx of illegal Mexican immigrants and Fouka *et al.* (2022) find that Blacks faced more prejudice following the Great Migration, we do not find such an effect in our setting. One speculative reason could be that in our case the immigrants (i.e. asylum seekers) entered the country (mostly) legally and therefore created less of a backlash. Another reason could be that pre-existing numbers of Syrians and Afghans were relatively low (also among the council candidates) and that voters are able to differentiate them for instance from Turks. The effect is largest for Eastern Europeans: the coefficient for rank improvements is double as large as in the baseline and for the share of elected candidates almost three times as large as in the baseline. This may potentially at least in part mirror the fact that many of these candidates are (descendants of) ethnic Germans who returned to Germany at some point.[46]

6 Mechanisms

6.1 Change in perception of immigrants

We use data from the German General Social Survey (ALLBUS) conducted by the Leibniz Institute for the Social Sciences (GESIS) to evaluate how asylum seeker intake has affected the perception of immigrants from Italy, Turkey, and ethnic Germans from Eastern Europe (GESIS, 2021a,b). The ALLBUS survey is conducted every two years for a sample of adults residing in Germany.[47] Interviews are conducted in person and include a range of questions on e.g.

[45]The contact mechanism may matter in Germany nevertheless. Our data simply does not measure the social acceptance of asylum seekers and thus a direct test of the contact hypothesis is beyond the scope of our paper.

[46]Note, however, that this is not reflected in similar names as our classification tools are comparatively well able to distinguish Eastern European (Slavic, Hungarian, Romanian) names from German names (see Figure A.7).

[47]The ALLBUS dataset at the municipality level is accessible in the Secure Data Center at the GESIS Data Archive for the Social Sciences in Cologne, Germany. To gain access to the data, researchers are required to sign a special data use contract and work in an individually set up secure, virtual working environment.

the attitudes, religiosity, health, and social networks of respondents. This includes questions related to immigrants in some of the survey waves between 1996 and 2018. We code responses such that larger values (on a scale from 0 to 1) indicate greater tolerance towards immigrants.[48]

We limit the sample to respondents from Hesse and estimate the following model:

$$Response_{i,m,t} = \alpha + \beta \Delta AS_{m,2015} + \gamma(\Delta\, AS_{m,2015} \times Post2015) + \zeta_t + \varepsilon_{i,m,t}. \tag{3}$$

$Response_{i,m,t}$ is the response to a question or an index over several questions of respondent i in municipality m in survey year t. $\Delta AS_{m,2015}$ is the change in the population share of asylum seekers from 2014 to 2015. $Post2015$ is an indicator that is one for the 2016 survey wave, i.e. the year after the treatment. ζ_t are survey year fixed effects. We also control for age, gender, marriage status, education, party membership, income, and German citizenship. Standard errors are clustered at the level of respondents' municipality. Table 2 collects the results.[49]

[Table 2 goes here]

There is no effect on feeling alienated due to immigrants or on attitudes towards granting immigrants the right to vote in local elections. Thus, there is no evidence for a general backlash against immigrants in line with our main results. However, we do find significant changes for respondents' attitudes towards neighbors from different origins. Respondents in municipalities with a larger asylum seeker intake are more willing to have Italians, ethnic Germans from Eastern Europe, or Turks as neighbors. In line with Section 5.3, the effect is considerably smaller for Turkish neighbors. Also, the total index across all five questions points overall to a significant change in attitudes. Results are similar when we control for respondent characteristics.[50]

[48]For more details and the wording of the questions see Table A.21 in the online appendix. After identifying the relevant questions, we normalize responses on a scale from 0 to 1. To avoid problems of multiple hypothesis testing, we construct an index using the procedure by Anderson (2008).

[49]We conducted additional analyses using questions about the perception of asylum seekers. We find similar results but abstain from reporting them as our main focus is on the perception of immigrants from countries that are also frequently the origin of immigrant-origin candidates.

[50]Note that the treatment variation is limited due to a low number of Hessian municipalities in the survey.

6.2 Alternative mechanisms

6.2.1 Candidate competence

Immigrant-origin candidates may be more successful in elections due to asylum seeker intake if voters perceive (descendants of) former immigrants as more competent in dealing with and taking decisions on immigration matters. This specific perceived competence should be higher for candidates with a similar origin as asylum seekers who mainly stem from the Middle East, Asia, or Africa (see Figure 1). If competence in immigration matters is related to cultural, linguistic, or religious similarity, the effect should be larger for candidates that have an immigrant origin similar to that of the asylum seekers. Contrary to this, we find that the positive effect is driven by candidates with a European immigrant origin. Overall, the competence channel is not consistent with the heterogeneous effects documented in Section 5.3.[51]

6.2.2 Shift in party preferences

Do voters indeed choose different candidates or do they allocate their votes to different parties (happening to have more immigrant-origin candidates)? We examine the latter alternative mechanism in two ways. First, we use party-election pairs as units of observation, i.e. we use the average share of elected immigrant-origin candidates per party instead of per municipality (see Model (1) in Table 3). The results are qualitatively similar to the baseline.

[Table 3 goes here]

Second, we examine whether asylum seeker intake affects the party composition of councils. In Models (2)-(6) in Table 3, we use seat shares of left-wing parties (SPD, Gruene, Linke), right-wing parties (CDU, FDP, AfD), all other parties or local lists, SPD and CDU as depen-

[51] Eastern European governments tend to be critical of asylum seekers. Voters may favor Eastern European candidates expecting them to share these views. There are, however, at least three pieces of evidence that speak against this. First, we document in Section 6.1 that asylum seeker intake improves attitudes towards immigrants. Second, we find no effect of asylum seeker intake on right-wing vote shares. Third, the effect is similar for Eastern European candidates on right- (CDU, AfD, FDP) and left-wing lists (SPD, Gruene, Linke). Hence, it is unlikely that voters prefer Eastern European candidates due to their potentially hostile attitudes towards asylum seekers.

dent variables. There is no significant effect of asylum seeker intake on any of these seat shares, confirming that our main results are not driven by party-level effects.

6.2.3 Strategic candidate placement by parties

Does strategic placement of immigrant-origin candidates on specific initial ranks drive our results? Parties may place these candidates on higher ranks in response to asylum seeker intake, e.g. to signal competence/diversity.[52] In turn, being placed on a higher rank may lead to more electoral success. Descriptively, immigrant-origin candidates have worse placements than their non-immigrant peers with hardly any difference between 2016 and 2021 (see Figure A.3(b)). In addition, Figure A.13(b) shows that candidates with a Southern/Eastern European origin were on average not placed differently than other immigrant-origin candidates.[53]

In Models (1)–(2) in Table 4, we examine the role of initial ranks of immigrant-origin candidates more systematically. There is no significant effect of asylum seeker intake on average normalized initial ranks of immigrant-origin candidates. Also, there is no effect on initial ranks of candidates from Eastern/Southern Europe. Thus, there is no evidence for strategic behavior of parties in response to the immigration shock.

[Table 4 goes here]

While parties did not place immigrant-origin candidates differently, initial list ranks may still be related to the performance of immigrant-origin candidates. We next examine whether initial ranks of candidates explain our main findings by including them as a control variable. Results are collected in Models (3)–(5) in Table 4 and are similar to our baseline findings. We also find an effect similar to the baseline when separately examining candidates in the top and bottom half of their lists with the effect being somewhat larger for candidates in the top half.

[52]Note that the 2016 candidate lists were due on December 28, 2015. This was well after the intake of asylum seekers in the late summer of 2015. In principle, this gave parties enough time to adjust their lists.

[53]Figure A.13(a) shows that initial ranks do not differ by gender in line with Baskaran and Hessami (2022).

6.2.4 Change in turnout

The effect on the electoral performance of immigrant-origin candidates may be driven by changes in the voter pool. The salience of immigration topics may mobilize voters that otherwise would not have turned out. If these additional voters have an immigrant origin, they may support immigrant-origin candidates. Alternatively, voters may refrain from participating in the election to show discontent with asylum seeker intake. Both of these channels would result in a voter pool that is more positive towards immigrant-origin candidates. We first examine the effect of asylum seeker intake on turnout (Figure A.16). The immigration shock did not affect turnout in 2016 but significantly reduced turnout in 2021. The effect is quantitatively small, however. A one standard deviation increase in the treatment is associated with a 1 ppt reduction in turnout. Thus, differences in overall turnout are not a plausible mechanism.

The small overall effect may mask differences in turnout between voters with and without immigrant origin.[54] Immigrant-origin voters have been shown to be less likely to turn out in various countries (Pons and Liegey, 2019; Spies *et al.*, 2020).[55] Thus, there is room for mobilization for this group of voters. In the ALLBUS survey, respondents are asked whether they participated in the last federal election.We use this question to examine the effect of asylum seeker intake on turnout for respondents with and without an immigrant origin (based on one of her parents having non-German citizenship). Results are collected in Table 5.[56]

[Table 5 goes here]

[54]The sample period coincides with the EU enlargement of 2004 and 2007, i.e. the accession of ten Northern/Eastern European countries (as well as Malta and Cyprus). This increased the number of Eastern Europeans in Hesse substantially. As EU citizens, they are allowed to run and vote in local elections. If the intake of asylum seekers correlates with the share of Eastern Europeans this could explain our results. We use RWI GEO GRID data to show that the share of Eastern Europeans in the population does not correlate with the asylum seeker intake. In addition, the baseline effect remains unchanged when explicitly controlling for the share of Eastern Europeans.

[55]Descriptively, this is also the case for Germany and Hesse. We use the German Longitudinal Election Study to examine differences in turnout (GLES, 2020). Respondents are asked before and after the 2009, 2013, and 2017 federal elections about voting intentions and their turnout. We identify the immigrant origin of respondents from their own and their parents' country of birth. Figure A.15 shows the reported turnout of respondents with and without immigrant origin in federal elections. Indeed, turnout is lower for respondents with an immigrant origin. There is convergence between the two groups, however. The focus on federal elections is a key limitation of the GLES in our case. We are not aware of a similar survey for local elections in Germany, however.

[56]Corresponding event-study plots are collected in Figure A.16 in the online appendix.

There is a significantly negative but small effect of asylum seeker intake on the turnout of immigrant-origin respondents. A one SD increase in asylum seeker intake leads to a 0.8 ppt lower turnout. The effect is not robust to the inclusion of individual controls. There is no significant effect for respondents without an immigrant origin and when we pool all respondents. In addition, there is no effect for respondents with an Eastern European origin.[57] Taken together, changes in turnout due to asylum seeker intake are an unlikely explanation for our main results.

7 Conclusion

How do social group boundaries evolve over time and can shifts be induced by immigration shocks? We study these questions in the context of local council elections where voting for an immigrant-origin candidate represents a consequential revealed preference. In particular, we examine how asylum seeker intake at the local level affects the electoral performance of immigrant-origin candidates as a proxy for the social acceptance of minority groups. Our continuous DiD estimates indicate that in municipalities with a higher asylum seeker intake immigrant-origin candidates experience larger rank improvements and are more likely to get elected into the council both in the 2016 and the 2021 elections, indicating that the effect persists. The effect is exclusive to Southern and Eastern Europe candidates who are relatively similar in their culture to native Germans. Survey evidence supports that the intake of asylum seekers positively affects the perception of immigrants by the native population.

Our findings are not consistent with the hypothesis of positive contact since the electoral benefit due to asylum seeker intake is limited to this subset of candidates who stem from other European countries. At the same time, our results do not corroborate the idea of a perceived group threat evoked by asylum seekers. If voters consider immigration as a threat, we would expect to see a negative effect for all immigrant-origin candidates. In our setting, there is also no backlash, i.e. the performance of candidates with an origin that is similar to that of the asylum seekers (Middle Eastern/Arab, Asian) does not vary with the treatment.

[57] For candidates with this origin, we observe the largest baseline effect (Figure 5). For other immigrant origins, there are too few respondents to produce meaningful results.

Taking together our results and those in previous related studies, we learn that the effects of immigration shocks on social group boundaries appear to depend on the specific context and in particular the type of immigrants (e.g. legal vs. illegal) and their distance to the native population as well as the distance of existing minority groups to the native population.[58] While in our context, we illustrate that cultural distance is an important mediating variable, it could very well be that in other contexts racial or genetic differences play a bigger role. Future research on interrelations between minorities in culturally diverse contemporary societies will reveal under which circumstances (and along which distance dimension) existing social hierarchies can be overcome to ensure future economic prosperity for all.

References

ABASCAL, M. (2015). Us and them: Black-white relations in the wake of Hispanic population growth. *American Sociological Review*, **80**, 789–813.

ALBAROSA, E. and ELSNER, B. (2023). Forced migration and social cohesion: Evidence from the 2015/16 mass inflow in Germany. *World Development*, **167** (106228).

ALESINA, A., MIANO, A. and STANTCHEVA, S. (2023). Immigration and redistribution. *Review of Economic Studies*, **90**, 1–39.

ALLPORT, G. W. (1954). *The Nature of Prejudice*. Reading, MA: Addison-Wesley.

ANDERSON, M. L. (2008). Multiple inference and gender differences in the effects of early intervention: A reevaluation of the Abecedarian, Perry Preschool, and early training projects. *Journal of the American Statistical Association*, **103** (484), 1481–1495.

AROLD, B. W. (2024). Evolution vs. creationism in the classroom: The lasting effects of science education. *Quarterly Journal of Economics*, forthcoming.

[58] Previous literature such as Cikara *et al.* (2022) also indicates that the relative size of minority groups matters.

BARONE, G., D'IGNAZIO, A., DE BLASIO, G. and NATICCHIONI, P. (2016). Mr. Rossi, Mr. Hu and politics. The role of immigration in shaping natives' voting behavior. *Journal of Public Economics*, **136**, 1–13.

BARTH, F. (1969). *Ethnic Groups and Boundaries: The Social Organization of Culture Difference*. Bergen: Universitet Ferlaget.

BASKARAN, T. and HESSAMI, Z. (2018). Does the election of a female leader clear the way for more women in politics? *American Economic Journal: Economic Policy*, **10**, 95–121.

— and — (2022). The gender recontest gap in elections. *European Economic Review*, **145** (104111).

BERBÉE, P., BRÜCKER, H., GARLOFF, A. and SOMMERFELD, K. (2022). The labor demand effects of refugee immigration: Evidence from a natural experiment. *IZA DP No. 15833*.

BERTRAND, M. and MULLAINATHAN, S. (2004). Are Emily and Greg more employable than Lakisha and Jamal? A field experiment on labor market discrimination. *American Economic Review*, **94** (4), 991–1013.

BLALOCK, H. M. (1967). Toward a theory of minority-group relations. *New York: John Wiley and Sons.*

BLUMER, H. (1958). Race prejudice as a sense of group position. *Pacific Sociological Review*, **1** (1), 3–7.

BORG, G., PASSARO, D. G. and HERMO, S. (2022). Minimum wage as a place-based policy: Evidence from US housing rental markets. Brown University, Working Paper No. 2022-004.

BREDTMANN, J. (2022). Immigration and electoral outcomes: Evidence from the 2015 refugee inflow to Germany. *Regional Science and Urban Economics*, **96** (103807).

BURSZTYN, L., CHANEY, T., HASSAN, T. A. and RAO, A. (2024). The immigrant next door. *American Economic Review*, **114** (2), 348–384.

CALLAWAY, B., GOODMAN-BACON, A. and SANT'ANNA, P. H. C. (2024). Difference-in-differences with a continuous treatment. *NBER Working Paper No. 32117*.

CIKARA, M., FOUKA, V. and TABELLINI, M. (2022). Hate crime towards minoritized groups increases as they increase in sized-based rank. *Nature Human Behaviour*, **6** (11), 1537–1544.

COLAS, M. and SACHS, D. (2024). The Indirect Fiscal Benefits of Low-Skilled Immigration. *American Economic Journal: Economic Policy*, forthcoming.

COOK, L. D., JONES, M. E. C., LOGAN, T. D. and ROSÉ, D. (2022). The evolution of access to public accommodations in the United States. *Quarterly Journal of Economics*, **138** (1), 37–102.

DINAS, E., FOUKA, V. and SCHLÄPFER, A. (2021). Family History and Attitudes toward Out-Groups: Evidence from the European Refugee Crisis. *Journal of Politics*, **83** (2), 647–661.

—, MATAKOS, K., XEFTERIS, D. and HANGARTNER, D. (2019). Waking up the Golden Dawn: Does exposure to the refugee crisis increase support for extreme-right parties? *Political Analysis*, **27** (2), 244–254.

DUFLO, E. (2001). Schooling and labor market consequences of school construction in Indonesia: Evidence from an unusual policy experiment. *American Economic Review*, **91** (4), 795–813.

DUSTMANN, C. and FRATTINI, T. (2014). The fiscal effects of immigration to the UK. *Economic Journal*, **124**, 593–643.

—, VASILJEVA, K. and DAMM, A. P. (2019). Refugee migration and electoral outcomes. *Review of Economic Studies*, **86** (5), 2035–2091.

EDO, A., GIESING, Y., ÖZTUNC, J. and POUTVAARA, P. (2019). Immigration and electoral support for the far-left and the far-right. *European Economic Review*, **115**, 99–143.

EUROSTAT (2017). Asylum in the EU member states, news release 46/17. https://ec.europa.eu/eurostat/documents/2995521/7921609/3-16032017-BP-EN.pdf/e5fa98bb-5d9d-4297-9168-d07c67d1c9e1.

FOUKA, V., MAZUMDER, S. and TABELLINI, M. (2022). From Immigrants to Americans: Race and Assimilation during the Great Migration. *Review of Economic Studies*, **89** (2), 811–842.

— and TABELLINI, M. (2022). Changing in-group boundaries: The effect of immigration on race relations in the United States. *American Political Science Review*, **116** (3), 968–984.

FRANK, R., AKRESH, I. R. and LU, B. (2010). Latino immigrants and the U.S. racial order: How and where do they fit in? *American Sociological Review*, **75** (3), 378–401.

GAMALERIO, M., LUCA, M., ROMARRI, A. and VISKANIC, M. (2023). Refugee reception, extreme-right voting, and compositional amenities: Evidence from Italian municipalities. *Regional Science and Urban Economics*, **100** (103892).

GAY, C. (2006). Seeing difference: The effect of economic disparity on black attitudes toward Latinos. *American Journal of Political Science*, **50** (4), 982–997.

GEHRSITZ, M. and UNGERER, M. (2022). Jobs, crime and votes: A short-run evaluation of the refugee crisis in Germany. *Economica*, **89** (355), 592–626.

GERHARDS, J. and HANS, S. (2008). Akkulturation und die Vergabe von Vornamen: Welche Namen wählen Migranten für ihre Kinder und warum? *Kölner Zeitschrift für Soziologie und Sozialpsychologie*.

GESIS (2021a). Allgemeine Bevölkerungsumfrage der Sozialwissenschaften - ALLBUS Sensitive Regionaldaten.

GESIS (2021b). Allgemeine Bevölkerungsumfrage der Sozialwissenschaften ALLBUS - Kumulation 1980-2018.

GLES (2020). GLES Querschnitt 2009-2017, Kumulation. *GESIS Datenarchiv, Köln. ZA6835 Datenfile Version 1.0.0*.

HALLA, M., WAGNER, A. F. and ZWEIMÜLLER, J. (2017). Immigration and voting for the far right. *Journal of the European Economic Association*, **15** (6), 1341–1385.

HANGARTNER, D., DINAS, E., MARBACH, M., MATAKOS, K. and XEFTERIS, D. (2019). Does exposure to the refugee crisis make natives more hostile? *American Political Science Review*, **113** (2), 442–455.

HESSAMI, Z. (2018). Accountability and incentives of appointed and elected public officials. *Review of Economics and Statistics*, **100**, 51–64.

HOFSTEDE, G. (2001). *Culture's consequences: Comparing values, behaviors, institutions, and organizations across nations*. Thousand Oaks, CA: Sage Publications.

—, HOFSTEDE, G. J. and MINKOV, M. (2010). *Cultures and Organizations: Software of the Mind. Revised and Expanded Third Edition.* New York: McGraw Hill.

KAAS, L. and MANGER, C. (2012). Ethnic discrimination in Germany's labour market: A field experiment. *German Economic Review*, **13** (1), 1–20.

KELLERMANN, K. L. and WINTER, S. (2021). Immigration and anti-immigrant voting in the 2017 German parliamentary election. *German Economic Review*, **23**, 341–401.

LANDKREIS GIESSEN (2015). Richtlinie zur Unterbringung und Betreuung von Flüchtlingen im Landkreis Gießen. `https://www.lkgi.de/images/formulare_downloads/Gesundheit_Soziales_Integration/Zuwanderung_und_Einreise/Richtlinie_Unterbringung_Betreuung_Fluechtlinge_LK.pdf`.

LINDO, J. M., MYERS, C. K., SCHLOSSER, A. and CUNNINGHAM, S. (2019). How far is too far? New evidence on abortion clinic closures, access, and abortions. *Journal of Human Resources*, **55** (4), 1137–1160.

LONSKY, J. (2021). Does immigration decrease far-right popularity? Evidence from Finnish municipalities. *Journal of Population Economics*, **34** (1), 97–139.

MCGARTY, C. (1999). *Categorization in Social Psychology*. London: Sage Publications.

MECHTERSHEIMER, A., BARTH, P. and GUTMANN, T. (eds.) (1988). *Militarisierungsatlas der Bundesrepublik: Streitkräfte, Waffen und Standorte, Kosten und Risiken (3. Neuauflage)*. Darmstadt: Luchterhand.

MEDIENDIENST INTEGRATION (2021). Abgeordnete mit Migrationshintergrund im 20. Deutschen Bundestag. Retrieved from `https://mediendienst-integration.de/fileadmin/Dateien/Recherche_Bundestag_2021_Mediendienst.pdf`.

MENDEZ, I. and CUTILLAS, I. M. (2014). Has immigration affected Spanish presidential elections results? *Journal of Population Economics*, **27** (1), 135–171.

PONS, V. and LIEGEY, G. (2019). Increasing the electoral participation of immigrants: Experimental evidence from France. *Economic Journal*, **129**, 481–508.

RWI and MICROM (2023). RWI-GEO-GRID: Socio-economic data on grid level - Scientific Use File (wave 13). RWI-GEO-GRID. Version: 1. RWI – Leibniz Institute for Economic Research. Dataset.

SCHAUB, M., GEREKE, J. and BALDASSARRI, D. (2020). Strangers in hostile lands: Exposure to refugees and right-wing support in Germany's eastern regions. *Comparative Political Studies*, **54** (3-4), 686–717.

SCHNEIDER-STRAWCZYNSKI, S. (2021). When is contact effective? Evidence on refugee-hosting and far-right support in France. *Paris School of Economics Working Paper. No. 02982827*.

— and VALETTE, J. (2024). Media coverage of immigration and the polarization of attitudes. *American Economic Journal: Applied Economics*, forthcoming.

SHAYO, M. (2009). A Model of Social Identity with an Application to Political Economy. *American Political Science Review*, **103** (2), 147–174.

SIDANIUS, J. and PRATTO, F. (1999). *Social Dominance: An intergroup theory of social hierarchy and oppression*. New York: Cambridge University Press.

SIRIN, C. V., VALENTINO, N. A. and VILLALOBOS, J. D. (2016). Group empathy theory: The effect of group empathy on US intergroup attitudes and behavior in the context of immigration threats. *Journal of Politics*, **78**, 893–908.

SPIES, D. C., MAYER, S. J. and GOERRES, A. (2020). What are we missing? Explaining immigrant-origin voter turnout with standard and immigrant-specific theories. *Electoral Studies*, **65**, 102–103.

STATISTISCHES BUNDESAMT (2022). Gut jede vierte Person in Deutschland hatte 2021 einen Migrationshintergrund. *Pressemitteilung Nr. 162*, retrieved from `https://www.destatis.de/DE/Presse/Pressemitteilungen/2022/04/PD22_162_125.html`.

STEINMAYR, A. (2021). Contact versus exposure: Refugee presence and voting for the far right. *Review of Economics and Statistics*, **103** (2), 310–327.

STREET, A. (2014). Representation despite discrimination. *Political Research Quarterly*, **67** (2), 374–385.

TAJFEL, H. and WILKES, A. L. (1963). Classification and quantitative judgment. *British Journal of Psychology*, **54** (2), 101–114.

TIEFENBACH, P. (2012). Besser wählen: Kumulieren und panaschieren. *Thesen zur Demokratie Nr. 25*, pp. 1–10, Berlin: Mehr Demokratie e.V.

TOMBERG, L., STEGEN, K. S. and VANCE, C. (2021). "The mother of all political problems"? On asylum seekers and elections. *European Journal of Political Economy*, **67**, 1019–81.

TORVIK, V. I. and AGARWAL, S. (2016). Ethnea - an instance-based ethnicity classifier based on geo-coded author names in a large-scale bibliographic database. *Presented at International Symposium on Science of Science*, University of Illinois at Urbana-Champaign.

TURNER, J. C., HOGG, M. A., OAKES, P. J., REICHER, S. D. and WETHERELL, M. S. (1987). *Rediscovering the Social Group: A Self-Categorization Theory.* New York: Basil Blackwell.

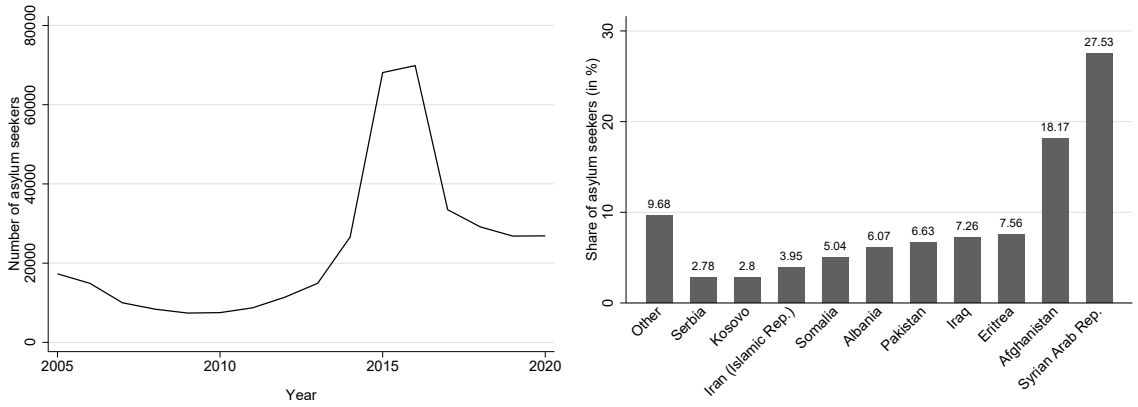
—, OAKES, P. J., HASLAM, S. A. and MCGARTY, C. (1994). Self and collective: Cognition and social context. *Personality and Social Psychology Bulletin*, **20** (5), 454–463.

VERTIER, P., VISKANIC, M. and GAMALERIO, M. (2023). Dismantling the "jungle": Migrant relocation and extreme voting in France. *Political Science and Research Methods*, **11** (1), 129–43.

VOIGTLÄNDER, N. and VOTH, H.-J. (2012). Persecution perpetuated: The medieval origins of anti-semitic violence in Nazi Germany. *Quarterly Journal of Economics*, **127** (3), 1339–92.

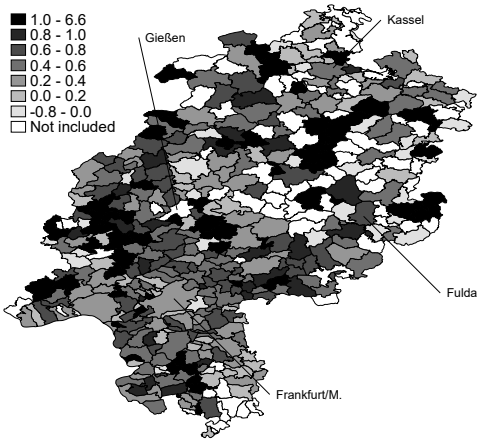
WATERS, M. C., KASINITZ, P. and ASAD, A. L. (2014). Immigrants and African Americans. *Annual Review of Sociology*, **40** (1), 369–390.

YE, J., HAN, S., HU, Y., COSKUN, B., LIU, M., QIN, H. and SKIENA, S. (2017). Nationality classification using name embeddings. *Proceedings of the 2017 ACM on Conference on Information and Knowledge Management*, pp. 1897–1906.



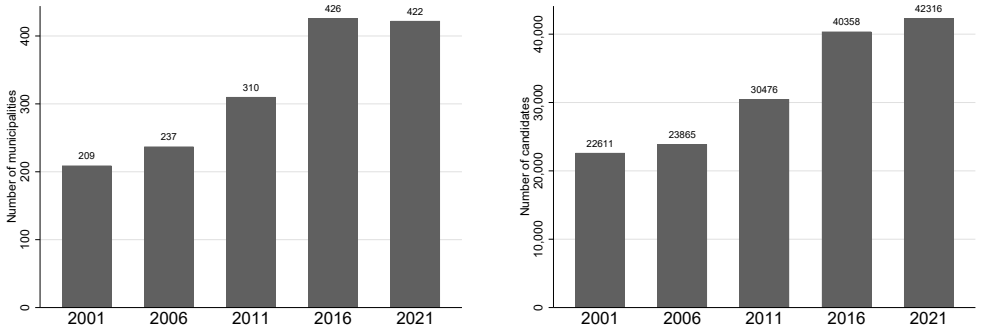
(a) Absolute number of asylum seekers over time

(b) Share of asylum seekers per origin



(c) Spatial distribution of asylum seekers

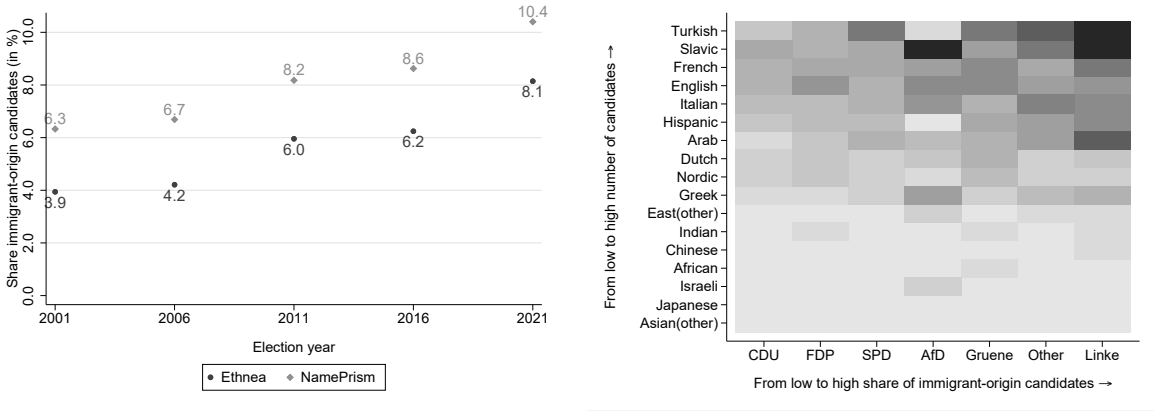
Figure 1: Development, origin, and spatial distribution of asylum seekers in Hesse. Subfigure (a) shows the number of asylum seekers in Hesse over time. Subfigure (b) reports the top-10 countries of origin in 2015 including the respective shares. Subfigure (c) shows the change in the population share of asylum seekers from 2014 to 2015 in Hessian municipalities (per 100 inhabitants). Municipalities in white are not included in the sample (see Table A.19 for reasons).



(a) Municipalities

(b) Candidates

Figure 2: Coverage of Hessian local council election data. The above bar charts show the number of municipalities (a) and candidates (b) in our dataset. We have full coverage for the 2016 and 2021 elections.



(a) Share of immigrant-origin candidates over time

(b) Immigrant origin by party lists

Figure 3: Immigrant-origin candidates over time and across party lists. Subfigure (a) shows the share of immigrant-origin candidates among all local council candidates in Hesse across election years. We report these shares based on the NamePrism as well as the Ethnea classification for comparison. Subfigure (b) shows the share of immigrant-origin candidates by party lists. The axes are sorted as indicated in the graph. The scale ranges from 0% to 4.7%. For example, 4.7% of candidates on the list *Linke* have a Turkish origin. This is also the list with the highest share of immigrant-origin candidates overall. Turkish is generally the most frequent origin among immigrant-origin candidates.

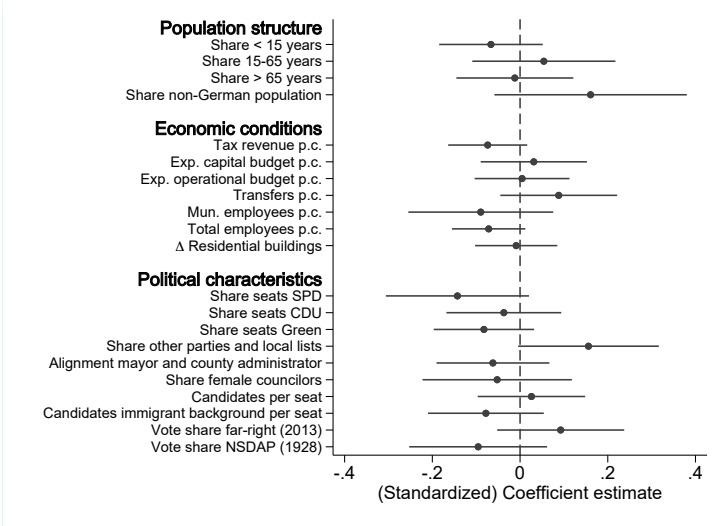
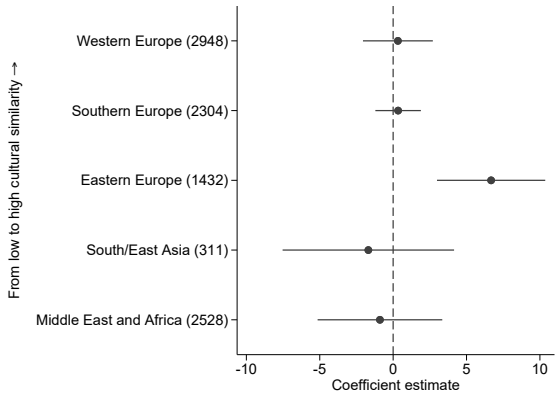
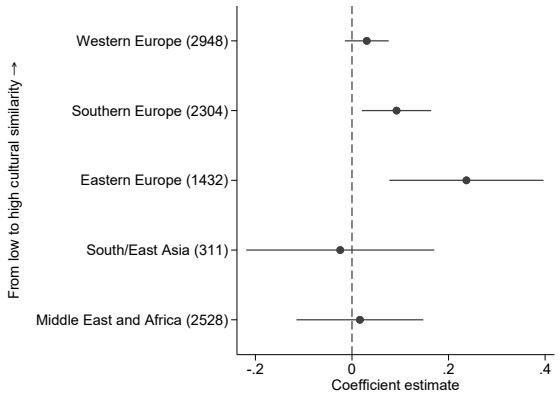


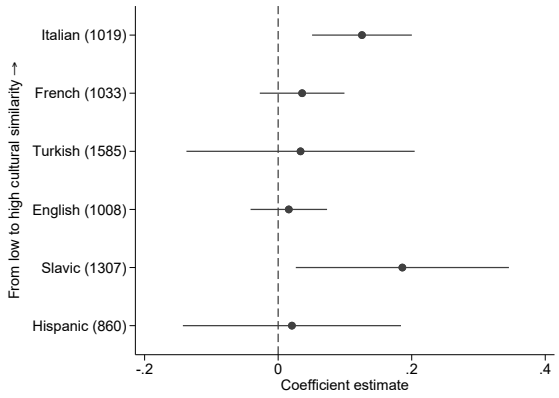
Figure 4: Balance tests: Treatment intensity and municipality characteristics. This graph shows coefficients from regressing the change in the asylum seeker population share on pretreatment municipal characteristics. Tax revenues p.c. are revenues from business and property taxes. Exp. capital budget p.c. are expenditures on debt service or municipal reserves. Exp. operational budget p.c. are expenditures on administration and public services. Transfers p.c. are transfers from other levels of government. All population and economic variables refer to 2014. Δ Residential buildings is based on RWI GEO GRID between 2010 and 2011 (RWI and microm, 2023). Seat shares of SPD, CDU, and Greens refer to averages for the 2001-2011 elections. Party alignment refers to mayors and county administrators in June 2015. The share of female councilors, the number of candidates/council seats, and the number of immigrant-origin candidates/council seats refer to the 2011 election. Vote share far-right (2013) refers to all small far-right parties in the 2013 federal election (NPD, *Die Republikaner*, *Bürgerrechtsbewegung Solidarität*, and *pro Deutschland*). Vote share NSDAP (1928) refers to the vote share of the NSDAP in the 1928 federal election taken from Voigtländer and Voth (2012). Regressions include county fixed effects. Standard errors are clustered at the municipality level. 95% confidence intervals are indicated for each coefficient.



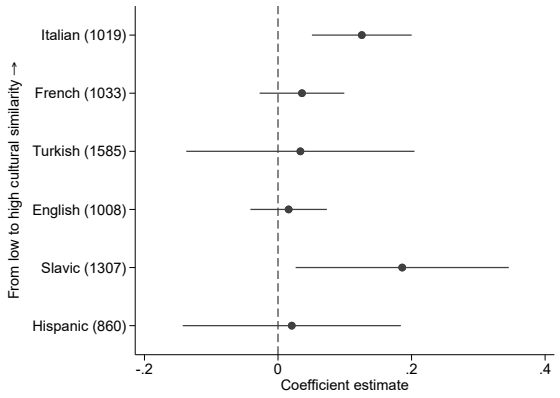
(a) Avg. normalized rank improvement (regions)



(b) Avg. share elected into council (regions)



(c) Avg. normalized rank improvement



(d) Avg. share elected into council

Figure 5: Asylum seeker intake and electoral success by candidate origin (regions). These coefficient plots show the effect of the change in the population share of asylum seekers on rank improvements of immigrant-origin candidates and the share of elected immigrant-origin candidates. Outcomes are municipality averages. Subfigures (a) and (b) show results for regional aggregates of origins, while subfigures (c) and (d) consider the six most frequent immigrant origins in our sample (see Figure A.6). Origins are sorted by cultural similarity relative to Germany (low similarity at the bottom) based on the following averages: Western Europe (0.914), Southern Europe (0.901), Eastern Europe (0.896), South/East Asia (0.868), Middle East and Africa (0.842). The number in parentheses next to the origin (region) indicates how many of these candidates are included in our sample. Regressions include year and municipality fixed effects, as well as control variables. 95% confidence intervals are indicated for each coefficient in each subfigure.

Table 1: ASYLUM SEEKER INTAKE AND ELECTORAL SUCCESS OF IMMIGRANT-ORIGIN CANDIDATES

Dep. var.:	Average normalized rank improvement			Average share elected into council		
	(1)	(2)	(3)	(4)	(5)	(6)
Δ Asylum seekers × Post			2.255***			0.082***
			(0.717)			(0.028)
Δ Asylum seekers × 2001	-0.171	-0.348		0.043	0.044	
	(1.110)	(1.143)		(0.037)	(0.038)	
Δ Asylum seekers × 2006	0.303	0.191		-0.030	-0.031	
	(1.305)	(1.345)		(0.029)	(0.030)	
Δ Asylum seekers × 2016	1.948**	1.874*		0.069**	0.073**	
	(0.958)	(1.036)		(0.029)	(0.032)	
Δ Asylum seekers × 2021	2.204**	2.588***		0.088**	0.098**	
	(0.942)	(0.966)		(0.040)	(0.042)	
Mean (SD)	-1.64 (9.70)	-1.63 (9.70)	-1.63 (9.70)	0.27 (0.30)	0.27 (0.30)	0.27 (0.30)
Year FE	✓	✓	✓	✓	✓	✓
Municipality FE	✓	✓	✓	✓	✓	✓
Controls		✓	✓		✓	✓
Municipalities	353	348	348	357	353	353
N	1,247	1,218	1,218	1,275	1,247	1,247

Notes: This table reports results from regressing the change in the population share of asylum seekers (Δ *Asylum seekers*) on electoral outcomes (averaged at municipality level) of immigrant-origin candidates. The 2011 election serves as the base year. Models (1)-(3) and Models (4)-(6) use average rank improvements and the share of elected immigrant-origin candidates as outcomes, respectively. In Models (2), (3), (5), and (6) we control for shares of non-German citizens, women, elderly and children as well as population density, tax revenues per capita, transfers per capita, and debt per capita. We also control for the seat shares of SPD, CDU, Gruene, and FDP in the previous election. Stars indicate significance levels at 10%(*), 5%(**), and 1%(***). Heteroscedasticity- and cluster-robust standard errors are in parentheses. The unit of clustering is the municipality.

Table 2: MECHANISM: SHIFTS IN PERCEPTION OF IMMIGRANTS

Dep. var.:	(1) Alienation	(2) Voting rights	(3) Neighbor ITA	(4) Neighbor repatriate	(5) Neighbor TUR	(6) Total index
Panel A: Without respondent controls						
Δ Asylum seekers	0.117	-0.188^{+}	-0.077	-0.095	0.009	-0.333
	(0.083)	(0.116)	(0.095)	(0.109)	(0.064)	(0.350)
Δ Asylum seekers × Post	-0.068	0.125	0.308***	0.244**	0.152*	0.978**
	(0.123)	(0.155)	(0.092)	(0.116)	(0.079)	(0.421)
N	566	623	630	630	630	632
Panel B: With respondent controls						
Δ Asylum seekers	0.027	-0.109	-0.031	-0.191*	0.015	-0.355
	(0.096)	(0.096)	(0.084)	(0.095)	(0.072)	(0.315)
Δ Asylum seekers × Post	0.014	0.069	0.310***	0.350***	0.139*	1.109***
	(0.124)	(0.133)	(0.081)	(0.107)	(0.085)	(0.367)
N	455	494	499	499	499	500
Year FE	✓	✓	✓	✓	✓	✓
Municipalities	23	23	23	23	23	23

Notes: This table reports results from regressing the change in the population share of asylum seekers (Δ *Asylum seekers*) on Hessian respondents' answers to questions about perceptions of foreigners in the ALLBUS surveys of 1996, 2006, and 2016 (see Table A.21 for the exact questions). Models (1) and (2) focus on general attitudes towards immigrants, Models (3)-(5) ask about respondents' willingness to have neighbors of a certain origin, while Model (6) uses an index across all five questions calculated in accordance with Anderson (2008). In Panel B, we also control for age, gender, marriage status, education, party membership, income, and German citizenship of respondents. Stars indicate significance levels at 10%(*), 5%(**), and 1%(***). Heteroscedasticity- and cluster-robust standard errors are in parentheses. The unit of clustering is the municipality of the respondent.

Table 3: ALTERNATIVE MECHANISM II: SHIFTS IN PARTY VOTE SHARES

Dep. var.: Avg. share elected into council		Seat shares of parties or party aggregates				
	(1) Within party	(2) Left	(3) Right	(4) Other lists	(5) SPD	(6) CDU
Δ Asylum seekers × Post	0.066***	0.003	0.005	-0.008	-0.001	0.006
	(0.022)	(0.006)	(0.006)	(0.009)	(0.006)	(0.005)
Mean (SD)	0.24 (0.36)	0.43 (0.14)	0.37 (0.13)	0.20 (0.16)	0.34 (0.13)	0.33 (0.12)
Year FE	✓	✓	✓	✓	✓	✓
Municipality FE	✓	✓	✓	✓	✓	✓
Controls	✓	✓	✓	✓	✓	✓
Municipalities	366	353	353	353	353	353
N	3,555	1,247	1,247	1,247	1,247	1,247

Notes: This table reports results from regressing the change in the population share of asylum seekers (Δ *Asylum seekers*) on the share of elected immigrant-origin candidates. Model (1) uses within-party averages, i.e. we aggregate candidates' electoral outcomes for each party in a municipality. Models (2)-(5) use municipality averages as in the baseline. In Models (2) and (3), we use the seat share of left- (SPD, Gruene, Linke) and right-wing (CDU, FDP, AfD) parties as outcomes. In Models (4) to (6), we use the seat shares of small parties, SPD, and CDU as outcomes. We control for the shares of non-German citizens, women, elderly and children as well as population density, tax revenues per capita, transfers per capita, and debt per capita. We also control for the seat share of SPD, CDU, Gruene, and FDP in the previous election. Stars indicate significance levels at 10%(*), 5%(**), and 1%(***). Heteroscedasticity- and cluster-robust standard errors in parentheses. The unit of clustering is the municipality.

Table 4: ALTERNATIVE MECHANISM III: INITIAL PLACEMENT OF CANDIDATES

	Average normalized initial rank		Average share elected into council		
	(1) All	(2) South/East	(3) Initial rank	(4) Top ranks	(5) Bottom ranks
Δ Asylum seekers × Post	-0.185	-0.108	0.080***	0.154***	0.045**
	(2.071)	(1.993)	(0.020)	(0.035)	(0.021)
Avg. norm. initial rank			-0.007***		
			(0.001)		
Mean (SD)	54.22 (17.36)	55.04 (18.52)	0.27 (0.29)	0.50 (0.37)	0.08 (0.23)
Year FE	✓	✓	✓	✓	✓
Municipality FE	✓	✓	✓	✓	✓
Controls	✓	✓	✓	✓	✓
Municipalities	349	319	349	280	309
N	1,233	1,075	1,233	916	1,044

Notes: This table reports results from regressing the change in the population share of asylum seekers (Δ *Asylum seekers*) on electoral outcomes (averaged at municipality level) of immigrant-origin candidates. Models (1)-(2) use average normalized initial ranks as outcome. Models (3)-(5) use the share of elected immigrant-origin candidates as outcome. While Model (1) includes all immigrant-origin candidates, Model (2) only includes candidates with an Eastern/Southern European origin. In Model (3), we control explicitly for the normalized initial rank. In Models (4) and (5), we consider candidates in the top and bottom half of their list, respectively. We control for shares of non-German citizens, women, elderly and children as well as population density, tax revenues per capita, transfers per capita, and debt per capita. We also control for the seat share of SPD, CDU, Gruene, and FDP in the previous election. Stars indicate significance levels at 10%(*), 5%(**), and 1%(***). Heteroscedasticity- and cluster-robust standard errors are in parentheses. The unit of clustering is the municipality.

Table 5: ALTERNATIVE MECHANISM IV: TURNOUT

Dep. var.: Turnout	Immigrant origin			
	(1) Yes	(2) No	(3) All	(4) Eastern Europe
Panel A: Without individual controls				
Δ Asylum seekers	0.231**	-0.073	-0.015	0.178
	(0.086)	(0.050)	(0.012)	(0.125)
Δ Asylum seekers × Post2015	-0.243**	0.065	0.010	-0.221
	(0.093)	(0.052)	(0.023)	(0.198)
N	216	734	2031	103
Panel B: With individual controls				
Δ Asylum seekers	-0.005	-0.079	-0.017	-0.066
	(0.118)	(0.056)	(0.013)	(0.185)
Δ Asylum seekers × Post	-0.013	0.068	0.0104	-0.024
	(0.133)	(0.057)	(0.027)	(0.204)
N	184	625	1660	89
Year FE	✓	✓	✓	✓
Municipalities	36	37	84	31

Notes: This table reports results from regressing the change in the population share of asylum seekers (Δ *Asylum seekers*) on responses to the question whether Hessian respondents voted in the last federal election. We show results for respondents with and without immigrant origin, as well as for all respondents and respondents with an Eastern European origin. As information on the origin of respondents' parents is not available for all years, Models (1) and (2) include only 1996, 2006, 2014, 2016, and 2018. Model (3) additionally includes 1998, 2002, 2004, 2008, 2010, and 2012. In Panel B, we also control for age, gender, marriage status, education, party membership, income, and German citizenship. Stars indicate significance levels at 10%(*), 5%(**), and 1%(***). Heteroscedasticity- and cluster-robust standard errors in parentheses. The unit of clustering is the municipality of the respondent.

Online appendix

A.1 Details on collection of council election data

The process of data collection is described in more detail in Baskaran and Hessami (2018). Information on the most recent election in March 2021 was collected by hand and added to the dataset. Our research assistants downloaded information on election results from the homepages of municipalities, typically in pdf format. Then, data was transferred into standardized Excel-sheets by hand. The Excel files were then merged into one dataset using municipal code and year. Since collecting the data by hand is error-prone, a number of plausibility checks were conducted to ensure data quality. Whenever mistakes were found, they were corrected or set to missing. For the election of 2021 we cover the universe of Hessian municipalities.

A.2 Details on ML classification of candidates' origin

To identify immigrant-origin candidates as correctly and objectively as possible, we followed several steps. First, we pre-processed candidate names by removing or transforming all special characters, accent marks, and umlauts. In addition, we strip names from titles such as *Dr.* or *Prof.*, the German equivalents of PhD and professor. After removing duplicate names, 93,032 unique candidate names remain to be classified.

The basis for our main analysis is the classification by Ethnea, a web-based publicly available classification tool (Torvik and Agarwal, 2016). It provides probabilities for 22 different linguistic origins separately for first and second name, as well as the joint probability. The algorithm determines probabilities for seven origins for each name. On average, probability drops substantially between first and second origin (see Figure A.5). Thus, the algorithm seems to be relatively sure in its first choice. We limit the data collection to the first four suggested origins. The process of data collection was done using webscraping in late 2021 and early 2022.[59] We notified the administrators of Ethnea and paused the scraper for one second after every query.

[59] We used the Python package *BeautifulSoup*, which is a standard package for tasks like this.

While for many names, such as *Schneider*, *Schuster*, or *Schmidt* the algorithm performs very well, there are names where the classification is less clear. If the probability that the origin of a candidates' name is German is more than 25%, we code the candidate as no immigrant origin. If the probability is below 1%, the candidate is coded as immigrant origin. We examine the 4,700 names that are in between 1% and 25% manually and adjust classification where necessary. Adjustments are made based on gut feeling of the German speaking authors on the origin of the name, likely resembling the situation of voters in the booth.[60] In addition, we reflect the classification result by using another publicly available tool – NamePrism (Ye *et al.*, 2017) – for robustness checks.

The most frequent German and non-German surnames as classified by Ethnea are collected in Tables A.1 and A.2, together with the number of times a surname is classified German and non-German. The German surnames seem very plausible. It is well established that e.g. *Mueller* is one of the most frequent surnames in Germany. Prima facie, non-German names are plausible as well. However, in some cases surnames are classified both German and non-German with similar frequency. Still, among the most common non-German names there are plausible instances, such as the Turkish surnames *Yilmaz* or *Can*.

Ethnea provides information on 22 different linguistic origins. Figure A.6 shows the most frequent linguistic origins.[61] Consistent with migration patterns in Germany during the 20th century, many names stem from Turkish, Slavic, French, Italian, or English linguistic origin. Table A.3 shows the three most frequent surnames for each of the relevant linguistic origins. Overall the classification seems to be plausible. However, Figure A.7 shows that some linguistic origins are more similar to German than others. Specifically, English, French, Nordic, and Dutch names are frequently the second guess for German names.

To substantiate the classification by the two algorithms, we additionally benchmark the classification in two ways. First, we compare the classification by the tools with human classi-

[60] We only change the classification into immigrant origin versus no immigrant origin. We are not able to check and correct the linguistic origins of names.

[61] Note that in this case we count names as soon as the linguistic origin is among the first four origins. In the empirical analysis we use only the most likely origin.

fication. We randomly draw a subsample of about 400 candidates ($\approx 0.25\%$ of all candidates) and classify them manually. There is a strong overlap of human and machine classification: Ethnea (NamePrism) agrees with the human classification in 93.98% (93.48%) of cases. Second, we examine the members of parliament in the 20$^{\text{th}}$ German Bundestag, which were elected in September 2021. A German non-profit organization collected information on the immigrant origin of candidates from their parties, their websites or media sources (Mediendienst Integration, 2021). Of the 735 parliamentarians, 83 have an immigrant origin (11.3%). Ethnea correctly classifies the immigrant origin for 89.9% of these parliamentarians.

Table A.1: LIST OF MOST FREQUENT NON-GERMAN SURNAMES (TOP-25)

Surname	Count (non-German)	Count (German)
yilmaz	26	0
sahin	22	0
dogan	22	1
yildiz	19	0
oeztuerk	17	0
can	16	0
demir	16	4
vanloon	15	0
pelekanos	14	0
kumar	14	0
kuepelikilinc	13	0
tosun	13	0
kaya	13	2
yildirim	13	1
singh	12	0
celik	12	1
akdeniz	12	0
aydin	12	4
kluin	12	0
khan	12	0
bibo	11	6
russo	11	0
colloseus	11	7
viel	10	7
basmara	10	0

Notes: This table shows the most frequent non-German surnames. While the classification tool uses first and surname, only surnames are depicted to enhance variation in the list. A surname can be classified non-German as well as German depending on the first name. The respective numbers Count (non-German) and Count (German) indicate the respective frequencies. The origin of names is determined using Ethnea.

Table A.2: LIST OF MOST FREQUENT GERMAN SURNAMES (TOP-25)

Surname	Count (non-German)	Count (German)
mueller	0	1627
schmidt	0	1503
schneider	0	1101
schaefer	0	1022
becker	1	887
weber	0	784
wagner	0	637
koch	1	633
fischer	0	608
hofmann	0	598
schmitt	0	551
hartmann	1	407
wolf	2	394
moeller	0	363
jung	2	331
koehler	1	308
klein	1	307
roth	0	294
hoffmann	0	276
schwarz	0	274
werner	0	273
hahn	0	265
richter	0	252
friedrich	0	251
kraft	0	244

Notes: This table shows the most frequent German surnames. While the classification tool uses first and surname, only surnames are depicted to enhance variation in the list. A surname can be classified non-German as well as German depending on the first name. The respective numbers Count (non-German) and Count (German) indicate the respective frequencies. The origin of names is determined using Ethnea.

Table A.3: LIST OF MOST FREQUENT SURNAMES BY LINGUISTIC ORIGIN

Linguistic origin	Surnames (Top-3)
African	sylla, demele, cumbi
Arab	khan, khalid, ahmad
Baltic	kuras, wember, cifersons
Chinese	seng, klueh, puersuen
Dutch	kluin, vanloon, stoeveken
English	hix, miss, thomas
French	godry, zarda, vanloon
Greek	pelekanos, stergiou, chatzis
Hispanic	macho, dias, teroerde
Hungarian	kavai, kovacsek, boesz
Indian	kumar, singh, moti
Indonesian	santoso, pillera, wlassak
Israeli	silberbonz, fraikin, yuvali
Italian	russo, basmara, piscopia
Japanese	ide, huwa, arraki
Korean	raiserlucasdoo, faschung, chomphoo
Nordic	colloseus, friis, nestor
Romanian	dumitrescu, craciun, silea
Slavic	pecka, fistric, avdovic
Thai	ostrizkij, tichai, duangphung
Turkish	yilmaz, dogan, sahin
Vietnamese	pham, thuy, tran

Notes: This table shows the three most frequent surnames for the different linguistic origins. The origin of names is determined using Ethnea.

Table A.4: LIST OF MOST FREQUENT WESTERN EUROPEAN NAMES

abrahamian	cahill	ellis	hoegy	lather	musmannbleech	samuel	tusk
abram	callander	endrejat	hog	laurent	naas	santiard	tuzimek
abramenko	cammerzell	enninga	hogh	lavan	nadj	sauvageot	tyszak
ackley	campbell	ens	holick	lavies	nafziger	savage	tzevdet
aden	caplier	enslin	holm	lawallschaad	nemluvil	schadli	uelman
aillaud	carqueville	eskuche	homa	lawrence	nestor	schleep	ujma
alford	carrie	eyres	hooge	lecky	newton	schlombs	umber
alin	cattepoel	eyssen	howe	lefebvre	nguyen	scholibo	utter
allafwagner	cavalier	fabricius	howell	lehrian	nijhuis	schradervongroote	vaak
allie	cendre	fackiner	hy	lemahieu	nitzbon	schrumpf	valentinbette
althen	cezanne	fallis	imdahl	lemaire	nohman	schury	valle
ameloot	chiout	fandre	imeraj	letmathe	odonovan	segel	valta
ament	chiron	farr	inhetpanhuis	leussink	old	seguin	vanbiene
amet	chlench	fedon	jackson	levien	oldehaver	seippwallwaey	vandenberg
andersen	chop	felmeden	jacobs	lewalterschoor	opheys	sengupta	vanderbeck
anderson	christensen	ferchland	jacobsen	ley	orlowski	sergan	vanderlindeteusch
andrin	cifersons	ferreau	jaeck	leysaht	ortweinhorn	severit	vandermeer
arnaud	ciliox	ferron	jakubowski	ligniez	ost	seymor	vanderminde
arnreich	ciolek	filipczak	james	lindberg	osthus	sharma	vanderschelde
atchison	claar	flarup	jamin	lipschik	ouariach	shea	vanderwerf
atkinson	claude	flockton	janakiew	ljungh	oulds	shelton	vandiepen
auleppwulff	cockburn	fohry	janes	loeb	paddock	shuttleworth	vangool
aviv	colakloens	fokken	jensen	loem	palmer	sideriusmanning	vanloon
babion	colditz	folwerk	jerke	luetjens	panagiotidis	siegel	vanmoll
badouin	collas	foshag	jokovic	luijendijk	pance	sillis	vanvenrooy
baenfer	collee	fourne	jolles	luitjenstaylor	panhans	singh	varlik
baerens	colley	fournillier	jones	lupton	paprocki	sinick	veillet
bagley	collinet	francon	jordan	lyding	patry	smith	velthuizen
bairam	colloseus	franssen	jory	macus	patryas	soine	veneri
bambey	combe	friis	jourdan	maday	paul	solveen	ventulett
bandilla	coote	frobin	jurdzik	maekitalo	paulson	somfalvy	verkroost
bantle	coppieters	fuertjes	kabel	maennche	pavel	spatar	versloot
barber	copray	gabsa	kabey	mahlroos	pelet	spruch	vial
barkhof	cordier	gahutu	kadhim	mainierie	pelizaeus	staaden	vialon
bate	coste	gamp	kalabis	majewski	perrot	stadion	vibert
bax	courbeaux	garnier	kanabajlemp	makamul	peters	stahl	vidapedd
bechtum	cress	garvey	kane	malcomess	picardmaureau	staples	viesehon
belika	crowe	gastine	kassoldmoulden	maleh	pichon	stapp	viet
belingabelinga	cwielong	gawletta	kay	malik	pillardy	steffanivelden	viethstein
benchaib	dambowy	gerum	kelley	malkmus	pingand	ster	villhard
beorchia	dams	gesellius	kennard	malsy	pisonic	sterling	vinson
berelson	dauvergne	geurts	kennedy	maritzen	platt	stevens	visser
berg	davies	gilbert	kerremans	markesina	plennis	stoerring	voeglin
berge	davin	glass	kiedos	marofsky	plesky	stoeveken	vonderheyden
bergin	debest	godja	kilbertus	martelleur	podstatny	stommellink	vongarnier
berneaud	defrenes	godry	kinet	martiker	poffo	studanski	vonsoostenhoellings
berns	dekruijff	goethals	kirse	martin	pollum	subtil	vonstryk
bertocchi	delahaye	golomb	kluin	maruhn	pons	suckut	voye
best	dengel	gorczynski	knab	mattern	pospiech	suerder	wadakur
bibo	desiere	gordine	knehler	may	pourteau	sufin	wade
bigus	devrient	gordon	kneller	mayerkotlenga	praetorius	sult	wakim
bille	dezimbalka	graen	koerlin	mccreight	privat	sutherland	walendsius
bind	dickson	grandjot	kont	mcginley	pudewell	swets	walker
biver	didonato	grasse	koog	mcgovern	raedge	swirschuk	walle
blanc	diele	griffiths	kophalbook	medjouti	rafoud	syllabelok	weegels
bleeker	dirienzo	groef	korell	medoff	rameil	talon	wember
blew	disson	groenewoud	korwisi	mehdi	ramus	tam	weste
blumgeenen	divivier	gronowski	kosteyn	menkens	rangkuty	tamme	wielsch
boden	dix	gros	kowacz	meret	rapson	tanner	wilczek
boehmhoegy	djadjo	guen	kozole	mergard	rasmussen	taylor	wilks
bogdon	djalek	haak	kreikle	meyerbairam	rettingfrendeborg	teesch	willemsen
bokler	dobrick	halbersma	kromberg	meziani	revinci	teltsch	williams
boseniuk	dohn	hame	kubat	michel	rininsland	tenelsen	wilson
boublik	dolfus	hanssen	kudra	middleton	rinklin	tent	winch
bouffier	dolman	haque	kuehnbousonvillle	mill	roglin	teroerde	witkus
bourdache	dolstra	harris	kujus	miller	rohark	tessnow	wlassak
bourdin	dormagen	hartfiel	kuras	millies	romey	teynor	woissyk
brall	downing	hary	labendz	millot	ronge	therrestaal	wolf
brando	dubois	hemsley	laberszillat	mindum	ross	thilenius	wolmuthneliba
brede	duciu	hendel	labigne	miss	rossi	thode	wolters
bremond	dudene	henryperret	ladiges	mockerthon	rothberg	thomas	woodfin
brons	duee	herbert	laforce	mohan	roush	tianis	wright
brown	dumontduvoitel	herve	lagadere	mohns	ruiter	tiffany	wurche
brudy	duplois	hieronimus	lagardere	mohtezebsade	ruopp	tilburgs	xylander
buergstein	dusemond	higman	laignel	mondre	russell	tilp	young
burbank	ede	hikade	lambion	moses	rysse	tintera	zalto
burrows	ederberg	hilgeland	lamoure	mosesmeil	saary	tobi	zanelli
burson	egly	hill	langlet	mouemin	saladoschwick	tourte	zarda
busam	elborg	hirdes	langstrof	mougoui	salin	tribull	zeaiter
butterman	elfayoumy	hix	laniewski	mouque	salomon	tsilifis	zeelen
butteron	elias	hodes	lankhof	muellerhuy	salur	tsitos	zeman
buus	elliott	hodges	lardy	mundelius	samson	tueret	zittier

Notes: This table shows the most frequent Western European surnames. Surnames need to appear at least twice in the candidate dataset to be included. In total, there are 3003 Western European candidates. This number refers to the candidate sample. The estimation sample contains slightly fewer immigrant-origin candidates (see Figure 5). The origin of names is determined using Ethnea.

Table A.5: LIST OF MOST FREQUENT MIDDLE EASTERN AND AFRICAN NAMES

abdallah	atmaca	cenik	erdemir	kaba	mahdaviazar	pektas	taskin
abdelkaderawwad	avci	cetin	erdogan	kale	mahmood	peymani	tatliguen
abdulrahman	avcil	cetiner	eren	kalfoglou	mailesimon	polat	taylan
adam	awad	cetinkaya	ergindemir	kandemir	majd	rashidialavijeh	telleznitzling
adraoui	ay	cevik	erguenal	kankilic	malakzay	rawas	temelatan
adsan	ayboga	ceyhan	ergueven	kaplan	malek	reez	tezerdi
agatay	aydin	chadim	erkan	kara	malik	roshanmoniri	timtik
agca	aydogan	chasimzia	erkiner	karaca	malmanesh	sabandar	tipi
agdas	ayguel	cicek	eroglu	karadag	mansoori	sackan	tokcan
agit	ayhan	ciftci	eroglukemiksiz	karademir	mansouri	sadiq	topuz
ahmad	ayyildiz	cinar	erol	karahan	mantar	saglam	tosun
ahmadi	azbak	corakbas	ersoy	karakaya	marasli	sahin	touma
ahmed	bachmat	coskun	erten	karakus	marcovici	sahinoezbek	tuerkmen
ak	bagda	cugali	ertuerk	karaman	marinc	salem	tunali
akbayir	bahadori	cumbi	eryilmaz	karaoglan	maurergenc	saltik	tunc
akbulut	bahar	dalkilic	eskandarigruenberg	karashin	mehrabian	samir	tunca
akdag	balan	dalkiran	esmer	karasu	meric	samoschkoff	turan
akdeniz	balcioglu	damster	farhan	karatas	mesbah	sapmaz	tuygun
akin	bangwi	dayankac	fathollahzadehkhouee	karatay	meskarha	sarikaya	tzemali
akkus	barakat	delbastehmiandoab	fikar	karimi	mirza	sarwar	uenal
akman	basak	demele	filiz	kartal	mohammad	satir	ugur
akopianshayrabti	basharat	demir	firat	kasalak	mohammadi	savoji	ulloth
akpinar	bayer	demiral	frahry	kasikci	mokhtari	sayar	ulusoy
aksu	bayoudh	demirbag	fraikin	kasilmis	mokthari	schamari	unvar
akyuez	bayram	demirci	gannoukh	katebini	monsefzadeh	scharifi	usman
alhindawi	baysal	demirdoeven	gelgec	kavlo	mooz	schmidtdakhlaoui	uzal
ali	bechrouri	demirel	genc	kaya	mougoui	schoenewald	uzel
alikhani	behdju	demirelkocar	ghabolirashti	kayacik	mousa	sediqi	uzun
alili	behnam	demirkol	ghattas	kaynak	moussa	sekerci	vanli
alkadari	bekheit	demirtas	ghazi	kazmaci	muellerbady	selcuk	varlik
allam	bektas	dengiz	goekcer	kelleristwany	muhammad	selim	veissi
alp	belhadj	diallo	goezel	kenan	munawar	sen	wardak
alpay	benaabel	dilsen	guecluer	kes	mustafa	senol	warraich
alsamarraie	benfadhel	dirican	guemuestekin	keskin	najib	sert	willmy
altinalan	bhatti	doenmez	guerkan	khalid	nassar	sevimli	yacoub
altinisik	bicakcioglu	dogan	habibzadeh	khalil	nasseri	seyedilusser	yagmur
altintas	bicer	dr	hadjighafouri	khan	nejatian	seyyitolu	yalcin
altintopnelson	biehal	duman	hajimirarab	khoury	nentwich	sezgin	yaltuk
altiok	birli	duodu	hameed	kilic	nizam	shafieimehryar	yamini
alwazir	bostan	duran	hamuroglu	kilicarslan	noruzishafei	shafiq	yanik
amaryoucef	bouaissa	duranoglu	hariri	kir	oelge	shaikh	yar
ameer	boulahri	durmus	harmanci	klabouch	oenenc	sharifpour	yasaner
amiri	bouziane	edeer	hassan	koc	oezbek	shehata	yavuz
amirzada	boyaci	ehtemai	hayat	koca	oezcan	silberbonz	yaz
amjahid	bozkurt	eker	hazer	kocabasoglu	oezcelik	simsek	yener
amoozegar	brahmi	ekerci	hodaeian	kocak	oezcicek	sirin	yesil
apandag	budak	ekiz	hussain	kocaoglu	oezdemir	sitki	yesirci
appelbaum	bueyuekkoc	elfechtali	hussein	kocyilmaz	oezdogan	sllamniku	yigit
aras	buga	elghazi	ibrahim	koeylueoglu	oezdogus	snitil	yildirim
argun	bulut	elhamsi	ic	kolat	oezen	soenmez	yildiz
ariah	cakir	elleithy	idir	komo	oezer	sonkaya	yildrim
arian	cakmak	elmaaroufi	idrees	korkusuz	oezgueven	sow	yilmaz
arif	calik	elmaci	ilhan	kotzaveli	oezkan	sticksel	yoenter
arifi	caliskan	elmanfalouty	imam	krassa	oezmen	subatli	yoldas
arman	can	elmrabet	ince	kuepelikilinc	oezmentekin	suleiman	yontar
arshad	canbolat	elouariachi	iqbal	kurnaz	oeztas	sultan	yueksel
arslan	caner	elshabassy	irmak	kurt	oeztuerk	sunkur	yusein
arslanergoelbasi	cankurt	elyaznasni	isikli	kus	omer	sylla	yuvali
asghar	cannawurf	elyoussfi	isiksal	kutlucan	omokoko	tadros	zayed
aslam	cavus	emamalizadeh	ismail	kyei	orazem	tafesse	zeneli
aslan	cayir	emejdi	janjua	labroumani	palanci	tahhan	zengin
asra	celebi	erbas	jarrar	larem	parlak	tahmassebihack	zeroualikeles
assim	celik	ercan	javaherian	lekpek	parviz	tanriverdi	zitoun
ates	cengiz	erdem	jebabli	maasri	payasli	tas	zuloewenstein

Notes: This table shows the most frequent middle eastern and african surnames. Surnames need to appear at least twice in the candidate dataset to be included. In total, there are 2577 middle eastern and african candidates. This number refers to the candidate sample. The estimation sample contains slightly fewer immigrant-origin candidates (see Figure 5). The origin of names is determined using Ethnea.

Table A.6: LIST OF MOST FREQUENT SOUTHERN EUROPEAN NAMES

agguel	bruno	debarra	galvagno	kaletta	marincola	perezprada	siargo
agricola	brustolon	debona	galvezroque	kalousios	marino	perezsepulveda	sierrabarra
aita	buelbuel	decarlo	gandolfo	kantopouloskestelidis	marquas	perri	silvestri
alcocermaestre	buergstein	deleonperezzollner	gandyra	karagiannis	marquesduarte	persichilli	simoes
aldema	buia	delfavero	garbato	karipidou	martinezdeuna	persichillikanuteh	sisignano
alegrealonso	bursukis	delledonne	garciabarroso	karisa	martinezmartin	peslis	solero
alekuzei	cadenaarias	delosriosserrano	garciacastro	kepa	martinpelaez	piazzolla	spano
alevizaki	califanoschlier	delpozoaguilera	garotti	kiranmezar	martins	pirespintoeduardo	sportiello
alfonsomunoz	calzadomunoz	demaria	gasparini	kliafas	mascarenhas	piscitello	stathakis
aliferis	canciglia	dembick	gattano	kokkineli	mattiacci	piscopia	stathopoulos
amatruda	capitain	derinaldis	gavriilidis	konstaninidis	matturro	pitino	stavridis
amma	capozzolo	desciscio	gennaro	konstantinidis	mavridou	pizarro	stay
amorisco	cappello	desousa	gentile	kostas	mazza	polyzogopoulos	stenda
anezakis	cappelluti	desousacunha	georgis	kotsikopoulos	mengues	pons	stergiou
angelis	capricano	dias	geremia	kotyza	meretis	ponzi	succi
angiargiu	caracciola	diasreigadas	giandinoto	kotziampasis	messina	prayon	talaveralopez
anicetovicente	cardenasalfonso	diazsanchez	giar	kounatidis	miano	proitsis	tasca
anthis	carella	dibenedetto	giardino	kouratos	micciche	quaegberzehe	tateo
anton	carleo	difabio	gilrotolo	kourtoglou	michos	ragucci	tegos
antonelli	carnetto	dilauro	giordano	koustar	micino	raguso	tenhaef
aonsopio	caroli	dileonardo	giorgis	krenos	milievi	rapisarda	teroerde
archinal	cartillone	diliberto	girardi	kumudis	minisci	rebbigkosir	terracciano
argyrakis	casillo	dima	giudice	lambrou	miosga	rengeo	testadoro
auriga	castagnaveneziano	dimartino	giudici	lapi	molata	ribeirodacosta	theocharis
avraam	catalaniwilhelmi	dimartinohafeneger	goenuel	laspoulas	mollandin	ricci	toma
azulay	cavaterra	dimitriadis	golapis	latona	montanari	risi	tonini
baerarras	cavone	dimitrin	golez	lauria	morano	rizzo	torre
bakakis	cazan	disilvestro	gonzalez	lavista	morciano	rizzograno	torres
balan	certa	dizo	gonzalezinglesias	lazaridis	moreirasarauio	rodagracia	tortorici
balzter	cescon	dossantosbarbara	gotsis	leonangeli	morena	rodriguez	tourlioumis
baranelli	chabba	duch	grasso	leonardo	morenoperez	rollar	triantafillidou
barbosadelima	chalwatzis	duente	grotti	leva	morenosalinas	roselli	trivilino
barone	charanza	edretziki	guel	liban	mpounartzi	russo	troia
barran	chatzifotiadou	eklemes	guenes	licatacaruso	munari	saatsi	tsalikis
basile	chatzis	elcherid	guer	liguori	munozdelrio	sabais	tsopkas
basmara	chimenti	eleftheriadis	guerrini	limacaldas	muzzulini	sagnellireeh	tzovaras
bassetto	chlosta	eminoglou	guglielmi	linossi	nezi	salado	uenal
basta	chouvardas	erojo	guida	lobello	nicolapietro	sales	ulano
batai	christopoulou	estevesreigadas	gutale	lobomassaro	nikisianiotis	salguerograu	ulfikowskimartin
batticane	chudzinski	evdokiou	hatzi	locastro	ntasiopoulou	sanchezarvelo	umberti
bellina	ciancimino	faggion	heilherda	lochiano	oenal	santiagovazquez	urbas
bellino	cianni	fagiolino	heilos	locorotondo	okenwaelem	santoro	urzo
bellocco	cirigliano	falga	herdina	loichelucci	olbort	saracino	valentini
bellou	cirillo	farina	herovi	lonegro	omeroglou	sasso	valerioti
besaret	cognetta	feniello	hillar	longo	orgas	scarpetta	vargiu
betakis	coleta	fernandezmera	honca	longobardi	ottaviani	scarselletti	varvara
betrianhidalgo	coletta	fernandezmueller	iliaz	lopesdeazevedo	pabian	schidleja	varvaroussis
beyes	colletti	ferraro	imbrogno	lopezvicente	papadopoulos	schillingaversano	venino
birne	coppola	ferrarotunali	ingiulla	loscialetsatsamba	papakyriakou	schisani	verazzo
biscas	corell	ferron	iredi	lucchesi	papoutsakis	schreiberalvarez	visciani
blogna	corro	filippidis	italiano	maares	pariti	schuch	viva
bodasfernandez	corsano	filippone	jardella	macaluso	parma	schugschdinis	vogetschmiz
bonanno	corvaja	foglia	jitschin	macho	pashalidis	scialo	volpp
boncori	costacanelas	fonseca	joris	madera	pauli	scinardo	vulcano
bonelli	costanzo	fountoukidis	jory	majal	pavone	sechi	xaviervinha
boscarino	cuccu	franco	juncalboullon	malataki	pelekanos	seizis	zado
bosco	cucuzzella	frangoulis	jurenda	malqui	pelekanou	senguel	zanniello
bozali	cutugno	fugensi	kacer	manfroi	pellilli	serdani	zarcadas
brando	czada	fusco	kaioglidou	marcattili	peluso	serena	zervas
bressan	dapuzzo	gajardobaeza	kalaitzis	marchi	pentarakis	sergi	zessinerol
brillante	dasilva	galanos	kalbas	marciano	pereiramalhaoeduardo	serio	zmerli
	daskaris	gallina	kaleja	marconi	perezgregorio	severini	zonzo

Notes: This table shows the most frequent Southern European surnames. Surnames need to appear at least twice in the candidate dataset to be included. In total, there are 2320 Southern European candidates. This number refers to the candidate sample. The estimation sample contains slightly fewer immigrant-origin candidates (see Figure 5). The origin of names is determined using Ethnea.

Table A.7: LIST OF MOST FREQUENT EASTERN EUROPEAN NAMES

abuska	craciun	gorski	klocksin	mahmutaj	papperttichy	rudenko	tkalec
akmadza	czajka	gorskimikanovic	kolar	majchrzak	pardela	saary	tomic
angelov	czajkowski	grabowski	kortus	makosz	paschenko	samujlo	tribula
aranjelovic	czyzewski	grabrovec	korzec	makowka	pastyrik	sarnecki	trocha
avdovic	darabos	greguric	kosir	malinowski	pawlak	sawicki	trutin
babacz	dastych	hadelko	kostro	malolepszy	pecka	schandor	tschepa
badea	dejanovic	hajdu	kotoucek	manakhimov	pengacevic	scheidemanngajewski	turk
bakija	djurovic	halas	kotula	marinescu	perkovic	schischkin	tyka
balon	dolicanin	hendek	kovac	marjanovic	pesta	schwalbgwosc	vago
banasiuk	domniku	hladek	kovacsek	matejczyk	peterek	seremet	vankov
bandurka	dosedzal	hromadko	kowalski	matejek	piljanovic	sergievski	vardak
bartkowiak	dostal	humla	koziol	matejka	piljic	sertic	vlajic
basara	dotlic	husetovic	kragulj	matych	piotrowski	silea	vonkostelac
bernetic	doubek	husnik	krajewskygoralczyk	mazur	pischzek	siletic	vopicka
bezdek	dowejko	ibiricu	kresevljak	metalija	podnar	skorupski	voskanian
bezela	drnikovic	ilic	kristek	metla	polak	skowronek	vujanovic
bialas	duhno	imeraj	kruhlsovanyka	mijatovic	polczyk	skrinjaric	vujic
bienko	dumitrescu	ivankovic	krzyzniewski	mika	poloczek	slavicek	vukovic
bienkowski	dworezkij	jablonski	kubat	milewski	potokar	smigiel	vuksanovic
biernat	dybus	jakubowski	kuraszkiewiczmoskwa	modry	preis	smolarz	wardak
blazi	dziurzynski	jankov	kusic	moenningersomogyi	pribluda	soric	wieczorek
boesz	dzwonek	jeromin	kusicka	moskalik	prochaska	sosnowski	winarski
borodan	eperjesi	jevsejeva	kvesic	mucha	prochazka	spajic	wirtnik
bradna	falticska	jovanovic	kwiatkowski	muharemovic	przewosnik	stachowiak	wlassak
brylka	fiala	jukic	lagala	myska	przyludzki	steffek	wojacek
bucur	fistric	kalac	langbrzuska	nagdalijev	pueskuelev	stevanovic	wrobel
bulat	fraikin	kaliszniziol	langula	nazarenusvetter	pupowicz	sticha	wrona
bytyqi	gabrielparpan	kaminski	lesov	nikolic	rabaev	stolecki	wuerthkresevljak
cernaj	galic	kanisicak	letanoczki	novikov	radev	stortchilov	wysocki
chmura	gaminek	kaniut	lhotak	novikova	radeva	strak	yanakiev
cholakov	gashi	kappelklivenyi	lipinski	nowak	radkovsky	swets	yanakieva
cholakova	gawron	karakuz	ljuca	orosz	ratajczak	synek	zak
chwala	gerovac	karalic	loncarevic	ossowski	ravasz	szymczyklach	zelenic
ciesielski	gierszewski	karkoska	lotzhalilovic	ostrowski	remiszewski	talic	zigric
ciupa	giourouk	katowiec	ludwikowski	ova	rexhaj	tanev	zilski
cojoacaru	godec	kavai	lutic	pacula	romicstojanovic	tepic	zuchowski
como	gorecki	klobuczynski	lutska	palivec	rosinsky	tesar	zugaj
	gorka		machnicki	panek		tilk	zygan

Notes: This table shows the most frequent eastern european surnames. Surnames need to appear at least twice in the candidate dataset to be included. In total, there are 1452 Eastern European candidates. This number refers to the candidate sample. The estimation sample contains slightly fewer immigrant-origin candidates (see Figure 5). The origin of names is determined using Ethnea.

Table A.8: LIST OF MOST FREQUENT SOUTH/EAST ASIAN NAMES

anand	chomphoo	gong	ikari	konyschew	meng	pancochar	schuma
arraki	cikar	guendar	imeraj	kumar	misar	paramsothy	see
ban	czmok	gui	john	lal	mohri	parandian	seng
bejou	dasgupta	hossain	jung	lucklum	moti	pountso	singh
boida	desoi	huwa	kanursuar	luo	mundethu	puersuen	tichai
boukayeo	dey	hyngar	karikari	majcen	naduvilezhath	raiserlucasdoo	tran
chen	faschung	ibryam	kaur	matlok	obijou	samuel	uen
	fujara	ide	klueh		ostrizkij	schatta	yang

Notes: This table shows the most frequent South/East Asian surnames. Surnames need to appear at least twice in the candidate dataset to be included. In total, there are 314 South/East Asian candidates. This number refers to the candidate sample. The estimation sample contains slightly fewer immigrant-origin candidates (see Figure 5). The origin of names is determined using Ethnea.

A.3 Robustness tests

Table A.9: ROBUSTNESS I – CLASSIFICATION

	Average normalized rank improvement			Average share elected into council		
	(1) Immigrant first and second name	(2) Probability of German <10%	(3) NamePrism	(4) Immigrant first and second name	(5) Probability of German <10%	(6) NamePrism
Δ Asylum seekers × Post	2.484***	2.169***	-0.831	0.086***	0.106***	0.081***
	(0.913)	(0.815)	(1.011)	(0.032)	(0.028)	(0.025)
Mean (SD)	-2.09 (10.06)	-1.62 (10.25)	-1.05 (7.33)	0.27 (0.31)	0.27 (0.31)	0.32 (0.27)
Year FE	✓	✓	✓	✓	✓	✓
Municipality FE	✓	✓	✓	✓	✓	✓
Controls	✓	✓	✓	✓	✓	✓
Municipalities	324	333	375	329	338	378
N	1,106	1,145	1,375	1,136	1,171	1,396

Notes: This table reports results from regressing the change in the population share of asylum seekers (Δ *Asylum seekers*) on electoral outcomes (averaged at the municipality level) of immigrant-origin candidates. Models (1) to (3) use the average rank improvement as outcome. Models (4) to (6) use the share of elected immigrant-origin candidates as outcome. In Models (1) and (4), candidates are dropped with a part of their name being classified as German in some cases. In Models (2) and (5), only candidates with a probability of being German of less than 10% are included. In Models (3) and (6), the classification of NamePrism is used. We control for the shares of non-German citizens, women, elderly and children as well as population density, tax revenues per capita, transfers per capita, and debt per capita. We also control for the seat share of SPD, CDU, Gruene, and FDP in the previous election. Stars indicate significance levels at 10%(*), 5%(**), and 1%(***). Heteroscedasticity- and cluster-robust standard errors in parentheses. The unit of clustering is the municipality.

Table A.10: ROBUSTNESS II – SAMPLE DEFINITION

	Average normalized rank improvement		Average share elected into council	
	(1) Only 2011 & 2016	(2) Balanced panel	(3) Only 2011 & 2016	(4) Balanced panel
Δ Asylum seekers × Post	2.611**	1.949**	0.104***	0.092**
	(1.039)	(0.885)	(0.036)	(0.036)
Mean (SD)	-1.85 (8.96)	-1.53 (8.10)	0.29 (0.30)	0.26 (0.27)
Year FE	✓	✓	✓	✓
Municipality FE	✓	✓	✓	✓
Controls	✓	✓	✓	✓
Municipalities	228	133	233	133
N	456	642	466	650

Notes: This table reports results from regressing the change in the population share of asylum seekers (Δ *Asylum seekers*) on electoral outcomes (averaged at the municipality level) of immigrant-origin candidates. Models (1)-(2) use average rank improvements as outcome. Models (3)-(4) use the share of elected immigrant-origin candidates as outcome. In Models (1) and (3), the estimation sample is limited to election years 2011 and 2016. In Models (2) and (4), the estimation sample is limited to municipalities for which we have data on all five elections (balanced panel). We control for the shares of non-German citizens, women, elderly and children as well as population density, tax revenues per capita, transfers per capita, and debt per capita. We also control for the seat share of SPD, CDU, Gruene, and FDP in the previous election. Stars indicate significance levels at 10%(*), 5%(**), and 1%(***). Heteroscedasticity- and cluster-robust standard errors in parentheses. The unit of clustering is the municipality.

Table A.11: ROBUSTNESS III – IDENTIFICATION

	Average normalized rank improvement			Average share elected into council		
	(1) Quartile FE	(2) Excl. ranks	(3) Excl. treat	(4) Quartile FE	(5) Excl. ranks	(6) Excl. treat
Δ Asylum seekers × Post	2.655***	2.257***	3.367**	0.057**	0.081***	0.169***
	(0.802)	(0.717)	(1.678)	(0.028)	(0.028)	(0.053)
Mean (SD)	-1.63 (9.70)	-1.62 (9.70)	-1.34 (9.37)	0.27 (0.30)	0.27 (0.30)	0.27 (0.29)
Year FE	✓	✓	✓	✓	✓	✓
Municipality FE	✓	✓	✓	✓	✓	✓
Quartile × Post FE	✓			✓		
Controls	✓	✓	✓	✓	✓	✓
Municipalities	348	346	303	353	351	307
N	1,218	1,212	1,070	1,247	1,242	1,094

Notes: This table reports results from regressing the change in the population share of asylum seekers (Δ *Asylum seekers*) on electoral outcomes (averaged at the municipality level) of immigrant-origin candidates. The outcomes are municipality averages. Models (1) to (3) use the average rank improvement as outcome. Models (4) to (6) use the share of elected immigrant-origin candidates as outcome. In Models (1) and (4), we include quartile × post fixed effects. In Models (2) and (5), we exclude candidates on the top three and bottom three ranks of their list. In Models (3) and (6), the 5% most extreme cases at the top and the bottom of the distribution of the treatment are excluded. We control for the shares of non-German citizens, women, elderly and children as well as population density, tax revenues per capita, transfers per capita, and debt per capita. We also control for the seat share of SPD, CDU, Gruene, and FDP in the previous election. Stars indicate significance levels at 10%(*), 5%(**), and 1%(***). Heteroscedasticity- and cluster-robust standard errors in parentheses. The unit of clustering is the municipality.

Table A.12: ROBUSTNESS IV – TREATMENT

	Average normalized rank improvement			Average share elected into the council		
	(1) Share	(2) IHS	(3) Military base	(4) Share	(5) IHS	(6) Military base
Share asylum seekers × Post	1.729**			0.046^{+}		
	(0.737)			(0.028)		
IHS Δ Asylum seekers × Post		3.132**			0.144***	
		(1.488)			(0.047)	
Δ Asylum seekers × Post			2.259			0.142**
			(2.123)			(0.059)
Mean (SD)	-1.73 (9.70)	-1.61 (9.70)	-1.13 (6.24)	0.27 (0.30)	0.27 (0.30)	0.22 (0.24)
Year FE	✓	✓	✓	✓	✓	✓
Municipality FE	✓	✓	✓	✓	✓	✓
Controls	✓	✓	✓	✓	✓	✓
Municipalities	363	347	38	369	352	38
N	1,266	1,214	150	1,297	1,243	150

Notes: This table reports results from regressing the change in the population share of asylum seekers (Δ *Asylum seekers*) on electoral outcomes (averaged at the municipality level) of immigrant-origin candidates. Models (1) to (3) use the average rank improvement as outcome. Models (4) to (6) use the share of elected immigrant-origin candidates as outcome. In Models (1) and (4), the treatment is the share of asylum seekers relative to overall population in the year before the election. In models (2) and (5), the treatment is transformed using the inverse hyperbolic sine. In Models (3) and (6), the sample is limited to municipalities that have an empty military base in 2015. We control for the shares of non-German citizens, women, elderly and children as well as population density, tax revenues per capita, transfers per capita, and debt per capita. We also control for the seat share of SPD, CDU, Gruene, and FDP in the previous election. Stars indicate significance levels at 10%(*), 5%(**), and 1%(***). Heteroscedasticity- and cluster-robust standard errors in parentheses. The unit of clustering is the municipality.

Table A.13: ROBUSTNESS V – CANDIDATE-LEVEL ESTIMATIONS

	Normalized rank improvement		Elected	
	(1)	(2)	(3)	(4)
Δ Asylum seekers × Post	2.262***	1.860**	0.096***	0.111***
	(0.805)	(0.837)	(0.031)	(0.035)
Mean (SD)	0.30 (12.59)	0.28 (12.66)	0.34 (0.48)	0.34 (0.48)
Year FE	✓	✓	✓	✓
Individual FE	✓	✓	✓	✓
Control incumbent		✓		✓
Municipalities	203	194	206	195
N	2,222	1,939	2,299	1,981

Notes: This table reports results from regressing the change in the population share of asylum seekers (Δ *Asylum seekers*) on electoral outcomes of immigrant-origin candidates. The sample includes only immigrant-origin candidates that participated at least once before and after 2015. Models (1) and (2) use the rank improvement as outcome. Models (3) and (4) use the elected immigrant-origin candidates as outcome. In Models (2) and (4), we explicitly control for incumbency. This is the only available time-varying candidate characteristic. Stars indicate significance levels at 10%(*), 5%(**), and 1%(***). Heteroscedasticity- and cluster-robust standard errors in parentheses. The unit of clustering is the municipality.

A.4 Additional figures

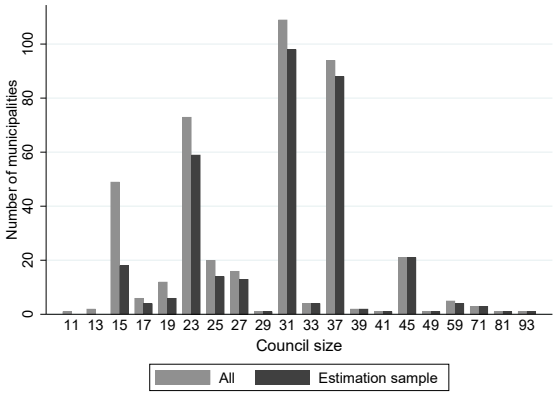


Figure A.1: Distribution of council sizes across Hessian municipalities. This graph shows the distribution of the number of seats in local councils across Hessian municipalities as of 2021. The distribution is shown for all municipalities and for municipalities in the estimation sample. The median council has 31 seats.

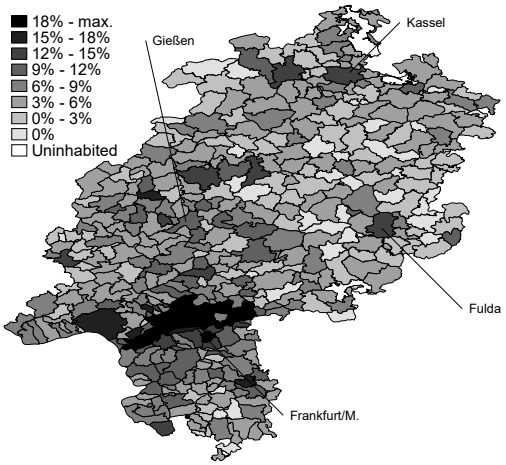
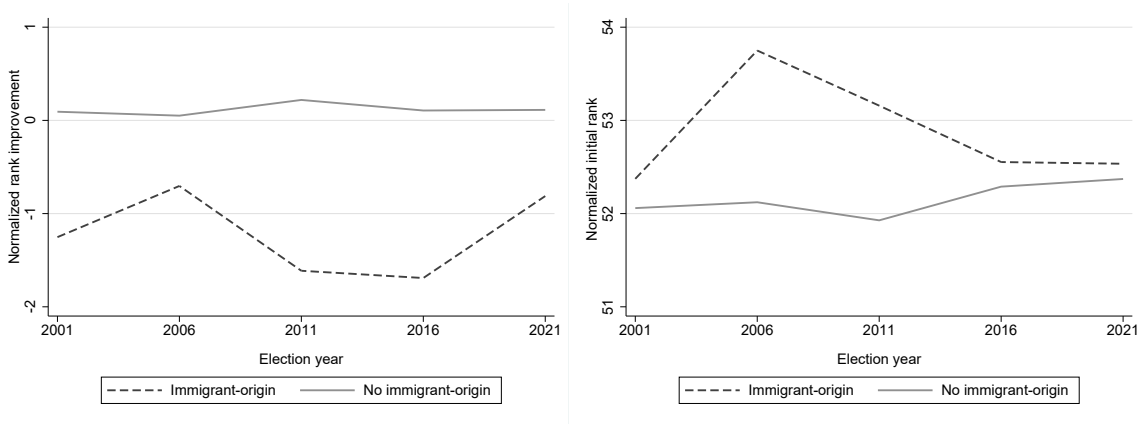


Figure A.2: Spatial distribution of immigrant-origin candidates. This map indicates the share of immigrant-origin candidates among all council candidates across all 422 Hessian municipalities for the 2021 election. The origin of candidates is classified based on Ethnea. The darker the shade, the higher is the share of immigrant-origin candidates in a municipality. In 37 municipalities, no immigrant-origin candidates competed for a council seat. The non-zero values range from 0.8% (Eichenzell) to 59.7% in (Kelsterbach).



(a) **(b)**

Figure A.3: Candidates' rank improvements and initial ranks over time, by origin. Subfigure (a) shows average normalized rank improvements for immigrant-origin and non immigrant-origin (i.e. German) candidates over the 2001-2021 period. If a candidate's final list rank is larger than her initial list rank – corresponding to a negative rank improvement – she is demoted by voters. Subfigure (b) illustrates the evolution of average normalized initial ranks for the two groups of candidates. The normalized initial rank is the initial rank of a candidate relative to the total number of ranks on a list. Note that a larger initial rank indicates a worse placement.

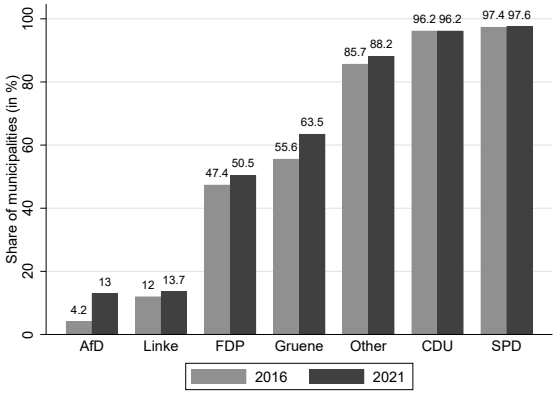


Figure A.4: Parties competing in Hessian council elections, 2016 and 2021. This graph displays the share of municipalities in which various parties participated (i.e. put forward a candidate list) in the Hessian local council elections in 2016 (left, bright shade) and 2021 (right, dark shade).

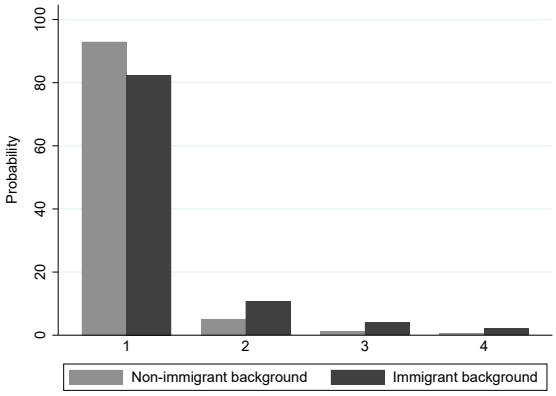


Figure A.5: Classification probabilities for first four origins based on Ethnea. This graph illustrates that the classification tool Ethnea is on average quite certain about the first origin proposed (more than 80% for candidates with a German background and more than 90% for immigrant origin candidats). The bars show average probabilities across the first, second, third, and fourth most likely origin. Averages are depicted separately for immigrant-origin and non-immigrant-origin candidates.

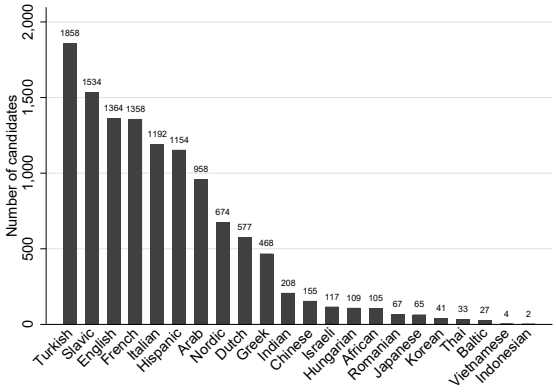


Figure A.6: Immigrant-origin candidate names, by origin. This bar chart shows the number of candidates by linguistic regions from which their non-German names originally stem based on the classification tool Ethnea.

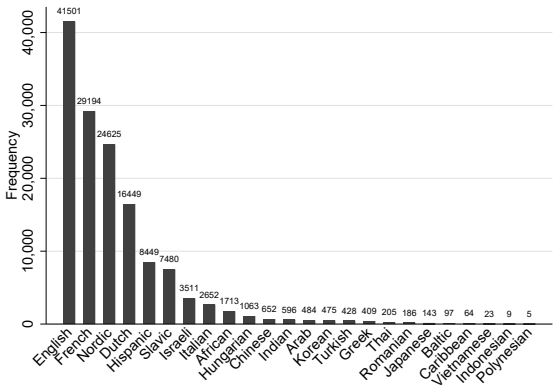


Figure A.7: Similarity to German names. This graph shows the most frequent second classification for German names, i.e. these categories are the second guess of the algorithm for relatively sure German names. Ethnea classification is used.

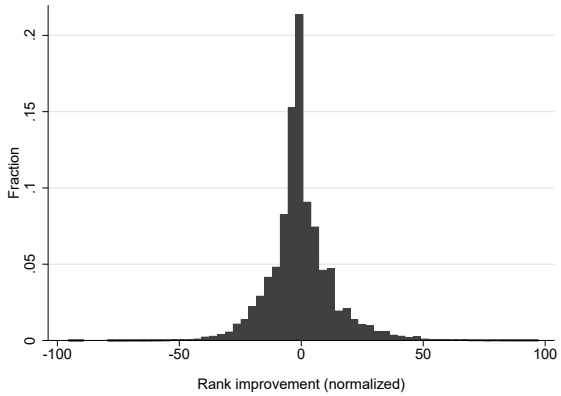


Figure A.8: Distribution of normalized rank improvements. This graph is a histogram of normalized rank improvements, i.e. differences between initial list ranks and final list ranks relative to council size, for all candidates.

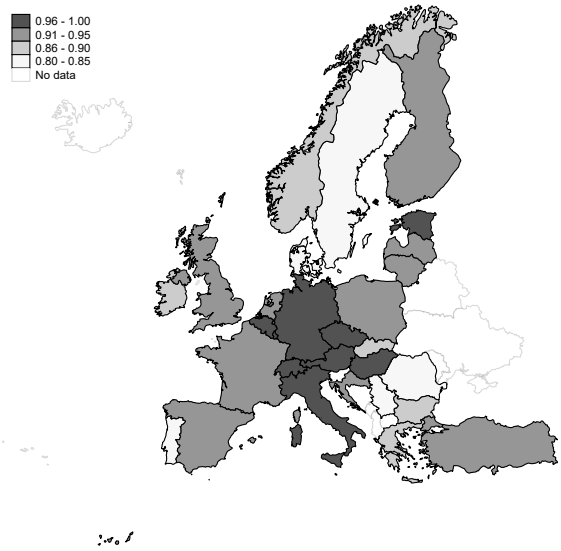


Figure A.9: Cultural similarity across Europe. This graph illustrates cultural similarity to Germany for European countries (Germany = 1.00). We calculate the index using the cosine similarity across the six dimensions by Hofstede *et al.* (2010). For some countries, no data is available or data is missing for at least one dimension. We exclude these countries.

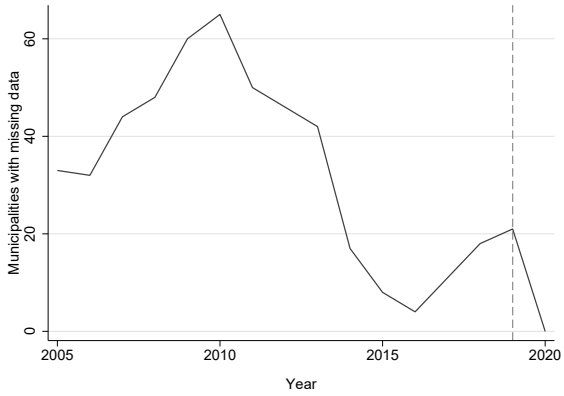


Figure A.10: Censored asylum seeker data. This graph depicts the number of municipalities that are subject to censoring over time. Due to privacy protection, asylum seeker numbers below three and above zero, as well as values that allow conclusions about censored values are censored by the Statistical Office (2005–2019). Since 2020, all asylum seeker numbers are rounded up or down to the nearest value divisible by five.

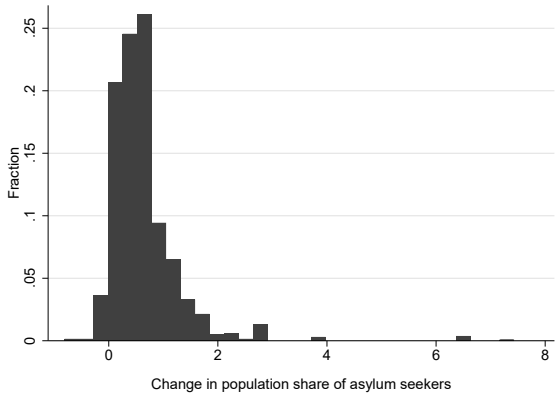


Figure A.11: Distribution of treatment (%Δ population share of asylum seekers). This histogram shows the distribution of the treatment variable, i.e. the change in the population share of asylum seekers from 2014 to 2015. The average amounts to 0.4 percentage points.

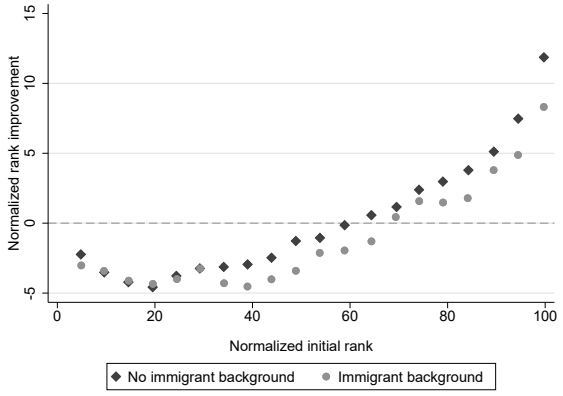
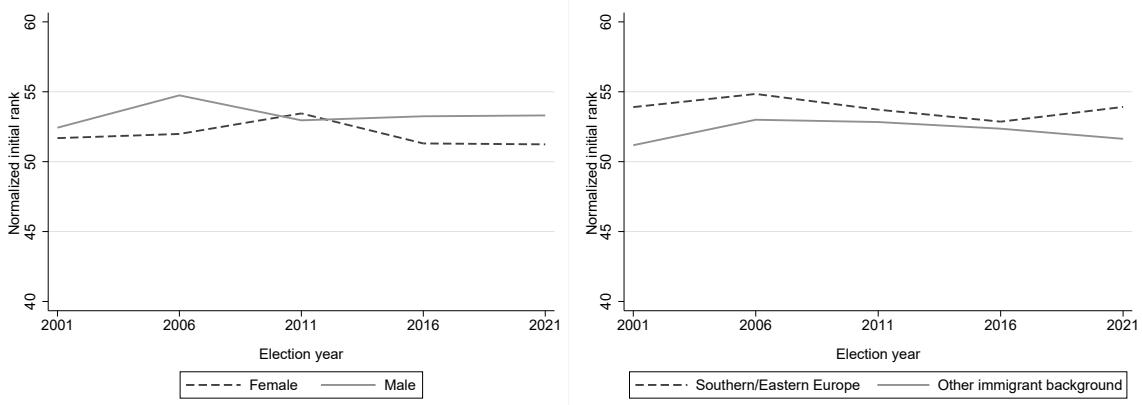


Figure A.12: Average rank improvements by initial list rank, German vs. immigrant-origin candidates. This graph shows average normalized rank improvements separately for immigrant origin and non-immigrant origin candidates. Initial list ranks are normalized to a scale running from 0 and 100.



(a) **(b)**

Figure A.13: Average initial list ranks, by candidate gender and immigrant origin. This graph shows average initial list ranks (a) for immigrant-origin candidates by gender and (b) for candidates from Southern/Eastern Europe vs. candidates with other immigrant origins.

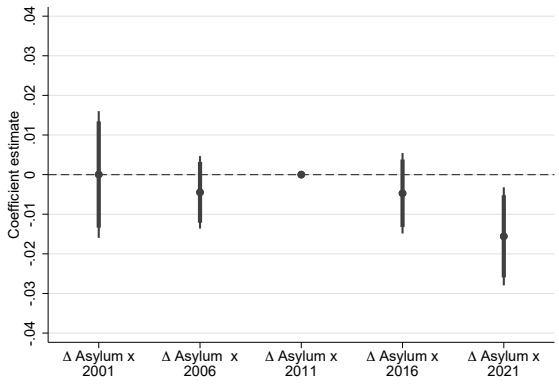


Figure A.14: Asylum seeker intake and turnout. This graph shows the effect of the change in the population share of asylum seekers on municipal level turnout. Regressions include year and municipality fixed effects as well as municipal control variables. 90% and 95% confidence intervals are indicated in the graph.

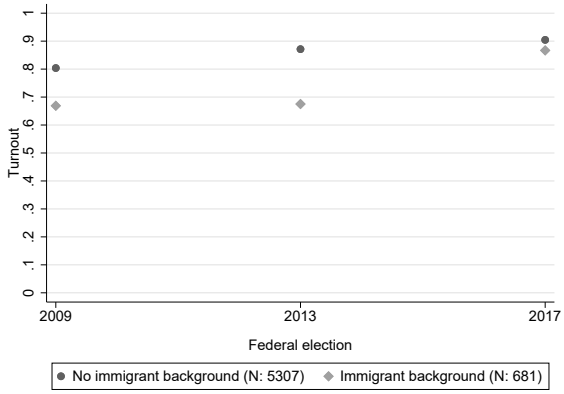
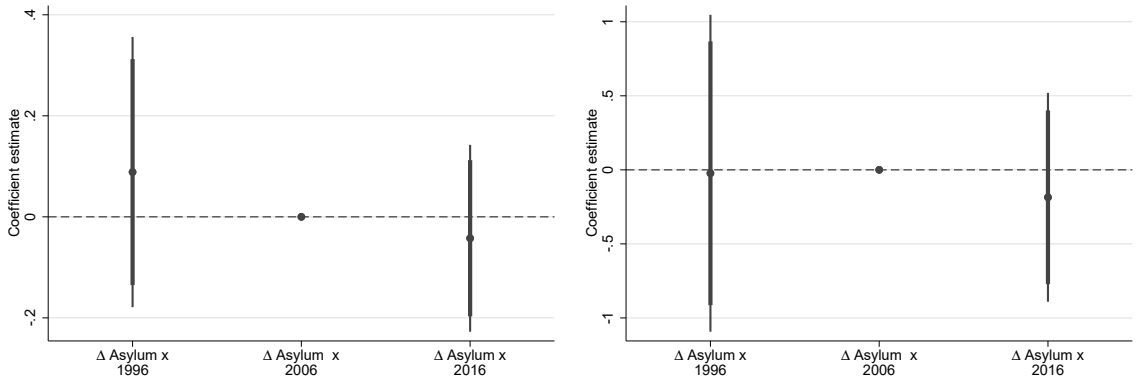


Figure A.15: Turnout by immigrant origin, federal elections – GLES. This graph shows the average turnout in federal elections in Germany by immigrant origin. Data is taken from the German Longitudinal Election Study (GLES). The overall number of respondents in each group is indicated in the legend.



(a) All respondents **(b)** Immigrant-origin respondents

Figure A.16: Turnout by immigrant origin, federal elections – ALLBUS. This figure shows the effect of the change in the population share of asylum seekers on respondents' reported turnout in the last federal election. Subfigures (a) and (b) include all respondents and only immigrant-origin respondents, respectively. Regressions include year fixed effects and respondent controls. Results correspond to Table 5, Panel (b). 90% and 95% confidence intervals are indicated in the graph.

A.5 Additional tables

Table A.14: SUMMARY STATISTICS: MUNICIPALITY CHARACTERISTICS

Variable	Count	Mean	SD	Min.	Max.
Avg. rank improvement	1247	-1.64	9.70	-40	65
Avg. elected	1247	0.27	0.29	0	1
Avg. initial rank	1247	53.99	17.10	3	100
Δ Asylum seekers	1247	0.63	0.67	-0.8	6.6
Share of asylum seekers	1247	0.01	0.01	0.00	0.18
Share of women	1247	0.51	0.01	0.4	0.5
Share of non-Germans	1247	0.09	0.06	0.0	0.4
Share of children	1247	0.14	0.02	0.1	0.2
Share > 65 years	1247	0.21	0.03	0.1	0.3
Tax revenue p.c. (in 1000€)	1247	0.96	0.57	0.3	9.3
Debt p.c. (in 1000€)	1247	1.06	0.85	0.0	8.1
Transfers p.c. (in 1000€)	1223	0.23	0.15	0.0	1.2
Population density	1247	417.23	455.60	37	3077
Lag share SPD	1247	0.36	0.13	0	0.7
Lag share CDU	1247	0.33	0.11	0	0.7
Lag share Gruene	1247	0.07	0.07	0	0.4
Lag share FDP	1247	0.04	0.04	0	0.4
Turnout	1247	0.52	0.07	0.3	0.8

Notes: This table reports summary statistics on key variables for the estimation sample (based on Table 1, Model 1). All variables are at the municipality level. Average rank improvement is the average across all immigrant-origin candidates. Average elected is the share of elected immigrant-origin candidates relative to all immigrant-origin candidates. Δ Asylum seekers is the change in the population share of asylum seekers between 2014 and 2015. Share of asylum seekers is the number of asylum seekers relative to population in 2015. Share of women is the share of female citizens. Share of non-Germans is the share of non-German citizens. Share children is the share of children below 14 years. Share > 65 is the share of senior citizens above 65. Tax revenue p.c. is revenue from business and property tax relative to population. Debt p.c. is the municipal debt relative to population. Transfers p.c. are the transfers a municipality receives from other levels of government relative to population. Lag share SPD, CDU, Gruene, and FDP are the seat share of the respective parties in the respective previous election.

Table A.15: SUMMARY STATISTICS: CANDIDATE CHARACTERISTICS

Variable	Count	Mean	SD	Min	Max
Rank improvement (normalized)	153749	0.04	13.65	-96	97
Initial list rank (normalized)	158238	52.22	28.88	1	100
Immigrant background (Ethnea)	159626	0.06	0.24	0	1
Immigrant background (NP)	159626	0.08	0.28	0	1
Female	159521	0.27	0.44	0	1
Age	113605	52.25	14.33	18	102
Highschool	97812	0.63	0.48	0	1
University	97812	0.31	0.46	0	1
PhD	97812	0.06	0.23	0	1
Architect	97417	0.01	0.09	0	1
Businesswoman/-man	97417	0.08	0.27	0	1
Engineer	97417	0.06	0.23	0	1
Lawyer	97417	0.03	0.18	0	1
Civil administration	97417	0.08	0.26	0	1
Teacher	97417	0.05	0.22	0	1
Employed	114473	0.70	0.46	0	1
Self-employed	114473	0.06	0.23	0	1
Student	114473	0.04	0.20	0	1
Retired	114473	0.16	0.37	0	1
Housewife/-husband	114473	0.02	0.13	0	1

Notes: This table reports summary statistics on candidate characteristics. Statistics are on the full sample of candidates in Hessian municipal elections between 2001 and 2021. NP is the abbreviation for NamePrism.

Table A.16: CULTURAL SIMILARITY OF COUNTRIES

Country	Cosine similarity	Euclidean distance	Candidate origin
Germany	1.000	0.0	
Switzerland	0.983	28.5	Western Europe
Luxembourg	0.980	30.9	Western Europe
Italy	0.979	31.5	Southern Europe
Czech Rep	0.978	31.8	Eastern Europe
Belgium	0.972	47.1	Western Europe
Japan	0.970	49.0	South/East Asia
Hungary	0.969	41.9	Eastern Europe
Estonia	0.961	44.5	Western Europe
Austria	0.957	43.8	Western Europe
France	0.949	50.1	Western Europe
Lithuania	0.937	54.1	Western Europe
Spain	0.932	54.9	Southern Europe
Great Britain	0.928	56.9	Western Europe
Malta	0.922	61.2	Western Europe
Finland	0.920	62.7	Western Europe
Taiwan	0.918	60.5	South/East Asia
Canada	0.917	60.4	Western Europe
Poland	0.911	63.9	Eastern Europe
India	0.908	63.9	South/East Asia
Netherlands	0.907	63.7	Western Europe
Croatia	0.904	64.4	Eastern Europe
Turkey	0.904	64.6	Middle East and Africa
Latvia	0.904	65.5	Western Europe
Brazil	0.902	65.4	Not applicable
Korea South	0.902	67.6	South/East Asia
New Zealand	0.901	65.7	Western Europe
Bulgaria	0.897	66.8	Eastern Europe
Slovak Rep	0.893	85.5	Eastern Europe
Greece	0.888	73.7	Southern Europe
U.S.A.	0.887	70.8	Western Europe
Hong Kong	0.885	72.5	South/East Asia
Ireland	0.885	70.6	Western Europe
Russia	0.877	79.8	Eastern Europe
Africa East	0.877	76.3	Middle East and Africa
Australia	0.875	74.4	Western Europe
Argentina	0.871	74.4	Not applicable
Vietnam	0.868	77.6	South/East Asia
China	0.868	75.9	South/East Asia
Indonesia	0.864	76.1	South/East Asia
Norway	0.863	78.5	Western Europe
Pakistan	0.859	78.8	Middle East and Africa
Bangladesh	0.856	78.0	South/East Asia
Iran	0.852	81.0	Middle East and Africa
Serbia	0.850	82.0	Eastern Europe
Thailand	0.846	81.9	South/East Asia
Romania	0.844	83.5	Eastern Europe
Arab countries	0.841	81.7	Middle East and Africa
Slovenia	0.838	82.8	Eastern Europe
Morocco	0.838	82.4	Middle East and Africa
Uruguay	0.838	83.8	Not applicable
Sweden	0.824	85.7	Western Europe
Singapore	0.820	86.4	South/East Asia
Denmark	0.815	88.2	Western Europe
Peru	0.810	88.7	Not applicable
Chile	0.809	89.8	Not applicable
Portugal	0.806	90.4	Southern Europe
Philippines	0.805	90.7	South/East Asia
Mexico	0.804	102.3	Not applicable
Malaysia	0.778	97.9	South/East Asia
Trinidad and Tobago	0.768	97.1	Not applicable
El Salvador	0.759	105.5	Not applicable
Colombia	0.759	104.2	Not applicable
Venezuela	0.741	115.7	Not applicable
Africa West	0.724	106.6	Middle East and Africa

Notes: This table shows cultural similarity of selected countries relative to Germany. Cultural similarity is calculated using data on six cultural dimensions following Hofstede (2001). We aggregate the dimensions using cosine similarity and euclidean distance. We include only countries with data on all six dimensions. Not applicable refers to countries for which it is unclear how to map them to our broad categories. Candidate origin refers to the broad regions we use in Figure 5. Values are sorted by cosine similarity.

Table A.17: DID ESTIMATIONS: ASYLUM SEEKER INTAKE AND ELECTORAL PERFORMANCE BY CANDIDATE ORIGIN

	(1) Western Europe	(2) Middle East and Africa	(3) Southern Europe	(4) Eastern Europe	(5) South/East Asia
Panel A: Average normalized rank improvement					
Δ Asylum seekers × Post	0.324	-0.899	0.339	6.676***	-1.690
	(1.210)	(2.155)	(0.787)	(1.872)	(2.946)
Mean (SD)	-0.75 (8.48)	-1.42 (10.94)	-0.59 (10.31)	-2.37 (11.81)	-1.11 (13.41)
Controls & FE	✓	✓	✓	✓	✓
Municipalities	379	214	259	225	107
N	1,389	670	857	697	296
Panel B: Average share elected					
Δ Asylum seekers × Post	0.031	0.016	0.092**	0.237***	-0.024
	(0.023)	(0.067)	(0.036)	(0.081)	(0.098)
Mean (SD)	0.32 (0.28)	0.24 (0.35)	0.32 (0.37)	0.25 (0.37)	0.25 (0.40)
Controls & FE	✓	✓	✓	✓	✓
Municipalities	381	218	266	231	109
N	1,404	688	890	715	304

Notes: This table reports results from regressions that relate the change in the population share of refugees (Δ *Asylum seekers*) to the average rank change of immigrant-origin candidates (Panel A) and the share of elected immigrant-origin candidates (Panel B). Outcomes are municipality averages. Model (1) includes only candidates with Western European immigrant-origin. Model (2) includes only candidates with Eastern European immigrant-origin. Model (3) includes only candidates with Southern European immigrant-origin. Model (4) includes only candidates with Middle East and Africa immigrant-origin. Model (5) includes only candidates with South/East Asia immigrant-origin. In all models we control for the share of non-German citizens, the share of women, the share of elderly and children, population density, tax revenue per capita, transfers per capita, and debt per capita. We also control for the seat share of SPD, CDU, Gruene, and FDP in the previous election. Stars indicate significance levels at 10%(*), 5%(**), and 1%(***). Heteroscedasticity and cluster-robust standard errors in parentheses. The unit of clustering is the municipality.

Table A.18: RULES FOR ALLOCATION OF ASYLUM SEEKERS TO COUNTIES

Population thresholds	Allocation quota (in %)	Number of counties
up to 100,000	1.0	1
100,000 – 150,000	2.0	4
150,000 – 200,000	4.0	6
200,000 – 250,000	4.5	5
250,000 – 300,000	5.5	6
300,000 – 400,000	6.0	2
more than 400,000	8.5	2

Notes: This table shows the allocation rule for asylum seekers to the 26 Hessian counties. In addition, the share of non-Germans and the existence of central asylum seeker facilities are taken into account.

Table A.19: MUNICIPALITY-YEAR PAIRS NOT INCLUDED IN ESTIMATIONS

Reason	Number of observations lost
No immigrant-origin candidates	351
Missing data on asylum seekers	49
Missing outcome	0
Singletons	32
Sum not included	432
Total	1567

Notes: This table illustrates for which reason how many municipality-election year pairs are not included in the baseline regression reported in Table 1, Model (6).

Table A.20: DID ESTIMATIONS: ASYLUM SEEKER INTAKE AND ELECTORAL PERFORMANCE OF GERMAN-ORIGIN CANDIDATES

	Share of elected German-origin candidates				
	(1) All	(2) Female	(3) Male	(4) Incumbent	(5) Non-incumb.
Δ Asylum seekers × Post	-0.006**	-0.009	0.011	-0.021	-0.013
	(0.003)	(0.006)	(0.010)	(0.019)	(0.016)
Mean (SD)	0.96 (0.05)	0.23 (0.09)	0.73 (0.11)	0.43 (0.23)	0.36 (0.20)
Year FE	✓	✓	✓	✓	✓
Municipality FE	✓	✓	✓	✓	✓
Controls	✓	✓	✓	✓	✓
Municipalities	353	353	353	353	353
N	1,247	1,247	1,247	1,247	1,247

Notes: This table reports results from regressions that relate the change in the population share of refugees (Δ *Asylum seekers*) to the share of elected German-origin candidates relative to all elected candidates. Outcomes are municipality averages. Model (1) uses the share of all elected German-origin candidates as outcome. Models (2) and (3) use the share of elected male and female German-origin candidates as outcome. Models (4) and (5) use the share of elected incumbent and non-incumbent German-origin candidates as outcome. Stars indicate significance levels at 10%(*), 5%(**), and 1%(***). Heteroscedasticity and cluster-robust standard errors in parentheses. The unit of clustering is the municipality.

Table A.21: ALLBUS SURVEY QUESTIONS USED FOR ANALYSIS OF MECHANISMS

Code	Question	Answers	Survey waves
mg07	How pleasant or unpleasant would it be for you to have an Italian person as a neighbor?	Would be very unpleasant, ..., Would be very pleasant	1996, 2006, 2016
mg08	How pleasant or unpleasant would it be for you to have an ethnic German from Eastern Europe as a neighbor?	Would be very unpleasant, ..., Would be very pleasant	1996, 2006, 2016
mg10	How pleasant or unpleasant would it be for you to have a Turkish person as a neighbor?	Would be very unpleasant, ..., Would be very pleasant	1996, 2006, 2016
ma09	With so many foreigners in Germany, one feels increasingly like a stranger in one's own country.	Completely disagree, ..., Completely agree	1996, 2006, 2016
ma07	All foreigners living in Germany - no matter where they come from - should have the vote in municipal (local) elections	Completely disagree, ..., Completely agree	1996, 2006, 2016
pv03	The last federal election took place on .... Did you vote in this election?	Yes, No, ineligible to vote	1996, 1998, 2002, 2004–2018

Notes: This table reports for the relevant questions in the ALLBUS survey the official code, the question, the answer options, and the waves for which each question was part of the survey.