RESEARCH

The impact of increased proximity from an asylum centre on the Swiss anti-immigration party's voting share

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Abstract

I study whether the increased proximity to the nearest asylum centre had an impact on the vote for the Swiss anti-immigration party during the lower chamber elections in 2015. I exploit a natural experiment given by the refugee crisis through a difference-in-differences model, with municipalities as a unit of analysis. To overcome the problem of endogeneity of the location of the asylum centre, I calculate the spillover effect of opening an asylum centre in a municipality on neighbouring municipalities. Finally, I calculate if there are heterogeneities among linguistic regions and if there are heterogeneities given by the contact between natives and asylum seekers. I find that the increase in proximity has influenced the vote weakly and negatively in the French-speaking region. I do not find this relationship to be driven by greater contact between natives and asylum seekers, rather I suppose it is a micro-social by-product caused by the media at the macro-social level.

Keywords: Asylum seekers; Asylum centres; Distance analysis; Refugee crisis; Parliament election; Rigt-wing convervative party; Natural experiment

1 Introduction

The outbreak of war in Syria in 2011 and the escalation of conflicts in Iraq and Afghanistan caused an exodus of people in the following years, first to neighbouring states and then to Europe. This exodus remained unceasing but stable until 2014, and then exploded and reached *biblical proportions* in 2015: 1,322,845 asylum applications were submitted in Europe alone, a number comparable to the Second World War (Eurostat, 2016). Exodus that first put the European Union and national governments in trouble over the allocation of asylum seekers, exodus that then influenced the vote in favour of the European extreme right (Fig. A1). Exodus that slowed down in 2017, or rather, that *was* slowed down by mutual agreement: European Union with Turkey in March 2016 and the Italy with Libya in February 2017 led to the closure of the Balkan route and a more insecure Mediterranean route.[1]

Several studies document a positive relationship between migration and anti-immigration parties, both far-right-wing (Otto and Steinhardt (2014); Becker and Fetzer (2016); Harmon (2018); Edo et al. (2019)) and centre-right (Barone et al., 2016). Other studies obtain different results, as a non-linear relationship. Mayda et al. (2016) show that up to a certain immigration threshold it is the Democrats (centre-left) who benefit, above the threshold it is the Republicans (centre-right) who benefit. Or, as different migrants have different effects. Halla et al. (2017) observe that only low-medium-skilled migrants have a positive relationship with the vote share for Freedom Party Austria (far-right). Mendez and Cutillas (2014) show that only culturally different migrants (Africans) have a positive effect on the People's Party (centre-right), while Brunner and Kuhn (2018) observe that only culturally different migrants have a positive effect on anti-immigration voting. The causal relationship is difficult to identify because migrants choose the destination country endogenously. To obtain an exogenous relationship most of the papers listed use an instrumental variable, similar to Card (2001): the current allocation of migrants tends to follow the past allocation of culturally similar migrants. There are two exceptions. Becker and Fetzer (2016), which use a classic difference-in-differences model and one with matching based on the propensity score

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[1]Swissinfo: https://www.swissinfo.ch/eng/asylum_why-refugee-numbers-in-switzerland-are-falling/44496450.

and Harmon (2018), which uses a different instrumental variable: in Denmark a law prohibited foreigners to buy property, so the availability of rented property becomes a predictor of migrants' settlement.

In addition to literature on the effect of migrants in a broad sense on the voting outcome, two further strands of literature have developed: the first is the effect of asylum seekers and permanent refugees on the voting outcome, the second is the effect of temporary refugees on the voting outcome.

The first strand presents contrasting evidence: Gerdes and Wadensjö (2010) note that in Denmark between 1999 and 2001 permanent refugees had a positive effect on both anti-immigration and pro-immigration parties. Gehrsitz and Ungerer (2017) observe through a natural experiment in Germany that municipalities with more asylum seekers and asylum centres did not increase the voting share for Alternative für Deutschland (far-right). Bratti et al. (2017) use the 2016 constitutional referendum in Italy as a manifestation of the anti-immigration sentiment of the population. They discover that a reduction in distance from the nearest refugee centre increases participation and no-voting, therefore, increases anti-immigration sentiment. Dustmann et al. (2019) take advantage of a Danish policy from 1986-1988 that almost randomly allocated refugees to Danish municipalities. They find that in rural municipalities the effect on anti-immigration parties (both far-right and centre right) is positive, in urban municipalities it is negative. Vertier and Viskanic (2019) exploit in France the reallocation of illegal migrants from Calais camp to temporary centres between 2015 and 2016. They use holiday villages as an instrument for temporary centres, because the centres were opened where there was a possibility to expand the space of them. The reallocation took place in October, a month in which the tourist villages are empty and therefore can be exploited. The authors highlight a non-linear relationship: municipalities hosting up to 40 migrants reduce the vote for Front National (far-right), municipalities hosting more than 40 migrants increase the vote for Front National. Steinmayr (2020) observes the parliamentary election on 27 September 2015 of the Austrian state: Upper Austria (a state on the Balkan route). The author uses the presence of collective housing, buildings to accommodate large groups of people as an instrument for the number of asylum seekers. The presence of asylum seekers reduces the voting share for Freedom Party Austria (far-right), but increases the share for the People's Party (centre-right).

The second strand finds an almost always positive relationship between refugee influx and anti-immigration party share. The lack of contact between natives and refugees and the large influx of refugees managed chaotically by the EU in the most affected areas seem to explain the positive relationship. Sekeris and Vasilakis (2016), Dinas et al. (2019)[2] and Hangartner et al. (2019) outline a natural experiment on the Greek Aegean islands. All three papers exploit the refugee stock and distance from the Turkish coast as an instrumental variable: less distance means more refugees. Sekeris and Vasilakis (2016) and Dinas et al. (2019) observe that the large influx of refugees had a positive effect on the share vote for Golden Dawn (far-right) in the Greek parliamentary election in September 2015. Hangartner et al. (2019) discover that the large influx of refugees generated a more hostile attitude towards refugees, other migrants, Muslims and a greater propensity to accept anti-immigration policies. Steinmayr (2020) notes that Upper Austrian municipalities close to the German border have been afflicted with an influx of transitory refugees. The author finds that the influx of transitional refugees has a positive effect on the share vote for FPA. Different results were obtained by Altındağ and Kaushal (2020) which outline a natural experiment of the strong influx of Syrians into Turkey during 2015, where the provinces treated are those with the highest refugee share. The authors also use an instrumental variable similar to Card (2001): the past settlement of the Arabic population as a predictor of the present settlement of Syrians, because Syrians most likely settle in areas where Arabic is spoken. The authors show that the effect of refugees on the ruling Justice and Development party (centre-right) is negative and modest.[3]

This study contributes to the first strand of refugee literature. It investigates whether in Switzerland the influx of permanent asylum seekers had an effect on the share vote of the Swiss anti-immigration party – Swiss People's Party (SVP) – in the elections to the lower chamber of the Swiss parliament at a micro-social level. The design is a natural experiment, where the reduction of distance from the municipalities to the nearest asylum centre serves as a treatment. The natural experiment makes it possible to exploit the extensive margin: some municipalities are treated because they find themselves with reduced distance from the nearest asylum centre while others are not. To avoid the problem of endogenous settlement of the asylum centre, I only calculate the spillover effect, i.e. the effect of the decision by some

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[2] The authors also calculate the average treatment effect: difference-in-differences model, where treatment is the strong influx of refugees, the pre-January 2015 parliamentary elections are the pre-treatment periods and the September 2015 elections are the post-treatment period.

[3] The perceived temporary settlement of Syrians and the short cultural distance with the local population seem to explain the negative relationship.

municipalities to open an asylum centre on neighbouring municipalities.[4] Bratti et al. (2017), Vertier and Viskanic (2019), Hangartner et al. (2019), Steinmayr (2020) also calculate the spillover effect. Bratti et al. (2017) use the spillover effect as the main identification strategy, while Vertier and Viskanic (2019), Hangartner et al. (2019) and Steinmayr (2020) use it to confirm or extend the main results. In addition to the average effect, this study investigates if there are effect heterogeneities among the three largest language regions in Switzerland and if some of these heterogeneities are due to a hypothetical contact between asylum seeker and voter.

Information on asylum centres and distances is collected manually from Swiss online newspapers, information on coordinates of municipalities is collected from the Federal Office of Topography, information on dependent and independent variables is collected from the Federal Statistical Office.

The evidence obtained does not support the causal micro-social relationship that ranges from the influx of asylum seekers to a higher vote for SVP. Only French-speaking Switzerland provides weak, though not significant, evidence ($p = 0.118 > 0.1$): the treated municipalities vote - 1,604 percentage points in favour of SVP compared to untreated municipalities. Also with regard to heterogeneity, no significant evidence is obtained. Among the treated municipalities, the French-speaking ones voted - 2,012 percentage points in favour of SVP compared to the municipalities of the other linguistic regions. Among the French-speaking treated municipalities, those that provide the conditions of a higher probability of contact have a voting pattern similar to that of the municipalities with less probability of contact. Therefore, the contact does not explain the weak evidence of the micro-social causal relationship of French-speaking municipalities.

The novelties of this study compared to the existing literature are to my best knowledge: first, it is the first study that investigates the impact of the refugee crisis on the share vote for SVP; second, it is the first study that uses data on asylum centres in Switzerland; third, it is the first study that uses the reduction of distance from a building as a treatment for a natural experiment; fourth, it is the first study that detects a difference in reaction to the refugee crisis based on language; fifth, it proposes a quantitative approach to indirectly assess the theory of contact (normally assessable qualitatively).

The rest of the study is structured as follows: Section 2 provides information on the refugee crisis, the Swiss

institutional context and the macro-social effect of the refugee crisis on the Swiss institutional context. It also outlines conceptually the micro-social causal relationship. Section 3 shows the empirical strategy: the design of the natural experiment makes it possible to exploit the extensive margin, the identification of the causal relationship takes place via difference-in-differences model, the identification of heterogeneity of response takes place via difference-in-difference-differences model or via difference-in-differences model with subset of data. Section 4 gives information on the data sources, the constructions of the variables, the structure of the dataset and the descriptive statistics. Section 5 presents the results and discussion of the results in relation to the literature.

2 Institutional background

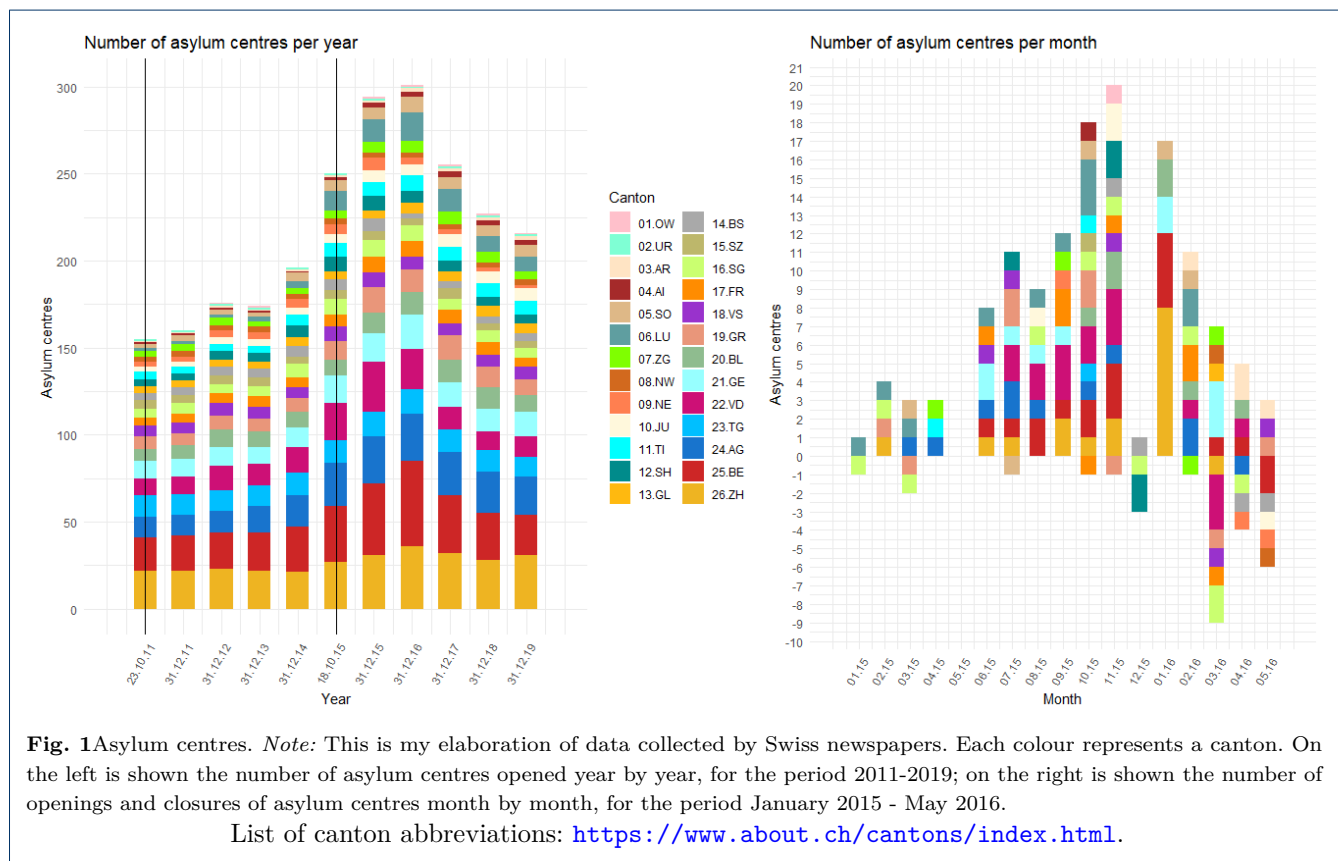### 2.1 Number of applications

In Switzerland, the number of applications is in 2015 (39,445) the fourth highest after the two war years in Kosovo 1998 (42,979) and 1999 (47,513), and after the outbreak of the Yugoslavian war in 1991 (41,663). Around the year 2000 conflicts ceased and the number of asylum applications fell, while in the following decade the number remained low and stable. (Fig. A2).

From 2011 until 2014, the number of applications grows again at a moderate pace until it explodes by 67% in 2015, from 23,555 to 39,445. From 2016 the number of applications returns to pre-2015 levels and from 2017 it returns to 2000 levels (Fig. A2). Compared to the EU27-EU28 average, Switzerland records an average number of applications higher for the years 2011-2014 and lower for the years 2015-2019 with a share of the total number of applications increasing from 8.2% in 2012 to 2.9% in 2015. In addition, Switzerland records an increase in applications per thousand inhabitants of 1.9, slightly lower than the European increase of 2. The smaller increase relegates Switzerland from fourth to fifth place among the European Free Trade Association members with the highest number of applications per thousand inhabitants (SEM, 2015).

In 2015, the number of applications increases dramatically from May to November and then decreases with the beginning of winter. It stabilises in March 2016, thanks to the agreements reached by the European Union to stop the influx. The most populated cantons (ZH, BE, AG, TG, VD, GE, SG, LU) record the highest inflow (Fig. A3).

Applications in Switzerland are divided by country of origin as follows: in *2011* 14.9% Eritrea, 6% Russia and 5% Pakistan; *in 2015* 25% Eritrea, 20% Afghanistan and 6% Iraq (SEM, 2015).

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[4]In concrete terms it means that all those municipalities that had an asylum centre between 2011 and 2015 are discarded by the observed municipalities.

Fig. 1 Asylum centres. *Note:* This is my elaboration of data collected by Swiss newspapers. Each colour represents a canton. On the left is shown the number of asylum centres opened year by year, for the period 2011-2019; on the right is shown the number of openings and closures of asylum centres month by month, for the period January 2015 - May 2016.

List of canton abbreviations: https://www.about.ch/cantons/index.html.

2.2 Asylum centres

Article 28 of the Asylum Act (AsylA) instructs the Confederation (State secretariat for migration – SEM) and the cantons to provide housing for asylum seekers. In the Swiss reception system, the Confederation provides accommodation *during* the preparatory phase, while the canton provides accommodation *after* the preparatory phase (AIDA, 2015).

The preparatory phase is the phase from the filing of the application to the allocation to a canton, for a maximum duration of 90 days. During this phase, the asylum seeker stays in a *reception and processing centre* or in a *remote centre*, both run by private companies under delegation from the Confederation (AIDA, 2015).[5]

After the preparatory phase, the asylum seeker is allocated to a canton and cannot leave it, until he receives a positive or negative decision on the asylum application. The duration of this phase varies case by case, in 2014 it lasted on average 400 days (AIDA, 2015). Each canton is responsible for a share of asylum seekers in proportion to its population (Table B1).

According to the canton, the stay of an asylum seeker may be divided into two stages: the first, where the asylum seeker is housed in *collective accommodation* and the second, where the asylum seeker is housed in *individual accommodation*. Duration of the procedure and personal situation (adult man, unaccompanied minor dependent children) influence the type of accommodation assigned (AIDA, 2015). On average, on 30 June 2015: 52% of asylum seekers and temporarily admitted persons are allocated to individual housing, 45% to collective housing and the remaining 3% to other types of housing (BFS, 2016). The choice between the two types of accommodation differ from canton to canton depending on the availability and cost of individual accommodation (Fig. A4)

For this analysis, only federal reception and processing centres, federal remote centres and cantonal collective centres are of interest. Thus, individual accommodation are excluded. Furthermore, I no longer make a distinction and define them all as *asylum centres*.

The number of asylum centres is growing in the same way as the number of applications (Fig. 1: links). Between 2011 and 2014, it grows steadily from 150 to 196. In 2015,

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[5] Article 26(2ter) AsylA.

it increases dramatically to 294. In 2016, it grows slowly until it reaches 301 at the end of the year. From 2017 it decreases and in 2019 it reaches 216. Between the two dates of the election of the National Council – 23 October 2011 and 18 October 2015 – the number of asylum centres increased from 155 to 267.

In 2015, the number of asylum centres increases dramatically by 56 between June and October and by 19 between October and November. From June 2015 to February 2016, the number increases by 98. (Fig. 1: right)

The intercantonal distribution of the centres is similar to that of the applications, cantons with the highest number of inhabitants (ZH, BE, AG, VD, GE, SG, LU) record both the highest number of centres in 2011 and the highest increase in 2015. Some of them have different trends: LU has an incredibly low number of centres in 2011, a number that substantially grows between 2011-2015. TG starts with a relatively high number of centres but does not increase over the eight years.

In percentage terms (Fig. A5), it can be seen that the share of asylum centres for the most populated cantons (ZH, BE, AG, VD, GE, SG, LU) remains almost stable at around 60% between 2011 and 2015. The share for ZH and TG has decreased significantly, while it has increased significantly for AG, VD, LU.

In terms of monthly intercantonal openings: from June 2015 to October 2015 VD opened several centres (12), followed by BE with 10 and ZH with 7; in the same period BE, LU and VD opened up to a maximum of 3 centres in a single month, more than all the cantons. The highest number of centres opened in a single month is observed in January 2016: BE with 4 centres and ZH with 7 centres. FR closed more centres than all of them in a single month, 3 centres in March 2016.

2.3 Swiss People's Party

Swiss People's Party (SVP) was born in 1971 from the union of two parties: Farmers, Artisans, and Citizens' Party (generally known as the Agrarian Party) and the Democratic Party of the cantons Glarus and Grisons. Until the 1990s, SVP was and remains the smallest of the historical parties with a permanent 10% preference in the National Council.[6] Since the 1990s, SVP has increased dramatically its popularity: in 1999 it became the majority party in the National Council and in 2003 it

won the second seat on the Federal Council (executive).[7] SVP was confirmed as the first Swiss party in the National Council for the next four elections, reaching the peak of consensus in 2015 (Fig. A6). The rise of SVP is attributed to a decisive repositioning of the party in more national-popular and less agrarian-protectionist positions, under the impetus of the Zurich section (the least moderate wing of the party) of the leader Blocher. The cornerstones become more liberalism, rejection of integration with the EU, increased migration controls and tighter asylum conditions.[8],[9]

SVP differs from other parties in the representation of the asylum seeker diametrically opposed to that of the Swiss people. The Swiss people are represented as a monolith, as a completely ethnically and culturally homogeneous entity, as an entity that works hard and rightfully benefits from the fruits of its labour. While the asylum seeker is represented as a usurper of Swiss identity, a criminal, a drug dealer and a profiteer of the benevolent Swiss welfare state.[10]

The SVP constantly adopts restrictive policies against asylum seekers: it has repeatedly acted at parliamentary level, launched referendums and initiatives to tighten the conditions for obtaining asylum and limit the rights of asylum seekers.[11] In addition, the then Federal Councillor SVP Blocher, when he was head of the Federal Department of Justice and Police (FDJP), decided to reduce the financial resources allocated to asylum. Blocher convinced that the number of asylum applications would settle in the coming years at around 10,000 applications per year, less than 2005 value (10'800), the lowest value since 1987.[12]

2.4 Refugee crisis and Swiss People's Party

2.4.1 Macro-social causal relationship

The number of asylum seekers peaked in November 2015, one month after the election of the National Council. It is reasonable to assume that the election was emotionally marked by the refugee crisis. During that election, SVP

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[6] The Swiss parliament is made up of the 200-seat House of Representatives and the 46-seat Senate. The House or National Council represents the population; the Senate represents the cantons. In October every four years, the National Council is elected through the proportional system. Each canton votes a number of representatives proportional to its share of Swiss residents.

[7] Swissinfo: https://www.swissinfo.ch/fre/un-nouveau-parti-bourgeois-sur-la-scene-politique/238164.

[8] See footnote 6.

[9] European election database: https://nsd.no/european_election_database/country/switzerland/parties.html.

[10] The contrast between asylum seeker and Swiss people is taken from Christelle Maire's dissertation: https://www.unine.ch/files/live/sites/sfm/files/shared/documents/about/collaborators/cma/memoire_AffichesUDC_CMA_1.pdf.

[11] Since 1999 five times asylum law has undergone a change, each time SVP has taken an anti-asylum seeker or refugee position: 1999, 2006, 2012, 2015, 2016.

[12] Revue Vivre Ensemble: https://bit.ly/1Gyonqt.

increased its support more than all other parties (Fig. A6). In addition, other European right-wing parties also dramatically increased their support more than SVP (Fig. A1).

To investigate whether the refugee crisis and the increase in the SVP vote share are causally linked, some reworked excerpts from the pre- and post-election SELECTS poll of Lutz (2015) are reported.

Refugee crisis is the main theme of the 2015 National Council election:

- In 2015, 44% of the population indicated immigration, asylum and refugees as the biggest problem. The second theme European integration was chosen by only 13% of voters, 30 percentage points less than immigration, asylum and refugees. Compared to 2011, the theme was mentioned twice as much as the biggest problem.

SVP is mentioned as the most relevant party to deal with the refugee crisis:

- Among those who mentioned immigration, asylum and refugees as the main problem, 55% indicated the SVP as the most competent party to solve the problem. PS is the second most competent party (16%), almost 40 percentage points away from SVP.
- Among those who *not* mentioned immigration, asylum and refugees as the main problem: SVP is indicated as the party most concerned with migration (64%). In second position we still have PS with 18%. SVP is still indicated as the most competent for 29% of respondents, against 22% indicating PS as the most competent.

SVP attracted voters from several sides and obtained additional votes from June to October:

- Between 2011 and 2015 SVP is the party with the most loyal voters of all parties, 93% of those who voted SVP in 2011 voted SVP in 2015. It is the party that "snatched" in 2015 more voters from the other parties (10% of the total, 13% from the FDP alone). It received more votes from those who had not voted in 2011, both from those who had not voted by choice (38%) and from those who were under obligation because they did not yet have the right to vote (24%).
- From June to October SVP is the party that more than all the others managed to keep its electorate, 90% of those who would have voted SVP in June actually voted SVP. SVP also obtained the vote of voters who had other preferences in June, mostly from other right-wing parties, little from left-wing parties. Those who had not expressed preference in June, the majority chose SVP.

The coronation of SVP as the most suitable party to deal with migration does not seem accidental. According to the study of Zumofen and Gerber (2018), SVP is the party that most of all concentrated its resources on the refugee crisis:

- SVP published during the electoral period of 2015 1658 announcements, 482 of them related to the refugee crisis (29.3%). By way of comparison. FDP published a total of 1580 ads, 27 of which related to the refugee crisis (1.7%).

In conclusion, it seems that SVP managed to attract new voters primarily thanks to the refugee crisis. Both during the whole 2011-2015 legislature and during the four months preceding the election of the National Council, months in which 56 asylum centres were opened.
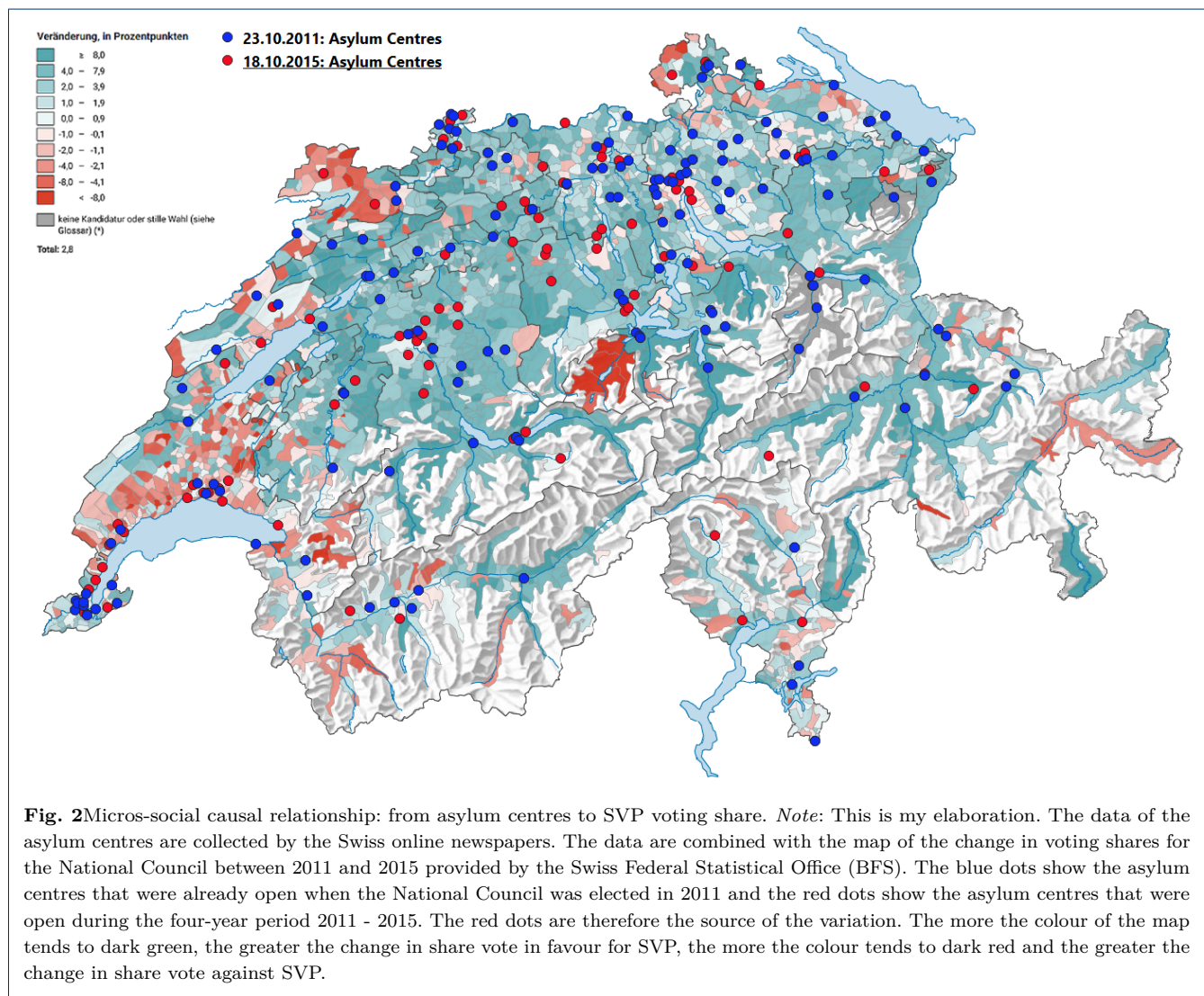
2.4.2 Micro-social causal relationship

The causal relationship established above ranging from refugee crisis to SVP share vote is of a *macro-social* nature, because it affects the whole population. The relationship is indirect, the information of the arrival of new asylum seekers is necessarily – as the name etymologically suggests – first mediated by the media, then ending up in the eyes or ears of the voter. Switzerland is a landing country and not a transit country, which means that in Switzerland the person generally referred to as a refugee is either an asylum seeker or a permanent refugee. Therefore, it competes with the natives and other immigrants. First for the resources of the welfare state, then on the labour market. In addition, the asylum seeker or permanent refugee is the bearer of a different culture that can be perceived as a permanent threat by natives.[13]

The indirect macro-social causal relationship may not be the only one, there may be relatively more direct *micro-social* causal relationships.[14] Such micro-social relationships are differentiated along the population: part of it is exposed and part of it is not, or is exposed to a greater intensity than the other part. In this analysis I am interested in a possible micro-social causal relationship: the one that goes from asylum centres to SVP share voting (Fig. 2).

The starting point is that the voter has *bounded rationality*, does not assess the real threats or opportunities for an increase in asylum seekers, does not know the real extent of the increase, does not know how many asylum seekers have been attributed to which cantons, does not know how many asylum seekers are then admitted or temporarily admitted. The voter only has a *perception*

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[13] See Hangartner et al. (2019) for a more detailed debate.

[14] Terminology and concepts are similar to Steinmayr (2020).

Fig. 2 Micros-social causal relationship: from asylum centres to SVP voting share. *Note*: This is my elaboration. The data of the asylum centres are collected by the Swiss online newspapers. The data are combined with the map of the change in voting shares for the National Council between 2011 and 2015 provided by the Swiss Federal Statistical Office (BFS). The blue dots show the asylum centres that were already open when the National Council was elected in 2011 and the red dots show the asylum centres that were open during the four-year period 2011 - 2015. The red dots are therefore the source of the variation. The more the colour of the map tends to dark green, the greater the change in share vote in favour for SVP, the more the colour tends to dark red and the greater the change in share vote against SVP.

of the phenomenon, that depends on the type of media heard, the social context and its individual characteristics. The voter with bounded rationality could therefore perceive an asylum centre not as mere overnight accommodation for asylum seekers, but as a manifestation of the macro-social event itself: the *refugee crisis*. In short, the asylum centre that is part of a micro-social universe becomes a *synecdoche* of the migration at macro-social level.

A closer asylum centre could arouse more *solidarity* or *fear* among voters towards asylum seekers than voters at an unaltered or increased distance. However, solidarity and fear are not empirically observable. An adequate unit of measurement is needed, I assume that the voting share for SVP is a good unit of measurement, precisely because SVP offers an unequivocally negative representation of

asylum seekers. More solidarity means less share to SVP, more fear more share to SVP.

So far the micro-social causal relationship from asylum centres to SVP share is conceptualized as a macro-social media-generated byproduct. However, this micro-social relationship could be influenced by another factor: the contact between asylum seeker and voter. Allport (1954) theorizes that between two groups with different cultural backgrounds, inter-group contact reduces prejudice, fear, anxiety to interact and increases the capacity for empathy. As long as four conditions are fulfilled: same group status, common goals, intergroup cooperation and support from the authorities. If the conditions are not fulfilled, intergroup interaction could have the opposite effect: increase prejudice, fear and anxiety. According to Allport if the four conditions are fulfilled, it could be assumed that a

possible contact between the voter and the asylum seeker would reduce the value of the SVP's representation of the asylum seeker, therefore, would reduce the voting share for SVP. Whereas if the four conditions are not fulfilled, it would confirm the SVP's representation of the asylum seeker, therefore, would increase the voting share for SVP. Possible contact between voter and asylum seeker means a simple visual exchange, an exchange of pleasantries, or the sharing of information and stories about the country of origin, the tortuous journey to the country of destination, the challenges of integration. Although it is possible to get this information through the media, direct contact with a person directly involved could have a greater impact on the voter.

In conclusion, I aim to observe indirectly through a quantitative approach the micro-social relationship that goes from asylum centres to share voting per SVP. A relationship that is byproduct of the media or that is the effect of a contact.

3 Estimation strategy

3.1 Natural experiment

The study links the increase in the number of asylum centres in Switzerland – due to the exodus of refugees from the Middle East and the relatively low number of asylum centres[15] – to the different inter-municipal evolution of the vote in favour of the anti-immigration party SVP.

Although asylum centres are increasing due to exogenous migration flows, they could be distributed non-randomly among municipalities according to their characteristics. If the characteristics that determine the allocation were all observable, once conditioned for these characteristics the difference in outcome between the two groups would depend only on treatment. However, unobserved characteristics are likely to influence the outcome, resulting in a problem of *omitted variables bias* (e.g.: the bargaining strength of the incumbent executive of a municipality with the cantonal government, the bargaining strength of the government with the federal council, the strength of anti-immigration parties at the municipal level).

A further problem is *reverse causality*: the share obtained by the SVP in 2011 (or the change in share from 2007 to 2011) could influence a municipality's decision to open an asylum centre. It can be assumed that municipalities with the highest share of votes for SVP in 2011 (or the change in share from 2007 to 2011) are less inclined to

open an asylum centre. Usually, this problem is tackled using an instrumental variable: in this study could be the location and size of military or civil protection bunkers and vacant apartments belonging to municipalities. Unfortunately, as this information is not available it is not possible to use the instrumental variable.

To solve the problems of omitted variables bias and reverse causality I propose a different identification strategy: do not observe the effect of the opening of an asylum centre on the share variation destined to SVP of the municipality itself, but observe the effect of the opening of an asylum centre on the share variation destined to SVP of the neighbouring municipalities. In other words, observe if the decision of a municipality to open an asylum centre has a *spillover effect* on the SVP share of the neighbouring municipalities. For each municipality that opens an asylum centre, municipalities find themselves with *reduced distance* from the nearest asylum centre beyond their will. The residents of a municipality cannot oppose – either by expressing dissent, writing articles or voting in future municipal elections for a new mayor – the opening of an asylum centre in the neighbouring municipalities. Therefore, they cannot influence the choice of the neighbouring municipality to open an asylum centre.[16] Although it cannot be excluded that neighbouring municipalities may exhibit related voting patterns, in the identification strategy I assume that the voting pattern of a municipality is independent of the voting pattern of neighbouring municipalities.

This study has the design of a *natural experiment* that focuses on the extensive margin: some municipalities are exposed to the reduction of distance from the asylum centre and others are not. The reduction of distance is therefore the treatment, that cannot be influenced by the dependent variable SVP.

3.2 Model: difference-in-differences

The natural experiment is estimated using the difference-in-differences (DD) model. To ensure the validity of the model, the key identification assumption is the common trend assumption (CTA). The pre-treatment outcome trend of the treatment group should be identical to the outcome trend of its counterfactual. Since the counterfactual trend is not observable because it does not occur, a control group with a parallel trend to the counterfactual should be found. If graphically the pre-treatmtnent trends between treatment group and control are parallel, then the control group chosen is a good control and the CTA is satisfied.

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[15] The relatively low number of pre-2015 asylum centres could be explained by the restrictive asylum policy promoted by Blocher when he was head of the FDJP: https://bit.ly/1Gyonqt.

[16] see Bratti et al. (2017), Hangartner et al. (2019), Vertier and Viskanic (2019), Steinmayr (2020).

The DD model (1) proposed has the following characteristics: two time points – 2011 and 2015 years of the National Council election – two groups of more municipalities discriminated by the treatment – reduction of distance from the nearest asylum centre – which starts as soon as the 2011 National Council elections are over and ends in the 2015 elections. The estimate of the coefficients is based on a dataset of municipalities that never hosted an asylum centre between 2011 and 2015.

The model is as follows:

$$y_{mt} = \alpha_i + \lambda 2015_t + \gamma RD_m + \beta(2015_t * RD_m)$$
$$+ \delta X_{mt} + \varepsilon_{mt} \quad (1)$$

y_{mt} is the voting share for the National Council elections collected by SVP, in the municipality m, during the time t - 2011 (National Council election, pre-treatment) and 2015 (National Council election post-treatment). α is the intercept. 2015_t is a dummy variable with value 1 for the post-treatment and value 0 for the pre-treatment election year. RD_m is a dummy variable with value 1 for the municipalities treated – those that they find themselves with reduced distance from the nearest asylum centre – and with value 0 for municipalities untreated – those with unchanged or increased distance from the nearest asylum centre. RD_m*2015_t is the interaction between the treated municipalities and the post-treatment electoral year. β is the coefficient of interest that measures the difference in SVP vote share between the two electoral years 2011 and 2015 and between the group of municipalities with reduced distance and the group of municipalities with unchanged or increased distance from the nearest asylum centre. X_{mt} is a set of covariate time-varying: population, population density, per capita income, share of foreigners, share of people aged between 20 and 64. Standard errors are clustered at the municipality level.

The DD model results will be tested if robust to different specifications. First, the dependent variable SVP is replaced by its logarithmic form. Second, *group specific linear time trend* are included, which means, the time evolution of the SVP voting share of both groups are included for the years 1999, 2003, 2007 and 2019. To be robust, the coefficient of the variable of interest should remain significant also with these two test.

3.3 Heterogeneous effect and contact theory
The treatment – reducing the distance to the nearest asylum centre – could have an opposing influence on the voting share for SVP in the municipalities. In order to grasp the heterogeneity of response of the treated municipalities and to avoid generalizing possible results to the whole Swiss territory, the model is estimated

several times: for the whole nation and for each linguistic region.

A second model (2) is estimated for the whole country and for the promising linguistic regions. Firstly, to confirm possible heterogeneity of response linked to the language of the treated municipalities. Secondly, to test whether other differences between the characteristics of the treated municipalities explain differences in response to treatment based on a potential contact between voters and asylum seekers (contact theory). The model is a difference-in-difference-in-differences (DDD) model or a difference-in-differences model with a subset of data.

$$y_{mt} = \alpha + \lambda 2015_t + \gamma_1 RD_m + \beta_1(2015_t * RD_m)$$
$$+ \delta X_{mt} + \gamma_2 DX_m + \beta_2(2015_t * DX_m)$$
$$+ \beta_3(2015_t * RD_m * DX_m) + \varepsilon_{mt} \quad (2)$$

This model is an extension of the model (1). The dummy variable DX_m is added: with value 1 if the municipality has a certain characteristic or if it is in the upper/lower part of the distribution of a certain characteristic, with value 0 vice versa. The triple interaction term ($2015_t * RD_m * DX_m$) is also added and captures the heterogeneity of response within the group of the treated municipalities.

4 Data and descriptive statistics
4.1 Data
Swiss Federal Statistical Office (BFS) provides information on the election of the National Council to construct the dependent variable SVP and information to construct the independent variables time-variant: population size, density, share of foreigners, the share of inhabitants aged between 20 and 64, the average income of inhabitants. BFS also provides information for the characteristics: unemployment, typology (urban, intemediate, rural). In addition, it provides the decennial Census, with the information: surface, language (french, italian, german), share of people with tertiary degree. The Federal office of topography provides the coordinates of the municipalities, which they are used to build the distance variable and with it the distance reduction treatment.

The construction of the distance variable required three steps. First, the geographical location, opening and closing date of all asylum centres are manually collected, for the period 2011-2019 (used in the analysis, period: 2011-2015) from the Swiss online newspaper.[17] Second, the asylum centres are geocoded.[18],[19] Thirdly, through the

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[17]For a list of Swiss media: https://medialandscapes.org/country/switzerland/media/print.
[18]Via Confederation site map.geo.admin.ch.
[19]Coordinate system: CH1903+/LV95.

geographical information system (GIS) environment is calculated for each municipality the distance as the crow flies from the nearest asylum centre on 23 October 2011 and 18 October 2015 (National Council election date).[20] The assignment of the treatment depends completely on the difference of the distance variable between 2011 and 2015, if the observation shows a positive value then it is treated.

The boundaries of Swiss municipalities vary over time due to mergers, so one year's boundaries must be chosen as a *constant geographical unit over time.* Year 2019 is chosen. The municipalities that merged between 2011 and 2012 are discarded from the sample due to a lack of information on certain variables. Also the municipalities that merged from 2016 to 2019 are discarded from the sample. The municipalities that merged between 2012 and 2015 are not discarded: all the variables of the 2011 fractions are aggregated according to the municipality boundaries in 2015 (which are those of 2019 without the mergers between 2016 and 2019).

In order to avoid the problem of endogeneity and reverse causality, all municipalities that have administered at least one asylum centre during one of the two election dates are discarded.[21]

From the initial sample of 2202 municipalities, 79 municipalities that have merged between 2016 and 2019 are discarded. From the remaining 2123 municipalities, 201 municipalities that hosted an asylum centre are discarded, to remain with 1922 municipalities that not hosted an asylum centre. Finally, further 79 municipalities are discarded or lack of at least one data of the dependent variable SVP between 1999 - 2019.

The final sample for the whole of Switzerland has 1843 municipalities, observed over two periods (2011 and 2015), for a total of 3686 observations. Of these municipalities, 677 increase the proximity to the nearest asylum centre. The sample for the German-speaking region has 1178 municipalities, for a total of 2356 observations. Of these municipalities, 388 increase the proximity to the nearest asylum. The sample for the French-speaking region

has 508 municipalities, for a total of 1116 observations. Of these municipalities, 240 increase their proximity to the nearest asylum centre. The sample for the Italian-speaking region has 113 municipalities, for a total of 226 observations. Of these municipalities, 40 increase the proximity to the asylum centres.

4.2 Descriptive statistics

Table 1 shows the descriptive statistics of the municipalities that between 2011 and 2015 did not host an asylum centre. In the four analysis regions, the treated group has a greater initial distance than its control group. By means of a t-test, I calculate if there are significant differences between the treated and the control municipalities.[22] The results are: (S) has significant differences in: distance, SVP, foreigners, tertiary degree, german, french, romansh. (g) has significant differences in: distance, intermediate, urban. (f) has significant differences in: distance, density, GDP capita, foreigners, tertiary degree, intermediate, rural. (i) has significant differences in: distance, density, tertiary degree, unemployment, urban, rural. In (S) the treated municipalities have a higher share of French-speaking municipalities (35% vs 23%) compared to German-speaking municipalities (57% vs 68%). In (f) the municipalities treated are on average more densely populated (390 vs 239), less rural (56% vs 67%), with more GDP per capita (38777 vs 33377), with a higher share of foreigners (18.47 vs 14.64) and a smaller share of people with a tertiary education diploma (24.10 vs 19.96).

In (i) the municipalities treated are on average less densely populated (276 vs 689), more rural (55% vs 33%), with a smaller share of foreigners (16.31% vs 19.76%) and a smaller share of people with a tertiary education diploma (14.29 vs 18.83).

It is interesting to note that the average municipality treated French-speaking is at the level of characteristics diametrically opposed to the municipality treated Italian-speaking. At the level of Switzerland as a whole, the typical profile of a treated municipality cannot be drawn. It can only be done at the level of French and Italian language regions. The characteristics of the municipalities may have somehow influenced the allocation of treatment and therefore a possible voting pattern for SVP could be wrongly assigned.

To deal with these differences, I examine the CTA, I control for time-variant characteristics and I perform more tests to see if the results are robust.

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[20] The distance calculated for this analysis is as the crow flies, it does not consider morphology and roads. I think it is a relatively small problem considering that I focus on the extensive margin and not on the intensive one, therefore, that the coefficient of interest is not interpreted: "one more kilometer of distance means more/minor % share vote for SVP". It is possible, using the QNEAT algorithm of the GIS environment, to calculate the distance considering at least the roads, but unfortunately the calculation for the whole of Switzerland is too complex and time-consuming.

[21] National Council elections dates: 23 October 2011 and 18 October 2015.

[22] If p-value is less than 5% then the differences are significant.

Table 1 Descriptive statistics

	Switzerland			German-speaking S.			French-speaking S.			Italian-speaking S.		
Treatment	No	Yes	p-value	No	Yes	p-value	No	Yes	p-value	No	Yes	p-value
Distance	6.93	10.80	< 0.01	6.29	9.75	< 0.01	7.18	10.52	< 0.01	8.09	20.0	< 0.01
SVP	31.80	30.37	0.015	35.87	35.84	0.962	26.39	24.90	0.072	12.0	12.8	0.568
Population	2295	2343	0.752	2604	2704	0.627	1653	1871	0.39	1799	1724	0.835
Density	339	356	0.57	353	350	0.902	239	390	0.02	689	276	0.02
GDP capita	33139	34480	0.113	32961	32062	0.34	33377	38777	< 0.01	35285	31966	0.122
Age	61.21	61.16	0.772	61.64	61.81	0.351	60.42	60.22	0.45	59.54	59.75	0.837
Foreigners	13.49	14.63	0.01	12.51	11.94	0.252	14.64	18.47	< 0.01	19.76	16.31	0.052
Tertiary Degree	18.71	19.78	< 0.01	18.44	17.79	0.082	19.96	24.10	< 0.01	18.83	14.29	< 0.01
Unemployment	2.22	2.30	0.164	1.85	1.76	0.111	3.02	3.09	0.597	3.75	2.99	0.01
Rural	0.55	0.56	0.927	0.52	0.55	0.375	0.67	0.56	0.011	0.33	0.55	0.025
Intermediate	0.27	0.25	0.39	0.31	0.23	< 0.01	0.19	0.28	0.014	0.22	0.30	0.362
Urban	0.18	0.19	0.398	0.17	0.22	0.034	0.14	0.16	0.603	0.45	0.15	< 0.01
Surface	16.24	14.34	0.15	14.48	12.42	0.09	12.98	12.25	0.74	18.54	34.74	0.057
German	0.68	0.57	< 0.01									
French	0.23	0.35	< 0.01									
Italian	0.06	0.06	0.76									
Romansh	0.03	0.01	0.012									

Note: The table shows for the whole of Switzerland and for each language region the average of the variables of the group of municipalities treated and of the group of municipalities non-treated for the year pre-treatment (2011). In addition, the table shows for each variable the p-values of the difference between treated and untreated group. If p-value is < 0.05 then the difference between the two groups is significant. The statistics for Switzerland as a whole (S) are based on a sample of 1843 municipalities, including 677 treated; for German-speaking Switzerland (g) they are based on a sample of 1178 municipalities, including 388 treated; for French-speaking Switzerland (f) they are based on a sample of 508 municipalities, including 240 treated; for Italian-speaking Switzerland (i) they are based on a sample of 113 municipalities, including 40 treated.

5 Results and discussion

5.1 Common trend assumption

The key identification of the DD model is the common trend assumption, i.e. treated group and control must show the same pre-treatment trend. The differences between the two groups lose relevance if the assumption is respected. Fig. 3 shows the common trend assumption (CTA). Each line corresponds to a linguistic region and represents the difference between the voting share per SVP of the treated group and the control group each year of the National Council election. Covariates are not considered. For the CTA to be respected, the line must be horizontal.[23] Fig. 3 shows that the CTA has different oscillations for each language region.

However, Table 2 shows that the p-values for each language region of the pre-treatment difference between treatment group and control group and the difference between the previous and next election year are always insignificant ($p > 0.1$). This means that the oscillations of the CTA are not significant and that the CTA is therefore

respected. To calculate the p-value, the covariates have been added. [24]

5.2 Main results

Table 3 shows the estimation for four region of analysis: the whole of Switzerland (S) and the three language regions: German (g), French (f) and Italian (i). No result obtained is significant ($p < 0.1$). (S) and (f) have a negative coefficient, while (g) and (i) have a positive coefficient. This confirms that the reduction in proximity to the nearest asylum centre has conflicting effects. (f) has the highest magnitude: the growth of the voting share of the treated group for SVP is 1,604 percentage points lower than the control group. (f) also has the lowest p-value: 0.118.

In comparison to the difference between treatment and control of the pre-treatment election years (Table 2), (f) and (i) have a lower p-value, while (S) and (g) have a higher p-value than the pre-treatment p-value. However, (i) has a high post-treatment p-value: 0.642. For (S), (i) and (g) I exclude that the greater proximity from an asylum centre influenced the voting pattern for SVP. For

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[23]Horizontal line is equivalent in the classic representation of the CTA to two parallel lines. Non-horizontal line is equivalent to two non-parallel lines.

[24]Table B2 shows that also with the logarithmic form of SVP CTA is respected.
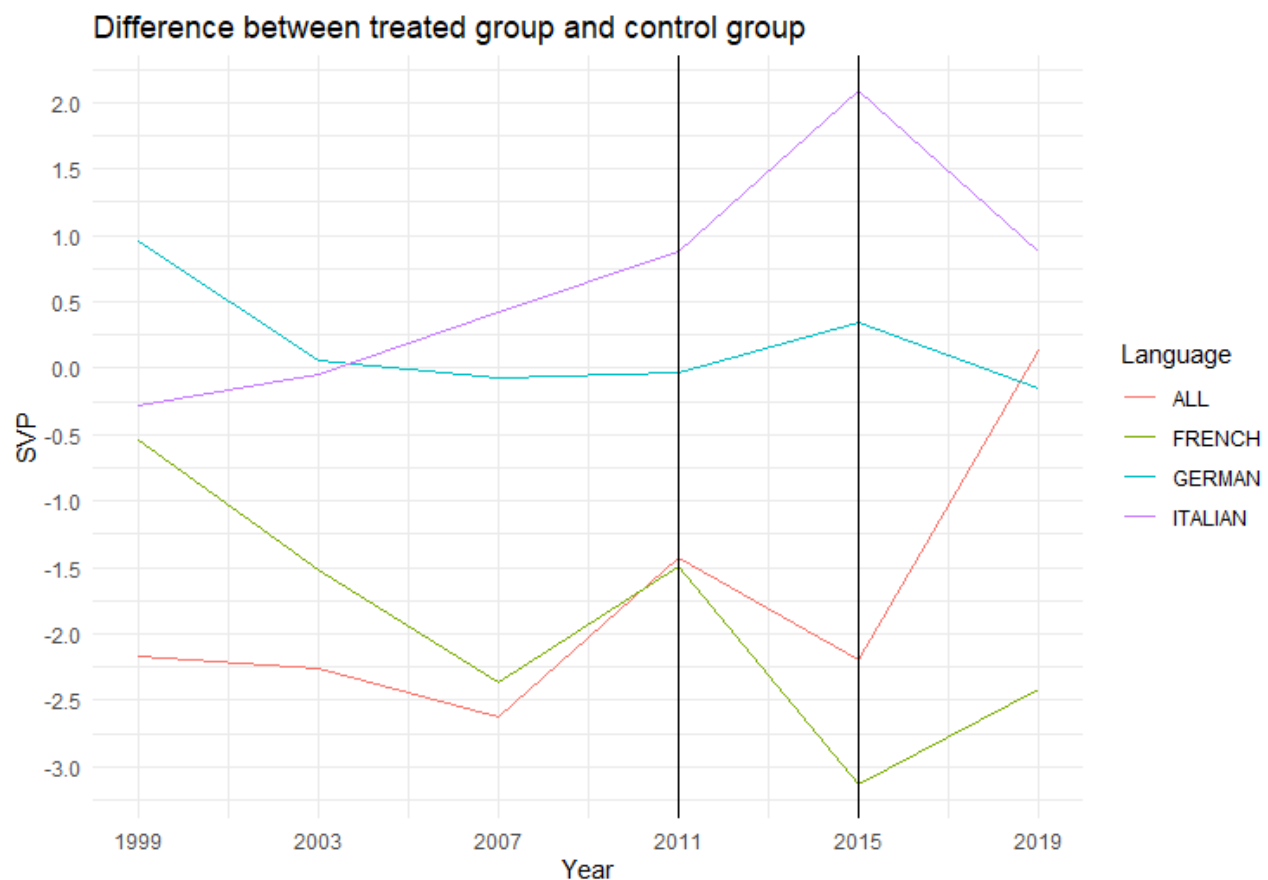
Fig. 3 Difference between treatment and control. *Note*: This is my elaboration of the data on the voting share of the National Council in favour of SVP for the period 1999-2019, data provided by BFS. The different evolution of the voting share between the treatment group and the control groups is shown for the linguistic regions: three lines represent a linguistic region, the "ALL" line represents the three linguistic regions together.

Table 2p-value common trend assumption

Region	1999-2003	2003-2007	2007-2011
All (S)	0.781	0.58	0.211
German (g)	0.41	0.884	0.987
French (f)	0.373	0.434	0.375
Italian (i)	0.871	0.833	0.839

Note: For each region of analysis, the pre-treatment difference-in-differences are performed: difference of voting share to SVP between the previous and next National Council election, between municipalities that they find themselves with reduced distance to the nearest asylum centre and municipalities with unchanged or increased distance in the period 2011-2015. Covariates are the logarithmic form of population and per capita income, population density, the share of people aged between 20 and 64 and the share of foreigners.

(f), although a significant result is not obtained (p = 0.118 > 0.1) it cannot be excluded that the proximity from the asylum centre had an effect, because in the post-treatment year the p-value is almost significant and is lower than in the pre-treatment years.

5.3 Robustness check

Table 4 shows two robustness checks for each analysis region: model estimation with the logarithmic form of the SVP variable and insertion of the group linear time trend. The main results are confirmed. For (S), (g), (i)

Table 3 Main Results - Estimated effect of the change in distance from the nearest asylum centre on SVP's voting share

| | *Dependent variable:* | | | |
| | SVP | | | |
	(S)	(g)	(f)	(i)
Reduced distance	−0.907	0.334	−1.604	1.154
	(0.813)	(0.879)	(1.024)	(2.476)
	p = 0.265	p = 0.704	p = 0.118	p = 0.642
Observations	3,686	2,356	1,016	226
R^2	0.144	0.145	0.212	0.104
Adjusted R^2	0.142	0.142	0.206	0.071

Note: For each region of analysis, the post-treatment difference-in-differences are performed: difference of voting share to SVP between the 2015 and 2011 National Council elections, between municipalities that they find themselves with reduced distance to the nearest asylum centre and municipalities with unchanged or increased distance. (S) is Switzerland as a whole, (g) is German-speaking Switzerland, (f) is French-speaking Switzerland, (i) is Italian-speaking Switzerland. Covariates are the logarithmic form of population and per capita income, population density, the share of people aged between 20 and 64 and the share of foreigners. Standard errors are clustered at municipality level. Level of significance of the coefficients is *p<0.1; **p<0.05; ***p<0.01.

the p-values obtained from the two tests are high, thus confirming the non-significant results. (f) from the test log(SVP) obtains a coefficient with p-value of 0.119, similar to the main results and lower than the pre-treatment p-values in table B2. (f) from the test with the inclusion of the group linear time trend obtains a significant coefficient with p-value of 0.027. Therefore, even after the robustness check it cannot be excluded that the reduction in distance to the nearest asylum centre had an effect on (f).

5.4 Heterogeneous effect: language divide and contact theory

Table 5 shows whether there is heterogeneity of response to reduced distance treatment from the nearest asylum centre. To test if heterogeneity exists, four coefficients are estimated. First, FE (french effect) measures whether there is a significant heterogeneity of response among the french linguistic regions and the other three linguistic regions. Second, LP (lower population) measures whether there is a significant heterogeneity of response between more and less populated municipalities. Third, GP (greater proximity) measures whether there is a significant heterogeneity of response among municipalities closer to an asylum centre than among more distant municipalities. Fourth, GDR (greater distance reduction) measures whether there is a significant heterogeneity of response among municipalities that have experienced greater distance reduction than municipalities that have experienced less distance reduction.

FE is estimated for the whole of Switzerland (S). The other coefficients are estimated only for the language region (f), the only one at which the effect of a reduction in distance from the nearest asylum centre on the SVP vote could not be excluded. FE, LP and GP are the estimated interest coefficients of the model (2), GDR is the estimated interest coefficients of the model (1) with subset data.

LP, GP, and GDR can test the theory of contact. LP: in relatively less populated municipalities it is more likely to come across an asylum seeker and therefore have a contact. GP: in municipalities relatively closer to an asylum centre, it is more likely to have contact with an asylum seeker. GDR: in municipalities with a greater reduced distance to an asylum centre, a contact with an asylum seeker is more likely to occur when there has never been contact before. For all three coefficients, a negative/positive value is equivalent to a higher treatment effect in municipalities where there is a higher probability of contact with natives and asylum seekers than in municipalities where there is a lower probability of contact with natives and asylum seekers. Therefore, a significant coefficient could be a sign that any contact between natives and asylum seekers has changed the attitude of natives towards asylum seekers, as measured by the reduction or augmentation in voting in favour of SVP.

FE reports a non-significant negative coefficient but with a low p-value (p = 0.180 > 0.1). Among the treated municipalities, the French-speaking ones replied with -

Table 4 Robustness check: logarithmic form and group linear time trends

	Dependent variable:							
	log(SVP) (S)	SVP (S)	log(SVP) (g)	SVP (g)	log(SVP) (f)	SVP (f)	log(SVP) (i)	SVP (i)
Reduced distance	−0.034	−0.033	0.006	−0.613	−0.069	−2.593**	0.109	2.369
	(0.030)	(1.008)	(0.025)	(1.102)	(0.044)	(1.172)	(0.144)	(2.176)
	p = 0.264	p = 0.975	p = 0.815	p = 0.578	p = 0.119	p = 0.027	p = 0.452	p = 0.277
Observations	3,686	11,058	2,356	7,068	1,016	3,048	226	678
R^2	0.122	0.036	0.105	0.031	0.163	0.172	0.106	0.144
Adjusted R^2	0.120	0.035	0.102	0.030	0.156	0.169	0.073	0.130

Note: For each region of analysis, the post-treatment difference-in-differences are performed: difference of voting share to SVP between the 2015 and 2011 National Council elections, between municipalities that they find themselves with reduced distance to the nearest asylum centre and municipalities with unchanged or increased distance. In Columns log(SVP) the dependent variable is the logarithmic form of the SVP variable. In SVP columns the dependent variable is SVP, with the inclusion of the group linear time trends in the estimated model (1). (S) is Switzerland as a whole, (g) is German-speaking Switzerland, (f) is French-speaking Switzerland, (i) is Italian-speaking Switzerland. Covariates are the logarithmic form of population and per capita income, population density, the share of people aged between 20 and 64 and the share of foreigners. Standard errors are clustered at municipality level. Level of significance of the coefficients is $^*p<0.1$; $^{**}p<0.05$; $^{***}p<0.01$.

Table 5 Hetereogeneous effect

	Dependent variable:			
	SVP			
	(S)		(f)	
	FE	LP	GP	GDR
Reduced distance	−2.012	−0.753	−0.500	−0.865
	(1.498)	(1.880)	(2.046)	(1.346)
	p = 0.180	p = 0.689	p = 0.808	p = 0.521
Observations	3,686	1,016	1,016	492
R^2	0.223	0.221	0.223	0.207
Adjusted R^2	0.220	0.212	0.213	0.194

Note: For (S) the difference-in-difference-in-differences coefficients FE is calculated, for (f) the difference-in-difference-in-differences coefficients LP and GP and the difference-in-differences coefficient with subsetted data GDR are calculated. The difference-in-difference-in-differences coefficients are the difference of voting share to SVP between the 2015 and 2011 National Council elections, among municipalities that find themselves with reduced distance to the nearest asylum centre, differentiated binarily according to the mentioned characteristic. FE is French effect, LP is lower population, GP is greater proximity and GDR is greater distance reduction. Covariates are: the logarithmic form of population and per capita income, population density, the share of people aged between 20 and 64 and the share of foreigners. Standard errors are clustered at the municipality level. Level of significance of the coefficients is: $^*p<0.1$; $^{**}p<0.05$; $^{***}p<0.01$.

2,012 percentage points in favour of SVP compared to the Italian, German and Romansh-speaking ones. It cannot be excluded that the language and with it the culture has mediated the influence of the treatment. LP, GP, and GDR report negative, non-significant, high p-value coefficients. It can be reasonably excluded that it was contact between natives and asylum seekers that reduced the share vote for SVP in French-speaking municipalities.

Therefore, I suppose that the different voting pattern at micro-social level is the by-product caused by the media at macro-social level.

5.5 Discussion

The results obtained are not sufficient to confirm or even reject a causal micro-social relationship ranging from asylum centres to share voting for SVP. Only in French-speaking Switzerland does the treatment seem to have had a small and negative effect. The effect does not seem to be explained by a greater contact between natives and asylum seekers. However, the role of contact could be better highlighted by future qualitative evidence.[25]

In the literature strand studying the effect of asylum seekers or permanent refugees, most of my findings are in line with Gehrsitz and Ungerer (2017). They do not detect any influence of the presence of refugees on the vote for the Alternative für Deutschland party (far.right). Part of my results are in contrast to Bratti et al. (2017) who find a positive influence between the presence of permanent refugees and the anti-immigration vote, but in support of Steinmayr (2020) who finds a negative influence between the presence of permanent refugees and the vote for the Freedom Party Austria (far-right). My results do not confirm the results obtained by Dustmann et al. (2019), i.e. I do not observe that less and more populated municipalities react differently to the presence of refugees. My results do not help to confirm or refute the results obtained by Vertier and Viskanic (2019) because I do not consider the number of refugees, hence the intensive margin.

In order to obtain more precise estimates of the micro-causal relationship from asylum centres to share voting per SVP, the time window between observations of the dependent variable should be narrowed. One could compare federal elections with elections at a lower institutional level (cantonal or municipal), or one could compare them with a poll. As mentioned above, there is a SELECTS survey that collected in 2015 the opinion of voters in May, before asylum centres increased dramatically. Unfortunately, the observations of individuals do not report the municipality of origin making it impossible to make a distance analysis.

6 Conclusion

This study investigates whether there is a causal micro-social relationship in Switzerland ranging from the refugee crisis in 2015 to the change in the vote share in favour of the Swiss People Party (the right-wing governing party). This study exploits a natural experiment given by the increase in asylum centres, during the 2015 lower chamber elections to the Swiss Parliament compared to the 2011 elections. To overcome the problem of the endogenous nature of the location of the asylum centre, this study only looks at the spillover effect generated by municipalities that decide to open an asylum centre in neighbouring municipalities. The identification strategy is based on a difference-in-differences model, where the treatment is the reduction of distance from the nearest asylum centre. In addition to investigating whether there is a micro-social causal relationship, this study aims to define whether there is a heterogeneity of response to treatment among the linguistic regions. Furthermore, it aims to understand if the causal relationship is mediated by contact between asylum seekers and natives.

The study provides weak evidence of a micro-social causal relationship only for the French-speaking region of Switzerland ($p = 0.118 > 0.1$), it does not provide evidence for the rest of Switzerland. The group of French-speaking municipalities with reduced distance to the nearest asylum centre voted - 1,604 percentage points less SVP than the group with unchanged or increased distance. Of the municipalities treated, the French-speaking ones voted - 2,012 percentage points compared to the municipalities treated in the other three language regions ($p = 0.180 > 0.1$). There is no evidence to attribute the change of vote in favour of SVP to the contact between natives and asylum seekers. Therefore, the different voting pattern at micro-social level is considered a by-product caused by the media at macro-social level.

7 Appendix A: Figures

## 8 Appendix B: Tables

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[25]see for example Steinmayr (2020).
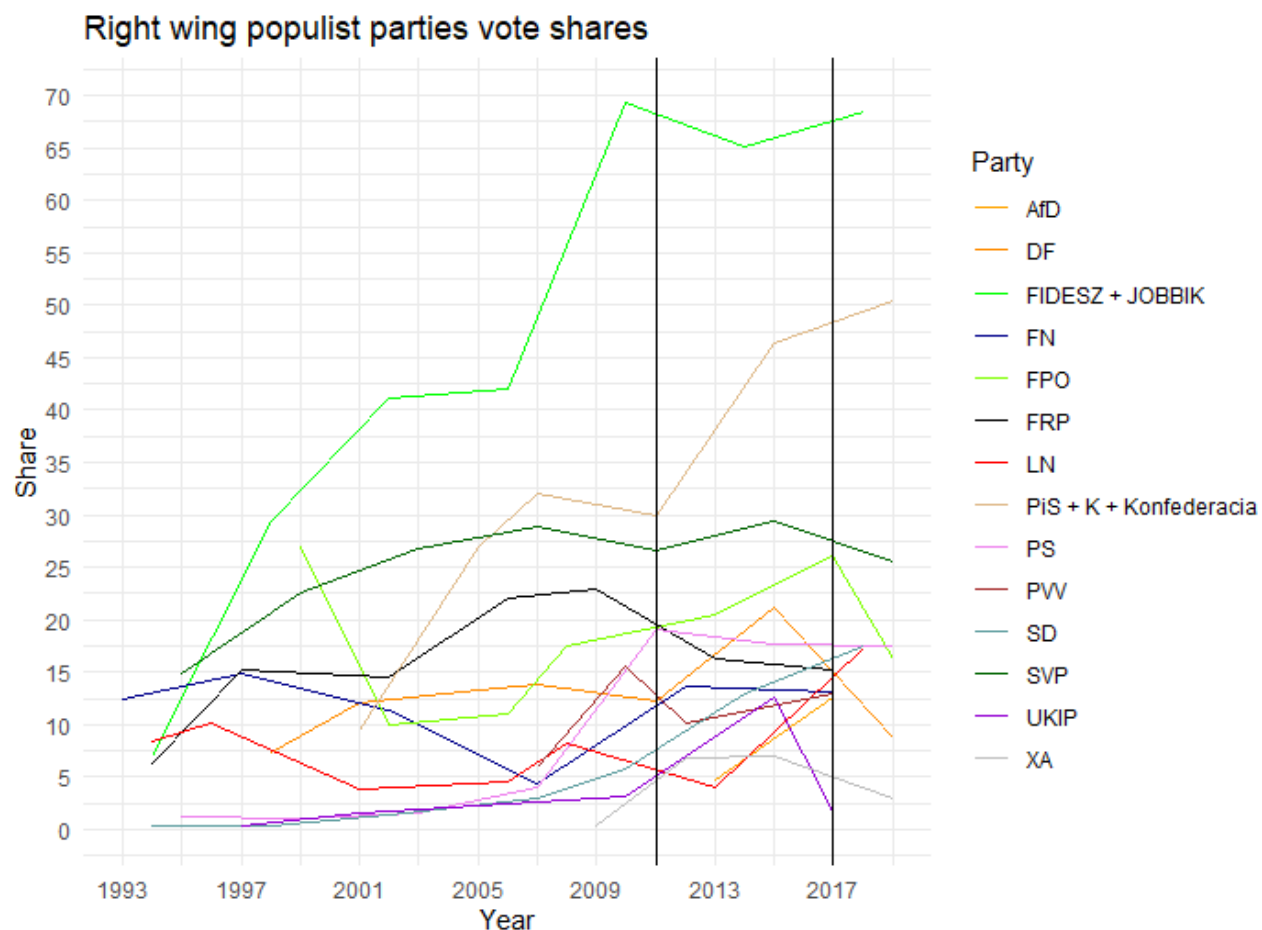
Fig. A1 Right wing populist parties vote shares. *Note*: This is my elaboration of data collected by *The database about parliamentary elections and political parties, by Wolfram Nordsieck*. This Fig. shows the voting trends of the major European right-wing nationalist parties: AfD: Alternative for Germany; DF: Danish People's Party; FIDESZ (ruling government): Hungarian civil union + JOBBIK: Movement for a better Hungary; FN: Front National; FPO: Freedom Party of Austria; FRP: Progress Party; LN: Northern League; PiS (ruling government): Law and Justice party + K: Kukiz'15 + Konfederacja: Confederation Freedom and Independence; PS: True Finns; PVV: Party for Freedom; SD: Swedish democrats; SVP (largest party): Swiss People's Party; UKIP: United Kingdom Independence Party; XA: Golden Dawn.

Database found on this website: http://www.parties-and-elections.eu/index.html.
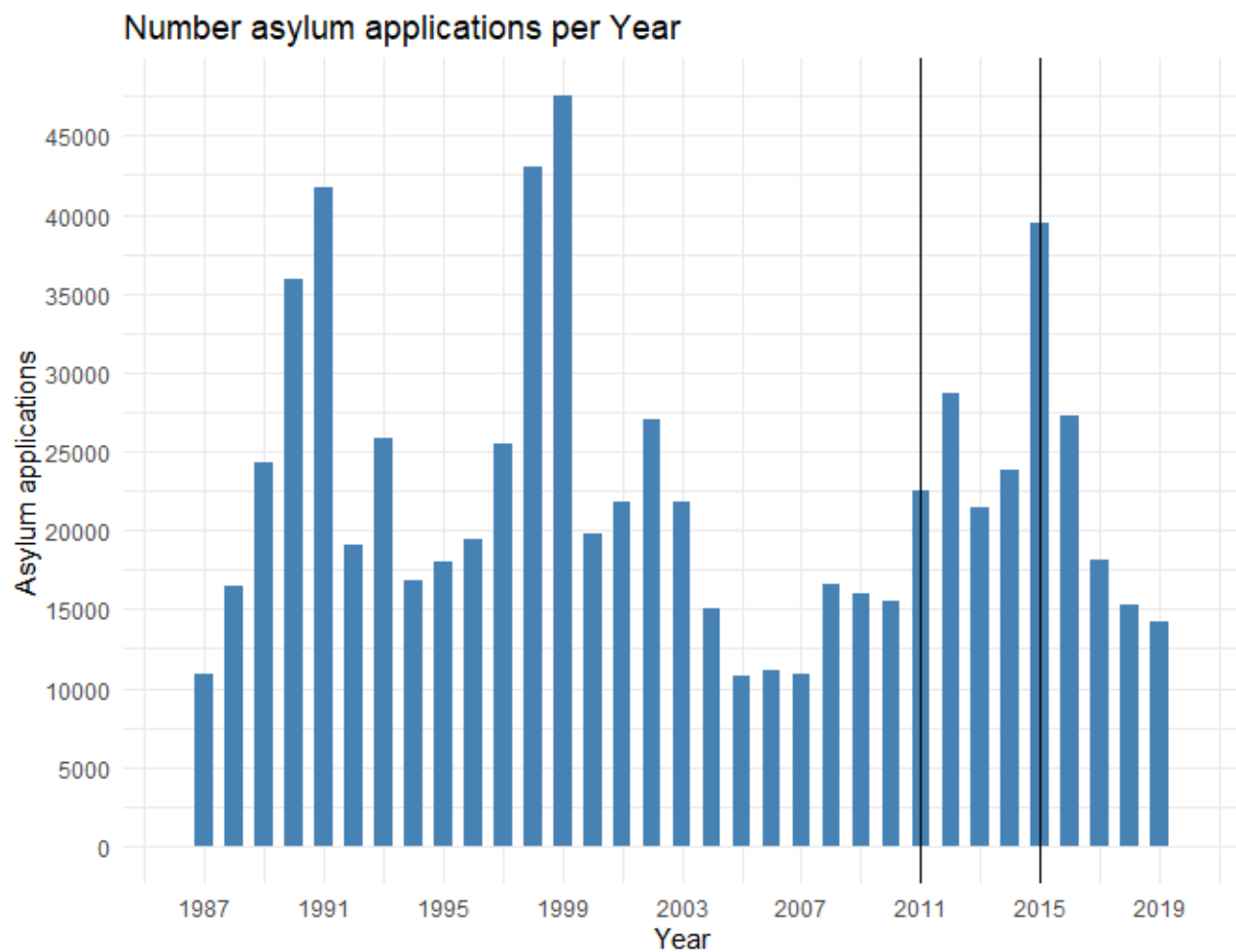
Fig. A2 Number asylum applications per year. *Note*: This is my elaboration of data provided by the BFS. The Fig. shows the number of applications year by year, for the period: 1987-2019.
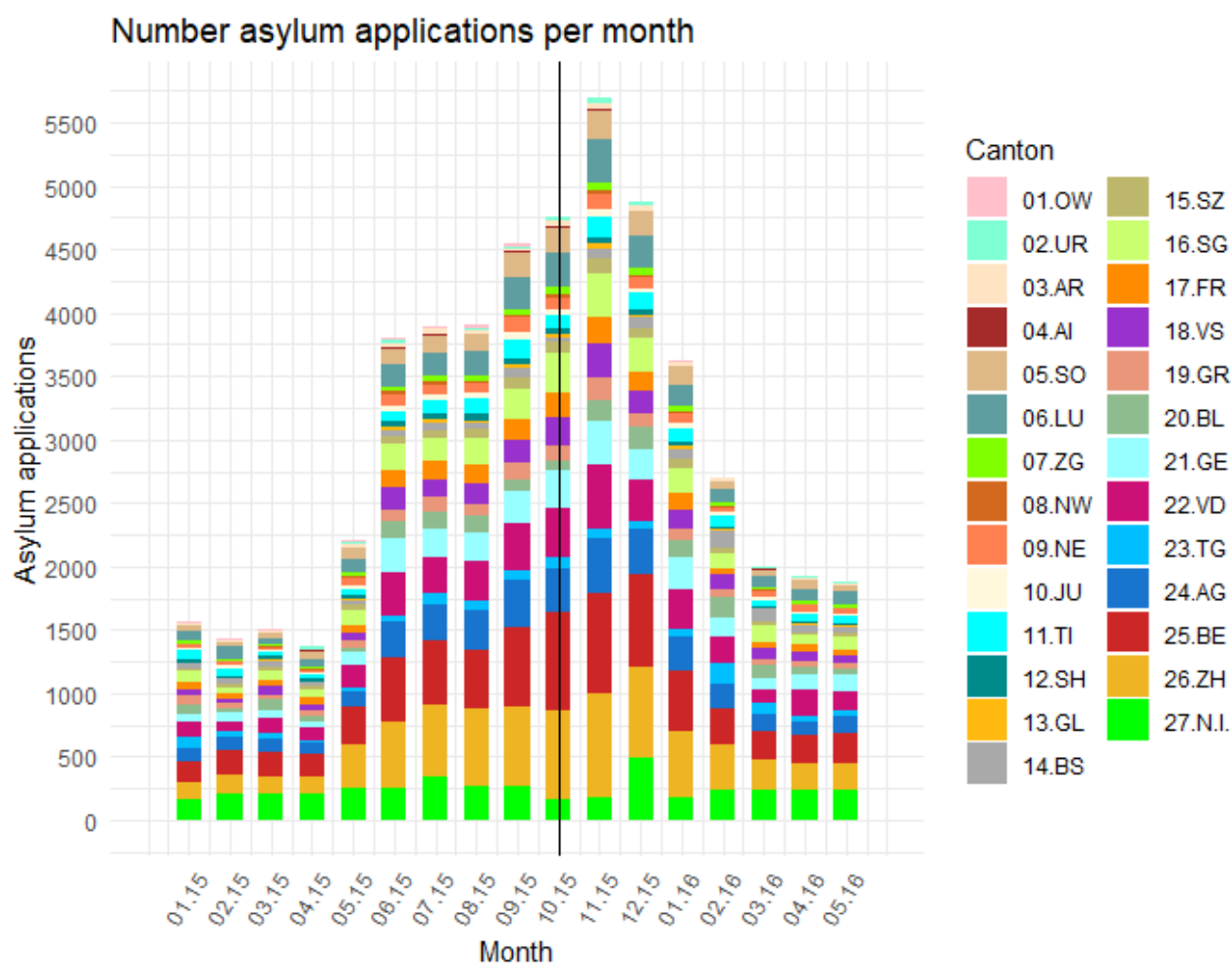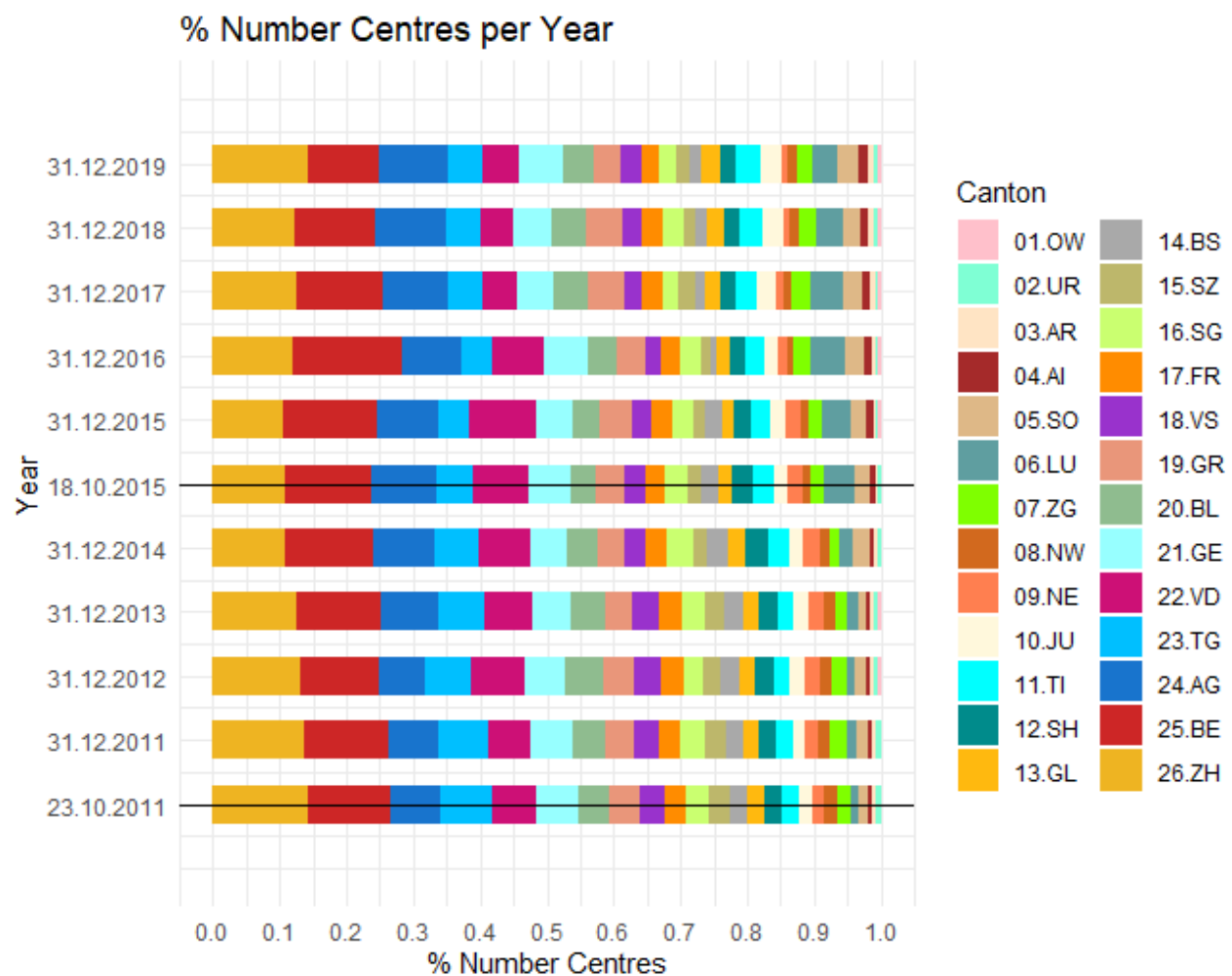
Fig. A3 Number asylum applications per month. *Note*: This is my elaboration of data provided by the BFS. The Figure shows the number of applications month by month, for the period from January 2015 to May 2016. Each color represents a canton.
List of canton abbreviations: https://www.about.ch/cantons/index.html.
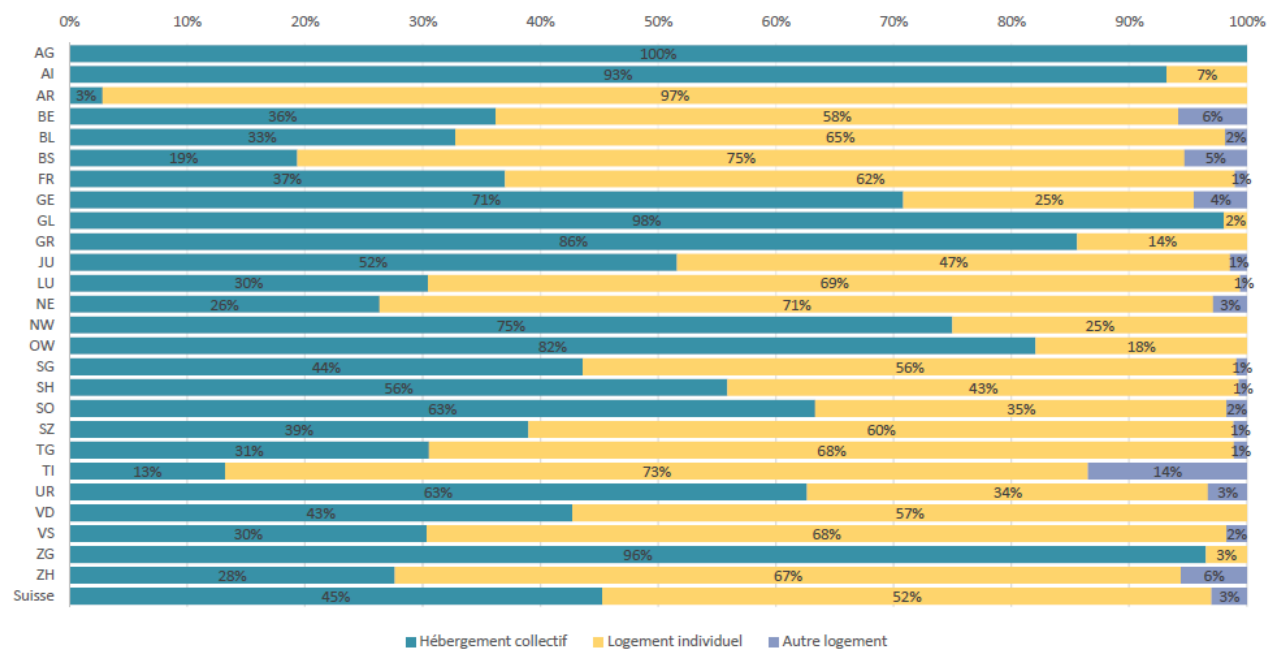
Fig. A4 Type of accommodation. *Note*: This Fig. is an excerpt from the report *Statistique de l'aide sociale dans le domaine de l'asile (eAsyl) Résultats nationaux 2015 provided by BFS. In green is shown the share of collective accomodation, in yellow is shown the share of private accomodation and in gray is shown the share of other accomodation types*.

https://www.bfs.admin.ch/bfs/en/home/statistics/catalogues-databases/publications.assetdetail.529196.html.

Fig. A5 Cantonal share of asylum centres. *Note*: This is my elaboration of data collected by Swiss newspapers. Each colour represents a canton. Two horizontal black lines indicate the bars corresponding to the years of the National Council election. Each bar indicates the share of asylum centres for each canton

.List of canton abbreviations: https://www.about.ch/cantons/index.html.
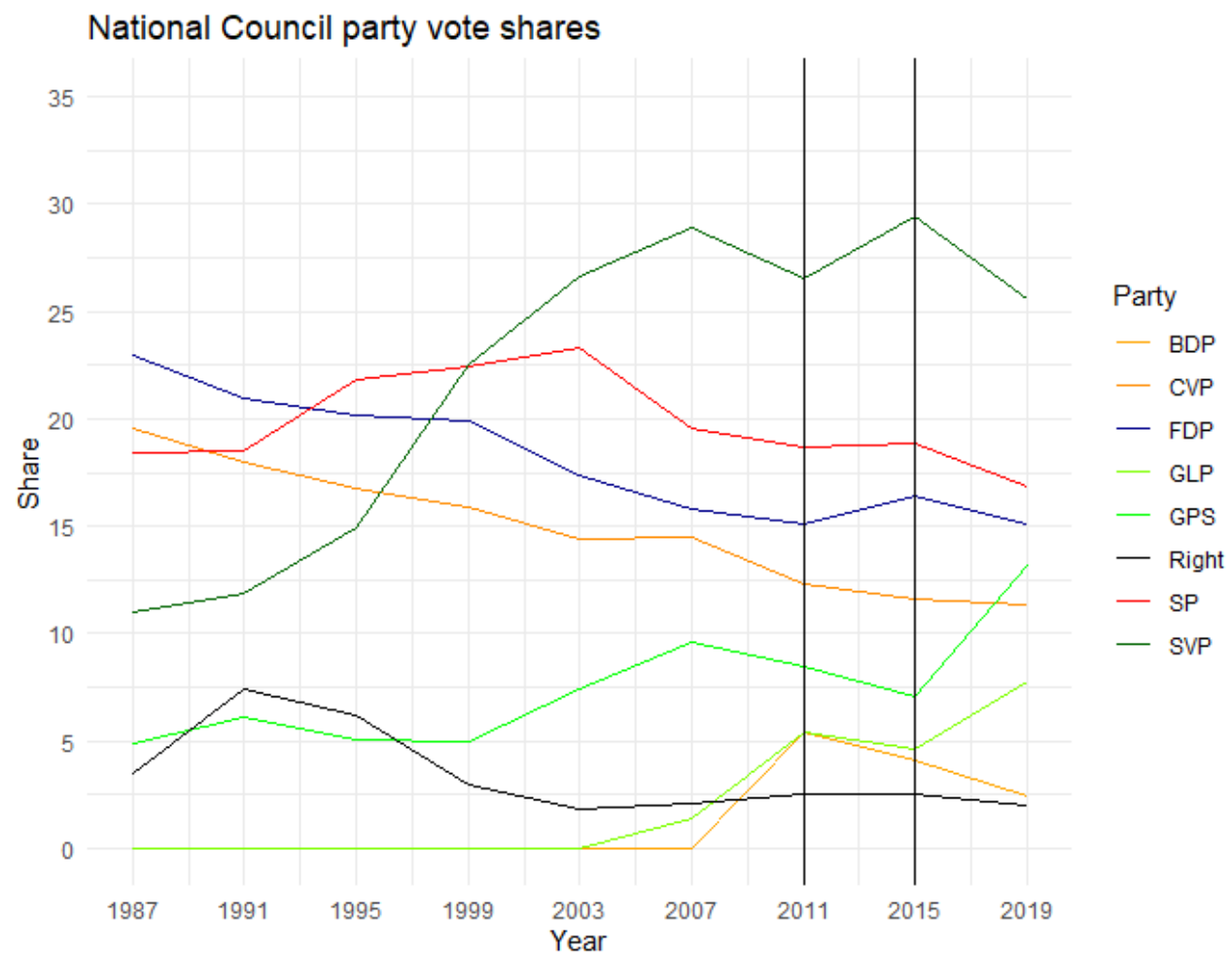
Fig. A6 National Council party vote shares. *Note*: This is my elaboration of data collected by BFS. Each line represents the voting trend of each Swiss party in the National Council, from 1987 to 2019. BPD: Conservative Democratic Party; CVP: Christian Democratic People's Party; FDP: The Liberals; GLP: Green Liberal Party ; GPS: Green Party ; Right : sum of Federal Democratic Union, Geneva Citizens' Movement, Swiss Democrats, Ticino League, SP: Social Democratic Party; SVP: Swiss People's Party.

Table B1 Cantonal allocation key

Canton	Key	Canton	Key
ZH	17.80	BS	2.30
BE	12.10	GL	2.30
VD	9.40	GR	2.30
AG	7.90	NE	2.10
SG	5.90	SZ	1.90
GE	5.0	ZG	1.50
LU	4.80	SH	1.00
TI	4.10	JU	0.90
VS	4.00	AR	0.70
FR	3.70	NW	0.50
BL	3.40	OW	0.40
SO	3.20	UR	0.40
TG	3.20	AI	0.20

Note: This is my elaboration of data collected by BFS. The table shows the share of asylum seekers to each canton.

Table B2p-value from logarithmic form of SVP

Region	1999-2003	2003-2007	2007-2011
All (S)	0.954	0.463	0.488
German (g)	0.44	0.344	0.953
French (f)	0.166	0.723	0.639
Italian (i)	0.873	0.839	0.76

Note: For each region of analysis, the pre-treatment difference-in-differences are performed: difference of voting share to the logarithmic form of SVP between the previous and next National Council election, between municipalities that they find themselves with reduced distance to the nearest asylum centre and municipalities with unchanged or increased distance. Covariates are the logarithmic form of population and per capita income, population density, the share of people aged between 20 and 64 and the share of foreigners.

Abbreviations

AIDA: Asylum Information Database; BFS: Swiss Federal Statistical Office; CTA: Common trend assumption; DD: Difference-in-differences; (f): is French-speaking Switzerland FE: French effect; DDD: Difference-in-difference-in-differences; (f): French-speaking Switzerland; FDJP: Federal Department of Justice and Police; FDP: Free Democratic Party; (g): German-speaking Switzerland; GDP: Gross domestic product; GDR: Greater distance reduction; GIS: Geographic Information System; GP: Greater proximity; (i) is Italian-speaking Switzerland. LP: Lower population; (S): Switzerland as a whole; SEM: State Secretariat for Migration; SP: Socialist Party; SVP: Swiss People's Party.

Acknowledgements

Author's contributions

All contributions are attributable to the author.

Competing interests

The author declares that he has no competing interests.

Funding

Availability of data and materials

Data and codes are available on:
https://github.com/Giovanni-Berta/Replication-Data-and-Code-for-SJES.git.

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