Understanding out-mobility and radical-right support as responses to differentiated refugee exposure

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The refugee crisis of 2015 became a major issue of both national and pan-European debate. Behavioral reactions among natives in the form of support for radical-right parties or leaving neighborhoods following influxes of non-Westerners are well documented, but a detailed account of how asylum seekers contribute to these dynamics remains elusive. In this paper, I study how asylum centers and refugees choosing their own residences prompt each of these two behavioral outcomes using register data for the whole of Sweden (2013–2018). The analyses show a divergence depending on the particular type of refugee exposure experienced and the specific behavior under analysis. Only increased radical-right support is observed following the establishment of a new asylum center, whereas greater native out-mobility is found following refugees self-selecting into native-based areas.

Keywords: refugee crisis, residential mobility, ethnic segregation, far-right support, exit and voice

Introduction

The refugee crisis of 2015 and its aftermath, reflected in numerous European countries facing an influx of large numbers of asylum seekers, became a major issue of both national and pan-European debate. The crisis has highlighted the deficiencies of current asylum systems following decades of restrictions being implemented across these countries (Dustmann et al. 2017; Hatton 2017; Bernhard and Kaufmann 2018), which have contributed to precluding the assimilation of refugees as a result of long processing times for asylum petitions (Hainmueller et al. 2016; Hvidtfeldt et al. 2018), and have increased the risk of living in residentially segregated areas (Campesi 2018; Andersson et al. 2019).

Recent research has shown that individuals of the majority ethnic group (natives) of host societies may change their behavior as the refugee population increases. In particular, a greater refugee population has been documented to
increase levels of support for radical-right parties (Vasilakis 2018; Dinas et al. 2019), and to perpetuate the concentration of poverty at the neighbourhood level through a devaluation of housing prices near asylum centers (Dröes and Koster 2019; Kürschner Rauck 2020). Although this research has increased the understanding of how the refugee crisis has impacted natives of Western European societies, an accurate description detailing how this occurs remains elusive.

In this article, I propose to understand far-right voting and neighbourhood out-mobility in the context of the refugee crisis as two complementary expressions of complaint behavior. Building on the work of Hirschman (1970) on exit and voice, I hypothesize that the existent correlation between neighbourhood degradation and ethnic residential segregation (Logan 1978; Massey 2016; for a review, see Sharkey and Faber 2014) may prompt some natives to move out (exit) or vote (voice) following growth in the non-Western refugee population depending on the expectations this produces on the neighbourhoods’ future quality.

Most importantly, previous research on far-right support (Valdez 2014) and residential mobility (Grannis 2005) has shown that the salience of ethnic minority visibility and spatial proximity are key factors that are necessary to influence the behavior of natives. These factors underline the importance of the way in which natives encounter refugees in their local contexts, rather than the total refugee population, as a primary condition for increasing far-right support and neighbourhood out-mobility (see Logan 2012). However, due mainly to limitations in the available data, most research has relied on the share of refugees in large areas to account for natives’ responses, and has thereby underestimated the outcomes produced by refugee presence by assuming equal salience throughout these large areas, whose size means that refugee visibility may in fact be too low to produce any effect (Park 1924).

This article aims to fill this gap by showing how the way in which natives encounter a refugee population in their local areas may, under some conditions, lead them to move rather than to support the far right (and vice versa). More concretely, I analyze natives’ behavioral outcomes following two qualitatively different modalities of local refugee exposure: asylum centers and refugees self-selecting into the housing market. While both produce an increase in the total share of refugees, they entail radically different ways in which natives may experience new refugees moving into their local areas, each of which might prompt a different expectation about the neighbourhood’s future quality and the type of complaint behavior natives may resort to as a result. For instance, asylum centers markedly increase visibility salience by means of a substantial influx of asylum seekers and their placement in highly limited spaces. At the same time, the high volatility that characterizes the presence of these asylum seekers, as their applications are dealt with and asylum centers are gradually dismantled over time, greatly limits the period during which they may exert any influence in generating the belief that the area is going to remain ethnically mixed, undermining the reinforcement necessary to spark out-mobility (Ottensmann 1995) and instead fostering voicing expressions like far-right voting due to the increase in ‘superficial contact’ between ethnic groups (Valdez 2014). This is in stark contrast to the situation in which
asylum seekers self-select into native-based areas, with these asylum seekers producing a sparser degree of exposure compared to asylum centers, but an exposure that may potentially be longer-lasting due to the asylum seekers remaining in the same area upon being granted permission to stay in the host country, and that may also increase the area’s appeal for other refugees (and non-asylum seeker ethnic minorities) to move in (Clark 1991), thereby increasing natives’ probabilities of out-moving (Harris 2001).

I study how these two modes of exposure may have influenced natives’ propensity to move-out and to support radical-right parties following the establishment of a new asylum center or incoming refugees self-selecting into native-based areas. I employ coarsened exact matching (CEM) (Iacus et al. 2012) and a synthetic control method (SCM) (Abadie et al. 2010) to analyze each behavioral outcome respectively, using Swedish register data (2013–2018) for two reasons: the first being that Sweden is among the countries that have received the largest proportion of asylum seekers in the EU (UNHCR 2015), which ensures a large sample of natives who have been exposed to neighbouring refugees; the second being that the information provided by the registers on actors with refugee status allows me to disentangle the role of asylum seekers and non-asylum seekers in relation to the non-Westerner exposure effect (FitzGerald and Arar 2018).

One could summarize the results as follows. The analyses show a divergence depending on the particular type of refugee exposure and the specific behavior under analysis. More concretely, results show higher radical-right support in areas following the establishment of a new asylum center, but not following an increase in refugees self-selecting into neighbourhoods. In contrast, the models indicate a positive increase in native out-mobility following refugees self-selecting into native-based areas, but not after the establishment of a new asylum center. This latter effect is moderated by the prior ethnic composition of the area, and increases as the ethnic minority presence becomes greater. However, this does not apply to the establishment of new asylum centers, which produce no out-mobility effect regardless of the area’s ethnic composition.

The analyses presented in this article advance the understanding of how the 2015 refugee crisis has impacted Western European countries by showing the importance of detailing the way in which natives encounter a refugee population in order to understand their behavioral reactions. The results described suggest that the type of refugee exposure on the one hand and the type of behavioral outcome on the other interact and determine how natives who are discontented by influxes of asylum seekers in their local contexts may express their discomfort: while new asylum centers might increase radical-right support, only refugees self-selecting into accommodation in a given neighbourhood contribute to forming a perception that the area’s ethnic composition may remain mixed, thus increasing the likelihood of natives out-mobility from the neighbourhood in question.

This article is organized as follows. The next section briefly reviews Sweden’s immigration history and the Syrian refugee crisis, followed by a development of Hirschman’s framework of ‘exit and voice’ to understanding native behavior in the context of the refugee crisis. The next section describes the register data and the
research design used for the analyses, followed by a description of the results obtained. This article concludes by detailing the policy implications and the limitations of the approach undertaken here.

The Syrian Refugee Crisis, Type of Local Exposure, and Native Exit and Voice

Sweden’s Recent Immigration History and the Syrian Refugee Crisis

Sweden’s recent immigration story started mainly after the Second World War, when the levels of immigration succeeded emigration for the first time (Bråmå 2006). Sweden mainly received labor immigration from the Nordic and European countries until the early 1970s, after which the bulk of immigration has mainly been composed of refugees. This changed the ethnic composition of Sweden from a relatively homogeneous to a multi-ethnic society in a rather short period of time, markedly increasing the diversity of origin, language, and religion of the country by the early 1990s (Bråmå 2006), although not necessarily uniformly across the territory (Malmberg et al. 2018).

Figure 1 shows the ethnic share (in percentage) of the three largest municipalities of Sweden—Stockholm, Göteborg and Malmö—for the period 1990–2017. Ethnicity is computed using the country of birth of individuals following the classification of Jarvis et al. (2017), and includes second-generation migrants who have born in Sweden but to whom at least one parent has born abroad. As can be seen, the presence of individuals from non-Western countries has continued to grow in the 1990s and has not stopped for almost three decades, albeit their rate of growth and presence clearly differ among minority ethnic groups. Individuals from Asia and Central/South America show the slowest growing slopes of all groups and even approach zero growth by the end of the period, a trend that is similarly shared by individuals from Eastern Europe/Balkans despite displaying a greater ethnic share, especially in Sweden’s second and third largest municipalities. In contrast, individuals born in Africa/Central Asia/Middle East show the steepest positive growing curve of all minority groups, which is sustained throughout the period and even surpass the ethnic share of all European migrants by the end of the last decade, a trend that even accelerated during the first years of the Syrian refugee crisis.

The extensive acceptance of asylum seekers and refugees in Sweden throughout its recent history is well documented (Aldén and Hammarstedt 2019; Migrationsverket 2021). While the country has witnessed several peaks in the number of asylum seekers in the 1980s and especially in the 1990s due to wars and crises such as in Yugoslavia and Iraq (Bråmå 2006), it was only during the 2015 refugee crisis that the country experienced such a massive, hitherto unforeseeable growth in the number of arrivals. Levels first peaked in 2014, when the Swedish Migration Agency received over 80,000 asylum seekers mainly from Syria, followed by Eritrea and by stateless persons. Germany and Sweden accounted for 30 and 13 per cent, respectively, of all asylum claims made in the European Union in 2014 (UNHCR 2015), with Sweden guaranteeing permanent residence permits to all refugees from
Figure 1.
Ethnic share (in percentage) of the three largest municipalities in Sweden—Stockholm, Göteborg, and Malmö—for the period 1990–2017. Ethnicity is computed using the country of birth of the individuals following Jarvis et al. (2017), which includes second-generation migrants.
Syria. Just 1 year later, Sweden saw a doubling of the size of this peak, receiving a further 163,000 asylum seekers, this time primarily from Syria and Afghanistan (including 35,000 unaccompanied minors). By 2016, increased border controls and changes in Sweden’s migration laws had made it more difficult to receive residence permits and to reunite with family, contributing to a reduction of the total number of asylum seekers to 29,000.

The refugee crisis of 2015 had a marked impact on the ethnic composition of Sweden’s population, with Syria displacing Finland (after more than 70 years) as the country with the largest foreign population. The experience of this rapid ethnic change over such a short period contributed to directing a strong media focus at Sweden’s response to the crisis, sparking further debates over the refugee issue that already permeated both the public and political discourse. The radical-right party Sweden Democrats (SD) (Sverigedemokraterna), for instance, doubled their share of the electoral vote in 2010 (Rydgren and Ruth 2013) and continued to increase this vote share in 2014 (Müller et al. 2014), achieving their best results since their inception in 1988.

Ethnic Minority Exposure, and Natives’ Radical-Right Support and Residential Mobility

Research has shown that an increase in the presence of ethnic minorities in an area is positively correlated with increased support for radical-right parties (Rydgren 2007). Similar results have been found regardless of whether the minorities under study are immigrants (Knigge 1998; Golder 2003; Swank and Betz 2003), native minorities (Rydgren and Ruth 2011, 2013; Valdez 2014; Dustmann et al. 2019), or asylum seekers (Lubbers and Scheepers 2001; Arzheimer 2009; Kenny and Müller 2020). Recent studies analysing the 2015 refugee crisis have confirmed these results by showing higher radical-right support in areas with significant exposure to asylum seekers (Vasilakis 2018; Dinas et al. 2019).

In a similar line of inquiry, previous research on residential mobility has documented that whites show a higher tendency to move out of and avoid neighbourhoods with large influxes of ethnic minorities (although without distinguishing between non-/asylum seekers) (Grodzins 1957). These results confirm that, although individuals’ mobility rates are determined by their socioeconomic status (DeLuca et al. 2019) and their self-selection into neighbourhoods that they can afford, the larger the neighbourhood share of ethnic minorities, the greater the likelihood that natives will move out (South and Crowder 1998; Quillian 1999, 2002; Crowder 2000; Crowder et al. 2006; Card et al. 2007; Pais et al. 2009; Schaae et al. 2010; Andersson 2013; Aldén et al. 2015; Müller et al. 2018; Böhlmark and Willén 2020).

Further, scholars have shown that residential mobility decisions are markedly shaped by interactions that occur mainly inside local communities that are internally connected by pedestrian streets and delimited by non-pedestrian roads (Grannis 1998, 2005; Logan 2012). This has also been highlighted by studies showing that increased minority presence is incapable of changing the residential mobility of
whites living in adjacent neighbourhoods (Crowder and South 2008; Crowder et al. 2011). Finally, others have recently found that house values decrease with proximity to asylum centers, especially in locations, such as streets containing markets, that are visited by both natives and asylum seekers, where inter-group contacts are greatest (Dröes and Koster 2019; Kürschner Rauck 2020).

An important commonality of the previous studies is that individuals exposed to ethnic minorities do similarly so as ‘regular neighbours’ that self-select into the housing market. While this is mostly true for regular migrants in Western societies, refugees represent an exception to this given their status (FitzGerald and Arar 2018) and the possibility in some countries to temporarily move to an asylum center, especially in contexts in which the host country is receiving massive numbers of asylum petitions. In the next subsections, I sustain that the type of refugee exposure across the host country might prompt some natives to react differently to influxes of refugees in their local areas based on their impact in maintaining the ethnic composition of an area mixed and the subsequent expectation held by natives that the quality of the neighbourhood will diminish.

‘Exit and Voice’, Neighbourhood Degradation, and Ethnic Composition

Hirschman (1970) departs by assuming that the normal functionality of companies, firms, and organizations in general eventually lead them into permanent or random periods of decline and decay (Hirschman 1970: 15). This gradual loss of rationality and efficiency inherent in the normal activity of organizations decreases the overall quality of the products, services, or functions provided, which directly affects their relationship with customers and the members of the organizations in general. In this context, Hirschman conjectures that actors dissatisfied with this situation and who wish to express their discomfort will do it through one of two generic mechanisms, so-called ‘exit’ and ‘voice.’ Exit refers to the set of behaviors to which an actor breaks any link with the organization and terminates buying, attending, or belonging as a member. Conversely, voice refers to the set of behaviors to which an actor expresses her/his dissatisfaction to some authority within the organization while s/he continuous to buy, attend, or belong to the organization. Since his release in 1970, this model has been widely applied to understand how individuals may express their discomfort in various contexts, such as political mobilization, political parties, and marriage (e.g. Hirschman 1980; Gehlbach 2006).

Similar to organizations, neighbourhoods have been postulated to be subject to periods of decline and decay through a deterioration of the state of buildings, schools, parks, and social services provided, and through an increment in the levels of crime, poverty, and unemployment, which decrease their appeal for attracting individuals to live in those areas and for companies and firms to invest in new housing and jobs (Logan 1978), especially in segregated neighbourhoods along ethnic lines (Wilson 1987; Massey and Denton 1993).
An important consequence of this is the reinforced association between ethnic minority presence and undesirable social class characteristics in ethnically segregated societies. Indeed, numerous studies have shown that this separation of ethnic groups into distinct neighbourhoods partly contributes to driving ethnic disparities along important welfare dimensions (Massey 2016) such as health status (Ludwig et al. 2008; Crowder and Downey 2010; Chetty et al. 2016), wage and income (Reardon and Bischoff 2011; Ludwig et al. 2012; Thomas and Moye 2015), and educational attainment (Harding 2003, 2009; Sampson et al. 2008). For instance, Downey (2006) finds that areas with a higher presence of African-American in the US suffered from higher levels of air pollution, and Legewie and Schaeffer (2016) find violence to be generally more predominant in situations where ethnic boundaries are less clear.

The prevalence of this association in Western societies might harm asylum policies if the refugee population reproduces this negative feedback loop by landing into segregated areas and failing to improve their socioeconomic attainment, as it has recently been observed to occur (Hainmueller et al. 2016; Campesi 2018; Hvidtfeldt et al. 2018; Andersson et al. 2019). In this case, refugee growth might contribute to generate the expectation to the native population that the quality of the neighbourhood is to decrease as long as the incoming refugees maintain the area ethnically mixed, sparking native out-mobility as a result (Harris 2001). Thus, unlike temporary asylum centers which are quickly dismantled and their asylum seekers redistributed, refugees who self-select into majority-based areas definitely help to consolidate the ethnic diversity of the area despite their lower salience compared to asylum centers, whose substantial influxes of asylum seekers markedly increase ethnic minority visibility and foster anti-immigrant attitudes among natives through greater superficial contact.

**Ethnic Minority Visibility and Superficial Contact**

One prominent cause accounting for the observed levels of radical-right support (Rydgren 2007) in ethnically mixed societies is found in the level to which natives hold anti-immigrant attitudes and prejudices (Pettigrew 1998; Zick et al. 2008).

One explanation to account for changes in inter-group attitudes is the so-called contact hypothesis (Allport 1954). This hypothesis posits that greater levels of inter-group contact may serve to decrease prejudice provided the following conditions apply: (1) groups share equal status in their contacts; (2) they share common goals; (3) they engage in cooperative tasks; and (4) authorities, the law, etc. provide external support. Despite abundant experimental evidence confirming the predictions of this hypothesis (for a review, see Pettigrew and Tropp 2006), results analysing observational data have primarily found higher levels of anti-immigrant attitudes the larger a community’s minority population (Blalock 1957; Scheepers et al. 2002; Schneider 2008), including asylum seekers (Hangartner et al. 2019). Thus, contrary to expectations derived from the contact hypothesis, these studies have concluded that neighbourhood and even school contact are not sufficient to
decrease anti-immigrant attitudes (McLaren 2003) (although cross-group friendship can, see Turner et al. 2007).

Valdez (2014) has accounted for this incongruence by showing that natives who do not necessarily engage ‘meaningfully’ with other ethnic minorities, but who nevertheless encounter out-group members and engage with them sporadically in daily activities, are more likely to support a radical-right party. This type of ‘superficial contact’, moderated by the salience of out-groups and their spatial proximity to natives, is capable of reinforcing anti-immigrant attitudes (Semyonov et al. 2008) by increasing the perception that the share of out-group members in a given area is greater than it actually is (Wong et al. 2012; Craig and Richeson 2014), as well as by highlighting self-group salience among natives. In a laboratory experiment, for example, Paolini et al. (2010) have shown that natives tend to report higher levels of self-group identity following negative experiences of sporadic inter-group contact.

Most importantly, superficial contacts can bring anti-immigrant attitudes to the fore as a politically salient issue. Through an increased salience of out-group visibility, political dimensions such as multiculturalism and integration may gain more relevance for voters than less salient issues in specific electoral contests (List and Dietrich 2011). In line with this, Hopkins (2010) has found that electoral campaigns that politicize the issue of immigration tend to increase the vote share of the radical right by comparison with campaigns that occur in a context of high immigration, but where immigration is not a hot political issue. Rydgren and Ruth (2013) have found increased support for radical-right parties in municipalities in which out-group presence is greatest, while Dustmann et al. (2019) have documented significant growth in such support mainly in rural areas that are exposed to asylum centers. Likewise, others have found higher levels of anti-immigrant sentiment (Hangartner et al. 2019) and radical-right support (Vasilakis 2018; Dinas et al. 2019) among natives living in territories that are more directly adjacent to neighbouring countries from which asylum seekers are more likely to arrive.

Data and methods

Data

The analyses employ Swedish register data, a dataset collected by Statistics Sweden that contains records of all individuals living in Sweden, with virtually no missing data. The data employed take two different forms, depending on the outcome examined. For the residential mobility analysis, the registers provide micro-data for all individuals from Sweden/Western Europe/US/Canada (natives) for the period 2013–2017, and include information on their residential locations at the level of the 100 × 100 m residential square (henceforth ‘residential square’), and the year in which they moved in. For the voting analysis, the registers provide data aggregated at the level of polling districts, and include the vote share of the political parties in any of the three main types of election (municipal,
county, and national), which have been conducted in Sweden every 4 years during the period 2006–2018.

In order to gather information about the type of refugee exposure natives may have experienced, I combine the registers with information on asylum centers provided by the Swedish Migration Agency. On the one hand, the registers contain precise information on refugees granted permanent residence permits in Sweden, including the year in which a decision was made on their asylum petition. Aside from this, the registers contain the same data for refugees as for others, including their residential location and country of birth. Most importantly, this not only allows for native exposure to non-Westerner asylum seekers to be distinguished from exposure to non-Westerners who are not asylum seekers (FitzGerald and Arar 2018), but also ensures that these refugees are not counted as residing in an asylum center, and have therefore chosen their own accommodation. This is due to Sweden’s policy to provide temporary housing to asylum seekers who need such accommodation during the period in which their petitions are being processed. The data on asylum centers are not in the registers and have been provided to this study by the Sweden Migration Agency, which contain the location of all asylum centers established at the municipal level and the number of asylum seekers living in them during the period 2007–2019.

Figure 2 shows relevant information about asylum seekers in Sweden. The subplot on the left shows the annual number of asylum petitions for the period 2000–2019. The colored lines represent the six countries that produced the largest number of asylum petitions during the refugee crisis of 2015. The figure clearly shows that the largest number of asylum petitions were made by refugees with Syrian citizenship (albeit closely followed by other groups). The refugee crisis of 2015 represented a clear spike in the historical trend in the number of asylum petitions in Sweden, necessitating the opening of additional asylum centers to handle the increased number of petitions (see the subplot on the right). The number of centers increased monotonically after 2009, with this increase accelerated during the period 2011–2013, and then peaking in 2015 when more than 280 centers were in use across the country. The total number of active asylum centers then quickly diminished, falling to 160 centers nationwide in 2019, a number not seen since the previous decade.

**Analytical Strategy**

In order to disentangle the propensity of natives either to move-out or support a radical-right party following different types of refugee exposure, I perform two separate analyses following a counterfactual design. First, I compare natives exposed to an increase in the presence of refugees whose residence applications had been granted with natives exposed to no change. Second, I compare natives exposed to the establishment of a new asylum center to natives who were not exposed to a new asylum center. This approach allows for the study of natives’ reactive behaviors by comparing the situation in which a given type of refugee
exposure is present with the situation in which that same type of exposure is absent (see Woodward 2003).

Further, the approach enables me to adjust for variations among natives that are likely to impact their likelihood of experiencing any refugee exposure and their propensity to move-out or support the radical-right (Pearl 2010). I follow a different strategy for each behavioral outcome under analysis, reflecting the differing available datasets. To adjust for confounders that affect natives’ propensity for out-mobility, I apply CEM, and to do the same at the level of polling districts, I apply an SCM. Following Ho et al. (2007), the weights resulting from the application of these methods are included in separate linear regression analyses, which are used to gauge the effect of refugee exposure on each behavioral outcome using the ordinary-least square (OLS) method, respectively.

Residential Mobility

The availability of individual-level data and the granularity provided by the registers allow me to apply CEM (Iacus et al. 2012), which some have argued constitutes a more efficient means of adjusting for confounders (covariates) than regression adjustment alone (Stuart 2010). This non-parametric matching strategy ensures that the groups to be compared are as similar as possible given data on a set of observed covariates. The resultant increase in similarity benefits the estimation by reducing its uncertainty (Rosenbaum and Rubin 1983) and lowering its reliance on the specific functional form of the model employed to gauge it (Ho et al. 2007). I follow standard practice and ensure that the standardized difference in means for each covariate is below 0.2 (Stuart 2010).

The literature on neighbourhood mobility has highlighted four main types of covariates that shape the propensity to move. (1) First, the authors of existing studies have highlighted the relevance of life-course events, such as having offspring,
getting married, or going to university, as important triggers of mobility (Clark and Huang 2003; Clark and Withers 2007). I therefore include natives’ age, civil status, and family type. (2) Socioeconomic factors also moderate residential mobility, and I thus include individual disposable income (logged), their type of tenure tenancy and ownership, years of education, and neighbourhood socioeconomic status (which I measure here as the median disposable income (logged) within the residential square) (South and Crowder 1998; Crowder et al. 2006). (3) To adjust for the tendency of individuals to cluster in neighbourhoods with high proportions of other co-ethnics, I adjust for the non-asylum seeker ethnic minority presence in residential squares and the natives’ country of birth (either their own, or that of their parents, categorized either as Sweden, or else from EU-15/US/Canada). (4) Finally, I adjust for the total number of inhabitants in the residential squares, the county of residence, the previous level of refugee, and whether there are any asylum centers in the municipality.

Finally, to ensure that the measurement of covariates precedes the natives’ categorization into the exposure groups, I split the period examined available into overlapping trials of three consecutive years. Each native in each trial then has a measure for each of the covariates corresponding to the first year of the trial, the exposure group into which they fall as recorded in the second year, and their mobility outcome in the third year. This approach ensures that each native is matched to similar natives at any time point, and conveniently rematches them should any of their covariates change over time (Aral et al. 2009).

Table 1 shows the mean values of each covariate for each group exposed to an increased presence of refugees prior to (Full sample) and after matching. The table shows how CEM produces similarity in each covariate value across groups, indicating, as expected, that the groups look more similar with regard to the observed covariates after matching (the performance of CEM is available in the Supplementary Materials).

Far-Right Support

The available voting data aggregated at the polling-district level reduces the efficacy of the matching method due to an increase in the difficulty of finding reasonably good matches. To overcome this limitation, I employ an SCM (Abadie et al. 2010). This method extends the traditional difference-in-differences (DiD) approach by ensuring that polling districts that receive an intervention are comparable to other polling districts that did not receive it (the ‘donor pool’). This is achieved via the estimation of a ‘synthetic’ control from the donor pool that closely resembles the average trajectory of the intervened polling districts (Robbins et al. 2017), a recurrent limitation in DiD applications that SCM overcomes.

I use SCM to analyze radical-right electoral outcomes in 2018 in polling districts that received increases in refugees/new asylum centers at any point during the period 2015–2017. I employ the remaining available years prior to the ‘intervention’ (i.e. 2006–2014) to create the synthetic control, using other
polling districts that did not experience the relevant changes during the period 2015–2017 as the donor pool.

The literature on radical-right voting has shown that young, unemployed, working-class males with lower levels of education are more likely to manifest support for radical-right parties (Elisabeth 2005; Evans 2005; Arzheimer and Carter 2006; Arzheimer 2009). I therefore include the following covariates whose trajectories are matched for each year: ethnic minority presence measured as the percentage of non-Westerners in the polling district; the number of individuals in the district; the median disposable income (logged); the percentage of asylum-seekers; the percentage of individuals with a university degree; the percentage of renters; the percentage married; the percentage younger than 40 years of age; the percentage unemployed; the county in which the district is located; the presence/absence of asylum centers in the municipality surrounding the polling district; the percentage of votes cast for

Table 1
Descriptives for Natives Exposed to a Proportional Increase in Refugees Who Had Sought Their Own Accommodation and Natives Exposed to No Change (2013–2016)

<table>
<thead>
<tr>
<th></th>
<th>Full sample</th>
<th></th>
<th>Matched sample</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No change</td>
<td>Refugee increase</td>
<td>No change</td>
<td>Refugee increase</td>
</tr>
<tr>
<td>Age</td>
<td>53.28</td>
<td>53.05</td>
<td>54.38</td>
<td>54.58</td>
</tr>
<tr>
<td>Years of education</td>
<td>11.66</td>
<td>11.75</td>
<td>11.65</td>
<td>11.65</td>
</tr>
<tr>
<td>Disposable income (log)</td>
<td>7.51</td>
<td>7.48</td>
<td>7.51</td>
<td>7.51</td>
</tr>
<tr>
<td>Single</td>
<td>0.3</td>
<td>0.41</td>
<td>0.32</td>
<td>0.32</td>
</tr>
<tr>
<td>Married</td>
<td>0.55</td>
<td>0.37</td>
<td>0.48</td>
<td>0.48</td>
</tr>
<tr>
<td>Divorced</td>
<td>0.14</td>
<td>0.23</td>
<td>0.2</td>
<td>0.2</td>
</tr>
<tr>
<td>With children</td>
<td>0.47</td>
<td>0.34</td>
<td>0.4</td>
<td>0.4</td>
</tr>
<tr>
<td>No children</td>
<td>0.31</td>
<td>0.22</td>
<td>0.27</td>
<td>0.27</td>
</tr>
<tr>
<td>Sweden</td>
<td>0.9</td>
<td>0.85</td>
<td>0.9</td>
<td>0.9</td>
</tr>
<tr>
<td>EU-15/US/Canada</td>
<td>0.1</td>
<td>0.15</td>
<td>0.1</td>
<td>0.1</td>
</tr>
<tr>
<td>Renter</td>
<td>0.04</td>
<td>0.38</td>
<td>0.2</td>
<td>0.2</td>
</tr>
<tr>
<td>Owner</td>
<td>0.03</td>
<td>0.35</td>
<td>0.16</td>
<td>0.23</td>
</tr>
<tr>
<td>Neigh. pr. non-Westerners</td>
<td>0.02</td>
<td>0.06</td>
<td>0.04</td>
<td>0.04</td>
</tr>
<tr>
<td>Neigh. pr. refugees</td>
<td>0.02</td>
<td>0.13</td>
<td>0.1</td>
<td>0.09</td>
</tr>
<tr>
<td>Neigh. median disp. income (log)</td>
<td>7.52</td>
<td>7.5</td>
<td>7.53</td>
<td>7.53</td>
</tr>
<tr>
<td>Neigh. N inhabitants</td>
<td>12.83</td>
<td>148.58</td>
<td>42.8</td>
<td>51.59</td>
</tr>
<tr>
<td>N</td>
<td>7,637,003</td>
<td>4,452,037</td>
<td>6,398,544</td>
<td>1,778,813</td>
</tr>
</tbody>
</table>

Rows show the mean value for each covariate prior to (Full sample) and after matching. Natives are also matched by county, not shown here due to space constraints. Numerical covariates are presented in terms of their own scale (or logged), and qualitative covariates are shown as proportions. The total number of cases declines due to pruning. Similarity is also achieved for natives exposed to a new asylum center and natives not exposed to a new center—omitted here due to space constraints (see Supplementary Table A1 for more information about the performance of CEM).
a party of the left; and the percentage of votes cast for the radical-right SD party. The latter two covariates were of course matched following each election (i.e. once per period 2006–2009, 2010–2013, and 2014).

Table 2 shows the mean value across the entire trajectory for each covariate for polling districts with new asylum centers and the synthetic control generated by aggregating poll districts without new asylum centers. As with the matching procedure, the table shows the mean value for those covariates whose trajectory has been matched annually from 2006 until 2014, save for those electoral-related covariates whose value is only matched following each election. The mean value for each covariate for polling districts that received no new asylum centers clearly approximates the mean value for the polling districts that received new centers, showing the improvement produced by the synthetic control in the level of similarity with the intervened polling districts.

Table 2.

Descriptives for Polling Districts in Which a New Asylum Center Was Established at Any Point Between 2015 and 2017, and Those With No New Asylum Center during the Same Period (the Donor Pool)

<table>
<thead>
<tr>
<th>No center (Full sample)</th>
<th>No center (Synthetic)</th>
<th>New asylum center</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pr. SD vote (municipal)</td>
<td>0.023</td>
<td>0.015</td>
</tr>
<tr>
<td>Pr. SD vote (county)</td>
<td>0.022</td>
<td>0.017</td>
</tr>
<tr>
<td>Pr. SD vote (national)</td>
<td>0.028</td>
<td>0.025</td>
</tr>
<tr>
<td>Pr. Left vote (municipal)</td>
<td>0.328</td>
<td>0.326</td>
</tr>
<tr>
<td>Pr. Left vote (county)</td>
<td>0.334</td>
<td>0.337</td>
</tr>
<tr>
<td>Pr. Left vote (national)</td>
<td>0.335</td>
<td>0.332</td>
</tr>
<tr>
<td>Asylum center (municipal)</td>
<td>0.534</td>
<td>0.148</td>
</tr>
<tr>
<td>Pr. refugees</td>
<td>0.076</td>
<td>0.048</td>
</tr>
<tr>
<td>N inhabitants</td>
<td>1301.34</td>
<td>1205.87</td>
</tr>
<tr>
<td>Pr. non-Westerners</td>
<td>0.046</td>
<td>0.028</td>
</tr>
<tr>
<td>Pr. with university</td>
<td>0.294</td>
<td>0.262</td>
</tr>
<tr>
<td>Pr. renters</td>
<td>0.261</td>
<td>0.164</td>
</tr>
<tr>
<td>Pr. married</td>
<td>0.437</td>
<td>0.464</td>
</tr>
<tr>
<td>Pr. unemployed</td>
<td>0.463</td>
<td>0.439</td>
</tr>
<tr>
<td>Pr. with less 40 years</td>
<td>0.366</td>
<td>0.335</td>
</tr>
<tr>
<td>Pr. female</td>
<td>0.506</td>
<td>0.488</td>
</tr>
<tr>
<td>Median disp. income (log)</td>
<td>7.292</td>
<td>7.284</td>
</tr>
<tr>
<td>N</td>
<td>4,886</td>
<td>4,886</td>
</tr>
</tbody>
</table>

The table shows the mean value for covariates whose trajectory has been matched annually for the period 2006–2014, save for those election-related covariates that are only matched following each new election (i.e. once per period 2006–2009, 2010–2013, and 2014). The values for polling districts with no new asylum center are shown prior to applying the synthetic control method (Full sample) and after (Synthetic). Cases are also matched by county, not shown here due to space constraints. Similar results are achieved for polling districts where there is a proportional increase in refugees who had sought their own accommodation and polling districts with no such change—omitted here due to space constraints (see Supplementary Table A1 for more information about the performance of the SCM).
(complete information about the performance of SCM is available in the Supplementary Materials).

Results

I now present and discuss the behavioral responses of natives following each type of refugee exposure (see Supplementary Table A1 for results in tabular form). Figure 3 shows the vote share for the radical-right SD party in the 2018 elections using OLS after SCM. The figure shows one estimate per type of election: municipal (white), county (black), and national (grey). The estimates are obtained by contrasting the synthetic control ($X^* = 0$) with the average for polling districts that experienced an increase in refugee presence (left plot), and with the average for polling districts with at least one new asylum center (right plot) ($X = 1$). As can be seen, the models produce noticeably divergent estimates depending on the type of refugee exposure. In particular, the models showing the effect of being exposed to

Figure 3.
The importance of the type of refugee exposure for radical-right voting behavior. Differences in the estimated vote-share of the radical-right Sweden Democrat party in 2018 produced by OLS using the weights from the synthetic control method. $X = 1$ indicates polling districts either receiving new refugees who self-selected into areas (left), or new asylum centers (right). $X^* = 0$ indicates the estimate calculated for the synthetic control from polling districts that neither experienced an increase in refugees presence nor new asylum centers. There is one estimate per type of electoral outcome, with results displayed for municipal (white), county (black), and national (grey) elections. Bars indicate standard errors at the 95 per cent level. $P$-values are in parentheses. The horizontal line indicates no effect.
refugees who have self-selected into the housing market (left) seem to yield estimates that are neither statistically nor qualitatively different from those of the synthetic control.

The opposite is found for the models analysing the impact of new asylum centers on radical-right support (right). In this case, the models yield a positive increase in the radical-right vote share when polling districts that receive new asylum centers are contrasted with the synthetic control of those that did not. More concretely, the estimates are positive for the elections conducted at the municipality- and county-level, for which increases are estimated to be around 2.5 and 1.8 per cent, respectively. These results are highly statistically significant. At the same time, the models predicting radical-right vote differences at the national election level seem not to yield significant differences in relation to the synthetic control. According to the models, then, it is only exposure to refugees through the placement of asylum centers that led to an increase in radical-right support in the 2018 elections, and only at the municipal and country election level.

Figure 4 presents estimates similar to those in Figure 3, but now centering on natives’ residential mobility patterns (I follow Clogg et al. (1995) to gauge the statistical significance between regression coefficients from non-nested models.) As before, the models seem to diverge depending on the type of exposure at hand. Conversely, however, in this case the models show estimates in the opposite direction from those found in relation to voting. More concretely, as Figure 4(a) shows, the only model that seems to indicate an increased probability of out-mobility is that which contrasts natives exposed to an increased presence of refugees with no change. This result is also highly statistically significant. Conversely, no effect is found for natives exposed to a new asylum center.

Subplots (b) and (c) in Figure 4 show the same effect across areas with different levels of ethnic minority presence, as indicated by the share of non-Westerners in the residential square prior to natives experiencing any new refugee exposure. Again, the model that consistently yields positive estimates is that focused on natives exposed to refugees self-selecting into their areas, in which the effect size seems to increase with the non-Westerner population share. In line with the literature, these models seem to yield statistically significant increases where the proportion of non-Westerners is greater than 5 per cent, remaining more or less stable up to a 25 per cent non-Westerners share. Beyond this point, the probability of moving-out seems to increase even more. In contrast, the models show consistent results indicating that among natives, being exposed to new asylum centers does not prompt out-mobility, even as the minority share in the area increases.

According to these models, then, natives seem to react differently depending on the behavioral outcome and the type of refugee exposure. Thus, natives were found to express increased support for radical-right parties following a change producing high out-group visibility, in the case of new asylum centers, but not following refugees self-selecting into native-based areas. At the same time, only increases in the presence of refugees who had self-selected into native-based areas seemed sufficient to produce an increase in the likelihood of native out-mobility,
and this increase in the likelihood of out-mobility was particularly marked in areas that were already ethnically mixed.

**Conclusion**

The refugee crisis of 2015 represents an important exogenous event that has realigned discussions around the refugee issue in many Western European countries. Building on Hirschman’s theory of exit and voice, in this article I have shown that natives facing influxes of refugees near where they live may react in different ways depending on how they encounter the refugee population, which I conjectured is due to the expectations that the incoming refugee population might prompt on the native population regarding the future quality of their neighbourhood.

In particular, I have relied on Swedish register data for the whole of Sweden (2013–2017) to show the need to differentiate between (1) asylum seekers who find their own accommodation (displaying a ‘sparse-but-persistent’ concentration of...
refugees) and (2) those who reside in asylum centers (displaying a ‘high-but-temporary’ concentrations of refugees). This article has thus studied whether these two types of refugee exposure might have changed natives’ propensities to move from their home residences, and/or to support a radical-right party.

By relying on CEM to analyze natives’ residential mobility patterns, I have shown that only exposure to refugees who have chosen their own accommodation seems sufficient to prompt natives to move-out. This effect is stronger in areas where the presence of non-Westerners was greater prior to the influx of refugees. At the same time, the results show no increase in levels of out-mobility following the establishment of a new asylum center when compared to areas with no new asylum center, even in areas with an ethnically mixed population.

In addition, I used an SCM to analyze radical-right support at the polling-district level during the electoral contest of 2018. The analyses showed that levels of radical-right political support did not increase in polling districts that received influxes of refugees who had self-selected into those areas. Conversely, a positive increase in radical-right support was observed following the establishment of a new asylum center. This effect is observed for the elections at the municipal- and the county-level, but not at the national-level.

In conclusion, the results presented in this article suggest that the visibility of refugees and their spatial proximity to the native population partly determine how natives may react to increases in the refugee population in their local contexts. When their overall visibility in an area is high but for a limited period of time, there is sufficient reinforcement to produce new far-right support, but not to prompt native out-mobility. Conversely, when the visibility of an increased refugee presence is low, but the ethnic composition of an area has a higher likelihood of remaining mixed, for example, due to a greater non-Westerner presence prior to the increased refugee presence, new far-right support does not occur, but there is an increase in native out-mobility.

This article also makes important policy-related contributions. By describing in greater detail how natives might react to different modes of refugee dispersal within the host country, the article provides a first assessment of how to optimally allocate new asylum centers and affordable housing for integration purposes, which can inform policy solutions aimed at maximizing the assimilation prospects of refugees by lowering their impact on the native population (Black 2001).

One prominent aspect that greatly determines whether individuals may resort in exit or voice and which I have not discussed here is the costs associated with the exit option. Already considered by Hirschman, the main logic of this is that individuals will be more likely to ‘exit’ if they readily have access to the set of alternatives available when exiting, otherwise they will ‘voice’. Given that moving is a highly costly behavior for most individuals and is mainly driven by changes in demographic factors (Clark and Huang 2003; van Ham and Clark 2009), a highly unequal access to the housing market should be expected following refugee growth, thereby prompting only a small portion of natives leaving the neighbourhood and most natives instead supporting the far right due to the marked lower costs associated with voting. While, according to this logic, the ‘cost’ factor always predicts more far-
right voting than mobility, this article has shown that this is not the only outcome observed in natives’ behavioral reactions following refugee growth, a divergence in behavioral reactions that is rather accounted by how natives encounter refugees in their local areas (remaining everything else constant).

This article is also subject to notable limitations. First, the data on the location of asylum centers at the municipal level should, ideally, be more precise in order to reduce the uncertainty introduced by the unknown spatial distance between the centers and the natives’ residential locations. As a result of data limitations regarding the precise locations of these centers, new asylum centers might be located anywhere within the natives’ municipality, a fairly large area that is highly likely to reduce out-group visibility for most natives. Thus, the analyses may have underestimated the effect of this modality of refugee exposure as a result of being unable to adjust for the distance to a new asylum center.

A second important limitation is that, at least in Sweden, asylum seekers awaiting the resolution of their asylum petition may also opt to seek their own accommodation. This may for example have been the case for many asylum seekers who were reunited with their families upon arrival. The data which I had access to on refugees who had chosen their own accommodation were restricted to refugees who had already been granted permission to stay, introducing a bias that may also lead to an underestimation of their effect on natives’ out-mobility.

In addition to these data constraints, I have not included any meaningful analysis of the media’s role in making the visibility of asylum centers and refugees even more salient. The media has clearly played a determinative role in conditioning Swedish discourses on the integration issue, impacting native behavior in ways this study leaves unexplored. More generally, the present analyses have to be taken into consideration within the Swedish context, a country which has already been experiencing greater far-right support in the last decades and in which the rapid increase in asylum seekers had occurred within a society whose ethnic diversity has slowly but relentlessly been widening and increasing. Hence, more research is needed to determine whether this model can be applied to native’s reactions of other societies that, unlike Sweden, have not received as many asylum seekers or whose ethnic makeup has not been increasingly diverse in the last decades.

Finally, as others have noted (Sobel 2006), an intrinsic limitation of causal analyses of social interactions at the level of neighbourhoods, particularly when these analyses are primarily based on observational data, is the almost certain violation of the so-called stable unit treatment value assignment-assumption. This is due to the existence of social networks, which can produce contacts between individuals exposed to new asylum seekers and others not exposed to this group, potentially confounding the exposure effect.

Future research, in addition to overcoming many of these limitations, could also improve on this study by investigating other meaningful ways in which natives who are discontented by an influx of refugees might express their discomfort. Voicing their opinions in the media or via social platforms, attending ‘anti-integration’ demonstrations, or even moving their children from schools attended by high numbers of refugees, all constitute examples of other behavioral reactions
that have not been explored here. In order to provide more clues on how to optimize the establishment of asylum centers, future research could also unravel the relevance of various different aspects, such as the asylum centers’ concrete shape, size, or the urban and demographic characteristics of the place in which they are established, to minimize the impact of new asylum centers on natives’ behavioral outcomes.

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Supplementary Data
Supplementary data are available at JRS online.
Understanding out-mobility and radical-right support


